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JACARANDA

HUMANITIES AND SOCIAL SCIENCES 7

FOR WESTERN AUSTRALIA

SECOND EDITION



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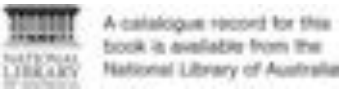
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This suite of print and digital resources may contain images of, or references to, members of Aboriginal and Torres Strait Islander communities who are, or may be, deceased. These images and references have been included to help Australian students from all cultural backgrounds develop a better understanding of Aboriginal and Torres Strait Islander peoples' history, culture and lived experience.

Wherever possible, culturally sensitive material has been flagged with a disclaimer at the beginning of a subtopic to help teachers and students navigate the material.

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SO MUCH MORE THAN A TEXTBOOK ...

DIGITAL

learnON	eBookPLUS	eGuidePLUS	PDF	iPad app	Print
An immersive, interactive and flexible online learning course	An electronic version of the student text, with digital resources	Everything in the eBookPLUS plus additional resources designed for teachers	Downloadable PDFs directly from your Jacaranda bookshelf	Access trusted Jacaranda content both online and offline	Printed textbook with free digital access code inside

Jacaranda Humanities and Social Sciences for Western Australia 2nd Edition, includes a wealth of online resources. Teachers have access to powerful diagnostic and assessment tools through the learnON platform. Students have access to their own set of easy-to-use tools that have been specifically designed to help them track and reflect on their own learning. These include visual indicators to reflect progress, and the ability to choose and mark their own practice tasks.

The power of learnON



The Humanities and Social Sciences for Western Australia series learnON resources provide an immersive digital learning platform that provides teachers with valuable insights into their students' learning and engagement. It's so much more than a textbook! It provides all of the content included in your eBookPLUS and eGuidePLUS, with important additional features that allow you to assign, mark and track student work. The platform can monitor and report progress in real time to give you immediate insights into student achievement. This helps you to easily isolate areas in which students (or groups of students) need additional support or extension.

The learnON platform gives you the flexibility to create multiple learning pathways.

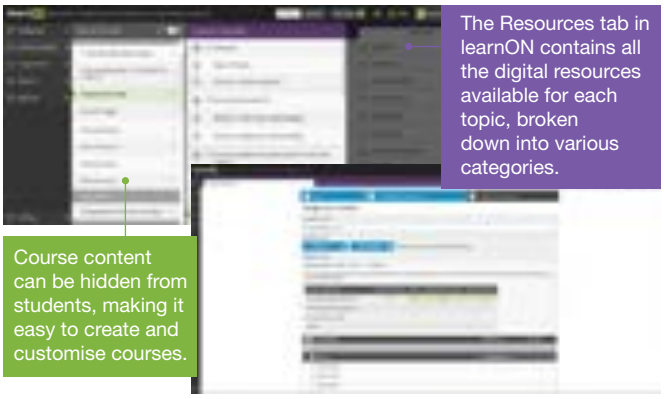


Customise student learning

At Jacaranda, we understand that good teaching begins with understanding each of your student's learning needs. With learnON, teachers can tailor each task and assign it to individual students, create their own groups or assign to the whole class.

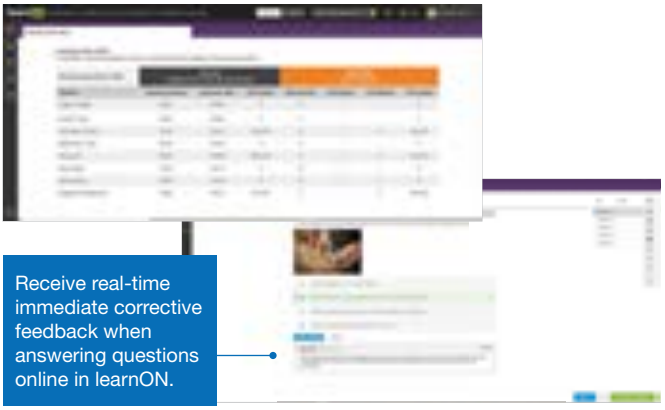
Teachers have complete control over which questions or tasks each student is assigned, whether it is for practice or assessment, their due dates and when they have access to results.

Teachers also have the ability to hide specific parts of the reading content from student view, to allow for 'closed-book' tests or to create their own pathway through the material for their class.



Track activity

The learnON platform provides real-time data of student activity to teachers about their class, and to students about themselves. At a glance, teachers can see how long a student spends reading, how many question-sets they have attempted and their progress with assessment tasks.

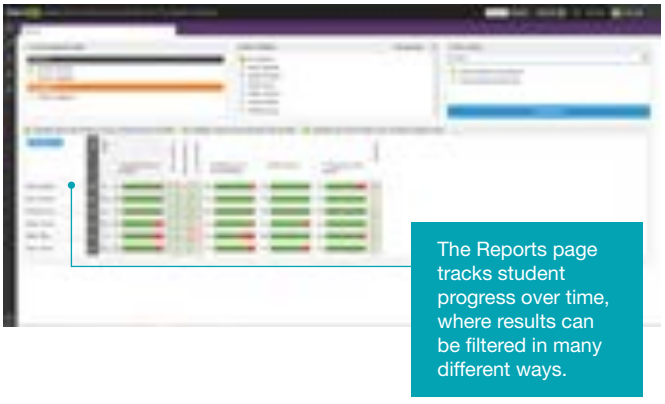


Provide meaningful feedback

The learnON platform also provides an easy-to-navigate marking interface that allows teachers to see student responses, provide feedback and mark their work. Students also have access to sample answers and guides that help them self-mark their own practice tasks.

Gain deep insights

Teachers receive detailed data about student progress that allows them to filter results for specific skills or question types. With learnON, teachers can show students (or their parents or carers) their assessment data in fine detail. Teachers can filter results to show development with each HASS skill, topic or subtopic. Students also have access to their own learning data, colour-coded to help them understand their strengths and weaknesses at a glance.



Keep track of your 'to do' list

The learnON dashboard gives students and teachers a clear picture of their progress throughout the year. For teachers, it provides a visual summary of upcoming assessment deadlines, student submissions waiting to be marked and overdue tasks. For students, it providers reminders of due dates and notifications about the availability of feedback and marked tasks.



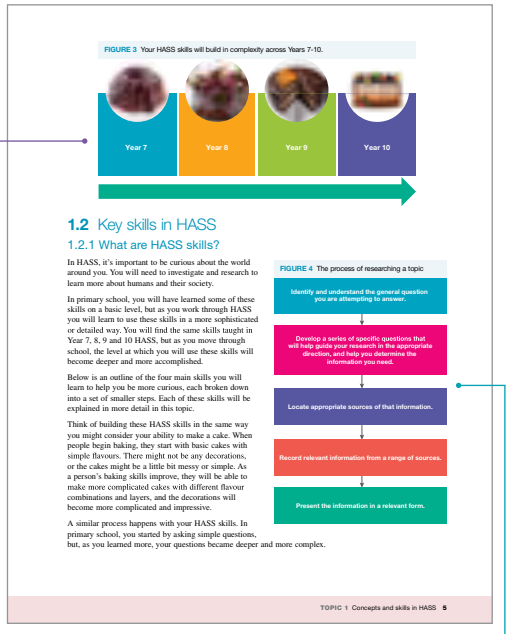
NEW FEATURES

The ever-popular *Jacaranda Humanities and Social Sciences for Western Australia series* has been re-published for the Western Australian Curriculum. The series is available across a number of digital formats: learnON, eBookPLUS, eGuidePLUS, PDF and iPad.

Explicit HASS skills teaching

Skills development is integrated throughout the new edition, and explicitly targeted through SkillBuilders and dedicated skills topics for all four subject areas. Each title in the second edition also includes a new, stand-alone HASS concepts and skills chapter, that introduces students to the key concepts in each subject, and explicitly teaches the HASS inquiry process. This topic has been specifically tailored for each year level (in content and complexity), to show the progression of inquiryvskills. HASS SkillBuilders within this topic are complemented by subject-specific differentiated worksheets, to provide teachers with three separate levels of support for their class. Throughout the topics, students will find links to relevant SkillBuilders alongside exercises and activities.

This suite of resources is designed to allow for differentiation, flexible teaching and multiple entry and exit points so teachers can teach their class their way.


FIGURE 3 Your HASS skills will build in complexity across Years 7-10.

Year 7 Year 8 Year 9 Year 10

1.2 Key skills in HASS

1.2.1 What are HASS skills?

In HASS, it's important to be curious about the world around you. You will need to investigate and research to learn more about humans and their society.

In primary school, you will have learned some of these skills on a basic level, but as you work through HASS you will learn to use these skills in a more sophisticated or detailed way. You will find the same skills taught in Year 7, 8, 9 and 10 HASS, but as you move through school, the level at which you will use these skills will become deeper and more accomplished.

Below is an outline of the four main skills you will learn to help you be more curious, each broken down into a set of smaller steps. Each of these skills will be explained in more detail in this topic.

Think of building these HASS skills in the same way you might consider your ability to make a cake. When people begin baking, they start with basic cakes with simple flavours. There might not be any decorations, or the cakes might be a little bit messy or simple. As a person's baking skills improve, they will be able to make more complicated cakes with different flavour combinations and layers, and the decorations will become more complicated and impressive.

A similar process happens with your HASS skills. In primary school, you started by asking simple questions, but, as you learned more, your questions became deeper and more complex.

FIGURE 4 The process of researching a topic

Identify and understand the general question you are attempting to answer.

Develop a series of specific questions that will help guide your research in the appropriate direction, and help you determine the information you need.

Locate appropriate sources of that information.

Record relevant information from a range of sources.

Present the information in a relevant form.

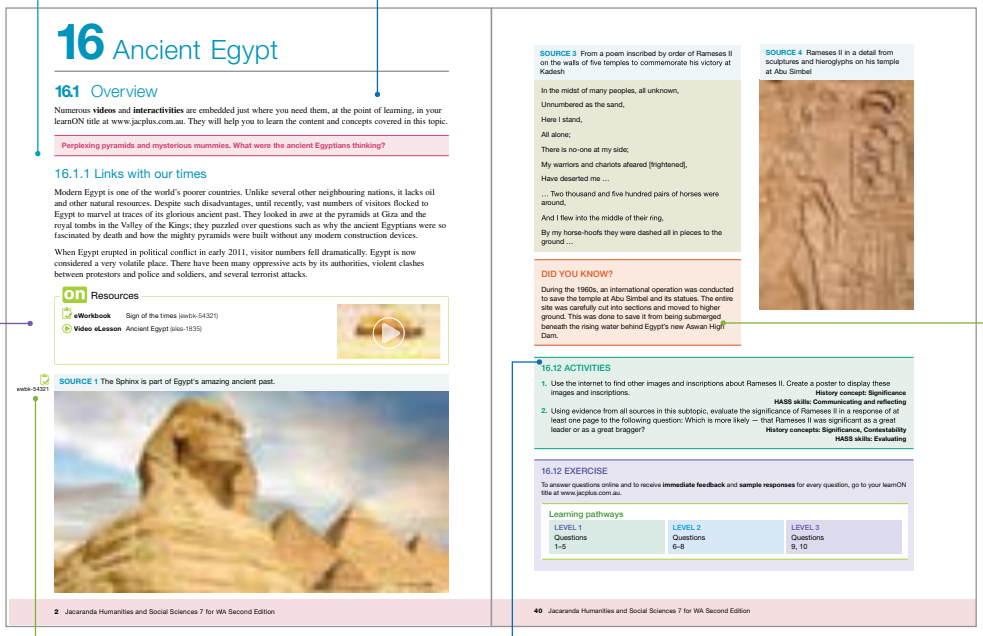
TOPIC 1 Concepts and skills in HASS 5

Topics open with an inquiry question to spark students' curiosity about the topic.

All topics start with an **Overview**, which includes a pre-test to gauge students' existing knowledge.

Explicit discussion of how each year level's concepts and skills link through 7–10 HASS.

Clear links to **HASS** inquiry skills show students how each skill is connected and can be broken down into manageable steps.


16 Ancient Egypt

16.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Perplexing pyramids and mysterious mummies. What were the ancient Egyptians thinking?

16.1.1 Links with our times

Modern Egypt is one of the world's poorer countries. Unlike several other neighbouring nations, it lacks oil and other natural resources. Despite such disadvantages, until recently, vast numbers of visitors flocked to Egypt to marvel at traces of its glorious ancient past. They looked in awe at the pyramids at Giza and the royal tombs in the Valley of the Kings; they puzzled over questions such as why the ancient Egyptians were so fascinated by death and how the mighty pyramids were built without any modern construction devices.

When Egypt erupted in political conflict in early 2011, visitor numbers fell dramatically. Egypt is now considered a very volatile place. There have been many oppressive acts by its authorities, violent clashes between protestors and police and soldiers, and several terrorist attacks.

Resources

eWorkbook Sign of the times (ewbk-54321)

Video eLesson Ancient Egypt (eles-1835)

ewbk-54321

SOURCE 1 The Sphinx is part of Egypt's amazing ancient past.

2 Jacaranda Humanities and Social Sciences 7 for WA Second Edition

SOURCE 3 From a poem inscribed by order of Rameses II on the walls of five temples to commemorate his victory at Kadesh

In the midst of many peoples, all unknown,

Unnumbered as the sand,

Here I stand,

All alone;

There is no-one at my side;

My warriors and chariots afeared [frightened],

Have deserted me ...

... Two thousand and five hundred pairs of horses were around,

And I flew into the middle of their ring,

By my horse-hoofs they were dashed all in pieces to the ground ...

SOURCE 4 Rameses II in a detail from sculptures and hieroglyphs on his temple at Abu Simbel

DID YOU KNOW?

During the 1960s, an international operation was conducted to save the temple at Abu Simbel and its statues. The entire site was carefully cut into sections and moved to higher ground. This was done to save it from being submerged beneath the rising water behind Egypt's new Aswan High Dam.

16.12 ACTIVITIES

1. Use the internet to find other images and inscriptions about Rameses II. Create a poster to display these images and inscriptions. **History concept: Significance** **HASS skills: Communicating and reflecting**
2. Using evidence from all sources in this subtopic, evaluate the significance of Rameses II in a response of at least one page to the following question: Which is more likely — that Rameses II was significant as a great leader or as a great bragger? **History concepts: Significance, Contestability** **HASS skills: Evaluating**

16.12 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1–5	Questions 6–8	Questions 9, 10

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onResources feature boxes provide guidance about additional resources online.

A free, customisable online workbook is provided for each title in the series.

Activities extend student skills and provide classroom practice.

Prompts and support for students who require additional scaffolding.

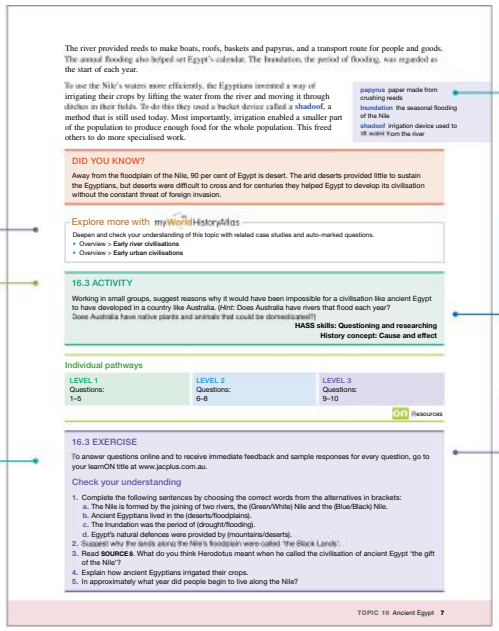
Links to the **myWorld Atlas** and **myWorld History Atlas** are provided throughout.

Activities promote deeper inquiry, encourage collaboration and help students to develop their research skills.

Immediate feedback and sample responses are available online for every question.

Skillbuilders model and develop key skills in context.

In each topic, a **Thinking Big research project** provides opportunities for students to delve deeper, think creatively and work collaboratively,



The river provided reeds to make boats, roofs, baskets and papyrus, and a transport route for people and goods. The annual flooding also helped set Egypt's calendar. The Inundation, the period of flooding, was regarded as the start of each year.

To use the Nile's waters more efficiently, the Egyptians invented a way of irrigating their crops by lifting the water from the river and moving it through ditches in their fields. To do this they used a bucket device called a **shadoof**, a method that is still used today. Most importantly, irrigation enabled a smaller part of the population to produce enough food for the whole population. This freed others to do more specialised work.

papyrus paper made from crushing reeds
Inundation the seasonal flooding of the Nile
shadoof irrigation device used to lift water from the river

DID YOU KNOW?

Away from the floodplain of the Nile, 90 per cent of Egypt is desert. The arid deserts provided little to sustain the Egyptians, but deserts were difficult to cross and for centuries they helped Egypt to develop its civilisation without the constant threat of foreign invasion.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.
- Overview > **Early river civilisations**
- Overview > **Early urban civilisations**

16.3 ACTIVITY

Working in small groups, suggest reasons why it would have been impossible for a civilisation like ancient Egypt to have developed in a country like Australia. (Hint: Does Australia have rivers that flood each year? Does Australia have native plants and animals that could be domesticated?)

HASS skills: Questioning and researching
History concept: Cause and effect

Individual pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions: 1–5	Questions: 6–8	Questions: 9–10

on Resources

16.3 EXERCISE

To answer questions online and to receive immediate feedback and sample responses for every question, go to your learnON title at www.jacplus.com.au.

Check your understanding

1. Complete the following sentences by choosing the correct words from the alternatives in brackets:
   a. The Nile is formed by the joining of two rivers, the (Green/White) Nile and the (Blue/Black) Nile.
   b. Ancient Egyptians lived in the (deserts/floodplains).
   c. The Inundation was the period of (drought/flooding).
   d. Egypt's natural defences were provided by (mountains/deserts).
2. Suggest why the lands along the Nile's floodplain were called 'the Black Lands'.
3. Read **SOURCE 8**. What do you think Herodotus meant when he called the civilisation of ancient Egypt 'the gift of the Nile'?
4. Explain how ancient Egyptians irrigated their crops.
5. In approximately what year did people begin to live along the Nile?

TOPIC 16 Ancient Egypt 7

Definitions are provided within the content to help students understand key terms; online, definitions are included as clickable popup notes.

The development of **skills**, **concepts** and **general capabilities** are clearly identified through activity and discussion labels.

Exercise sets at the end of each subtopic allow students to check and apply their understanding.

A wide range of **engaging sources**, **diagrams** and **images** support learning, and wherever relevant give examples from a WA context.



4.14 SkillBuilder: Analysing and corroborating sources

online

What are the main ancient Egyptian primary sources?

Ancient Egyptian primary sources include pyramids, tombs, temples, mummies, coffins, art and written records on stone and papyrus.

Select your learnON format to access:
- an explanation of the skill (Tell me)
- a step-by-step process to develop the skill, with an example (Show me)
- an activity to allow you to practise the skill (Let me do it)
- questions to consolidate your understanding of the skill.

4.15 Thinking Big research project: Ancient Egyptian archaeological excavation

online

SCENARIO

Apply for a role at an archaeological dig in Egypt. Interested students have been asked to identify sites in Egypt where significant remains could be unearthed during an archaeological excavation, explain what types of traces might be found at these sites, and submit their research as an application.

Select your learnON format to access:
- the full project scenario
- details of the project task
- resources to guide your project work
- an assessment rubric.

on Resources

projectsPLUS Thinking Big research project: Ancient Egyptian archaeological excavation (pro-0228)



FIGURE 1 Thousands of Australian students gathered in climate change protest rallies in March 2019.

DISCUSS

Consider this statement: 'Interest groups should not be able to donate money to political parties in order to try to influence them or help them win power.'
a. What would be the different positions that the following groups of people would have on this issue?
   (i) A Greens politician who has received a large donation from an environmental group to help her campaign
   (ii) A pro-business lobby group that donates to the Liberal party
   (iii) Undecided voters
b. What values and beliefs may influence their differing perspectives?

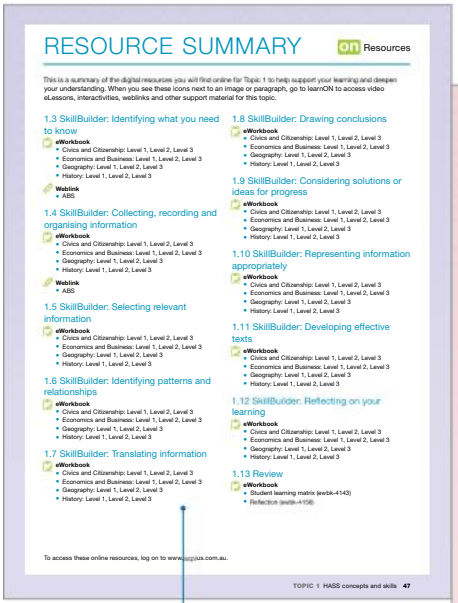
[Ethical Capability, Personal and Social Capability]

19.4.7 Other political party campaign activities

Political parties have a variety of additional campaign techniques that are used in most elections. These include:
- *Letterboxing*. Parties will print and distribute advertising leaflets during an election campaign. These will usually feature a photo and information about the local candidate, as well as information about the party's policies. Local party members then volunteer to walk around the electorate delivering the leaflets to letterboxes.
- *Polling*. As well as opinion-polling companies carrying out surveys of voters' opinions, political parties carry out their own opinion polls, particularly during an election campaign. They want up-to-date feedback on how well their campaign is being received by the voters, whether their policies are popular or not, and how well the leaders are performing. The political parties carry out polling almost every day during an election campaign.

TOPIC 19 Choosing a government 627

Discuss features explicitly address general capabilities, subject concepts and HASS skills.



RESOURCE SUMMARY on Resources

This is a summary of the digital resources you will find online for Topic 1 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

1.3 SkillBuilder: Identifying what you need to know
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3
- Weblink
  - ABS

1.4 SkillBuilder: Collecting, recording and organising information
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3
- Weblink
  - ABS

1.5 SkillBuilder: Selecting relevant information
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

1.6 SkillBuilder: Identifying patterns and relationships
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

1.7 SkillBuilder: Translating information
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

1.8 SkillBuilder: Drawing conclusions
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

1.9 SkillBuilder: Considering solutions or ideas for progress
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

1.10 SkillBuilder: Representing information appropriately
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

1.11 SkillBuilder: Developing effective texts
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

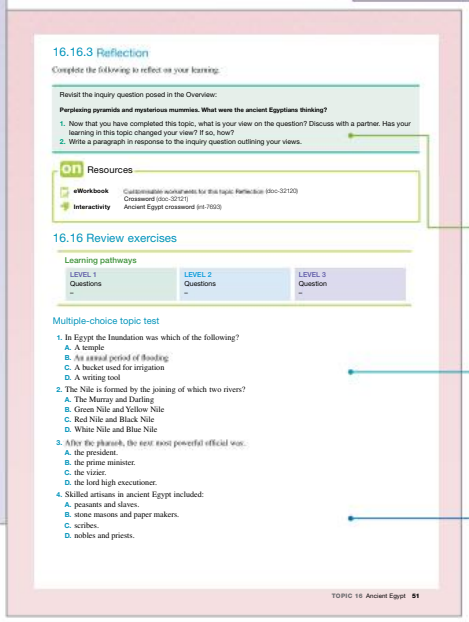
1.12 SkillBuilder: Reflecting on your learning
- eWorkbook
  - Civics and Citizenship: Level 1, Level 2, Level 3
  - Economics and Business: Level 1, Level 2, Level 3
  - Geography: Level 1, Level 2, Level 3
  - History: Level 1, Level 2, Level 3

1.13 Review
- eWorkbook
  - Student learning matrix (ewbk-4143)
  - Reflection (ewbk-4158)

To access these online resources, log on to www.jacplus.com.au.

TOPIC 1 HASS concepts and skills 47

Resource summaries for each topic help teachers and students find online resources easily and quickly.



16.16.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Perplexing pyramids and mysterious mummies. What were the ancient Egyptians thinking?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views.

on Resources

eWorkbook Customisable worksheets for this topic Reflection (doc-32120)
Crossword (doc-32121)
Interactivity Ancient Egypt crossword (int-7693)

16.16 Review exercises

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions: –	Questions: –	Question: –

Multiple-choice topic test

1. In Egypt the Inundation was which of the following?
   A. A temple
   B. An annual period of flooding
   C. A bucket used for irrigation
   D. A writing tool
2. The Nile is formed by the joining of which two rivers?
   A. The Murray and Darling
   B. Green Nile and Yellow Nile
   C. Red Nile and Black Nile
   D. White Nile and Blue Nile
3. After the pharaoh, the next most powerful official was:
   A. the president.
   B. the prime minister.
   C. the vizier.
   D. the lord high executioner.
4. Skilled artisans in ancient Egypt included:
   A. peasants and slaves.
   B. stone masons and paper makers.
   C. scribes.
   D. nobles and priests.

TOPIC 16 Ancient Egypt 51

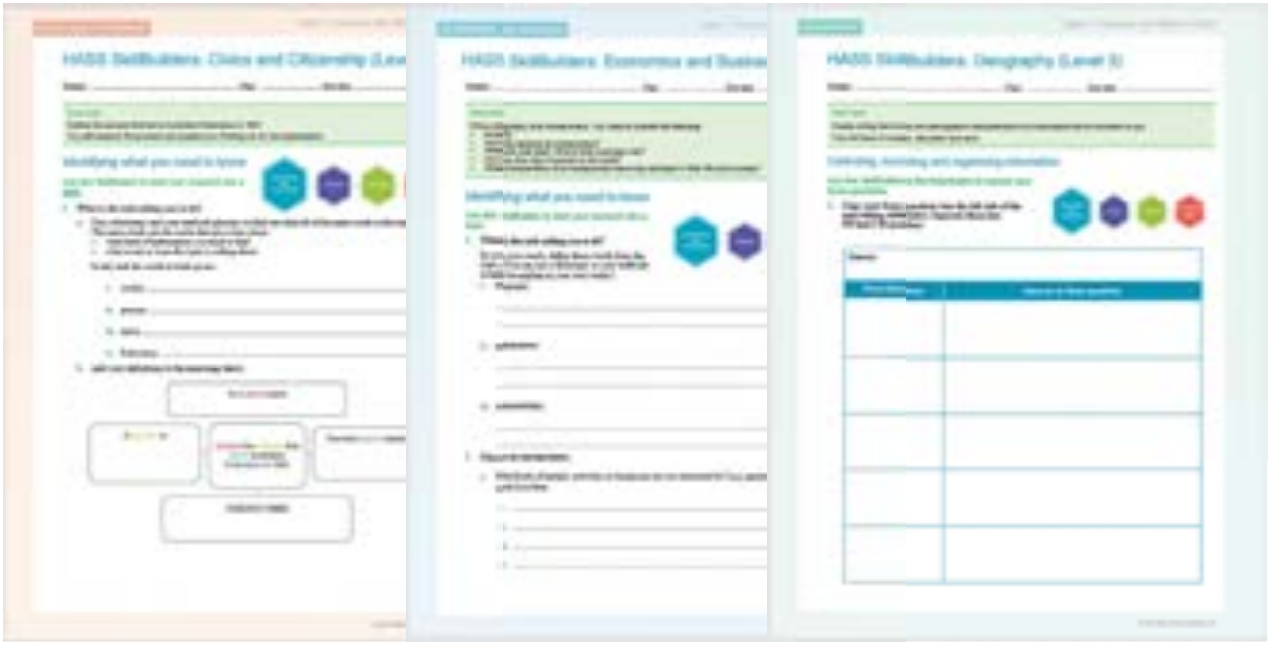
Topic-specific **reflections** help students understand their learning more effectively.

A range of questions and a post-test are available online and in print to test students' understanding of the topic.

Key terms are included in every topic review.

eWORKBOOK

Jacaranda's brand-new *eWorkbook for Humanities and Social Sciences for Western Australia* is available online in learnON. The eWorkbook is the perfect companion to the series adding yet another layer of individualised learning opportunities for students. One of the main features of the eWorkbook is the Level 1, Level 2 and Level 3 individual pathway worksheets for HASS skills topics.



The eWorkbook also features fun and engaging activities for students of all abilities — from introductory activities such as language familiarisation puzzles to structured worksheets to step students through the process of evaluating their own learning — both in terms of the content understanding and skills development. Teachers, students and parents or carers can monitor progress over the course of each topic using the student learning matrix (checklist). All of these powerful resources are available in the new eWorkbook as a downloadable PDF or a customisable Word document in learnON.



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Front cover

The covers of the Jacaranda Humanities and Social Sciences for Western Australia series are the work of WA artist Emma Blyth.



Emma's paintings express a passion for colour, and she has a unique ability in translating Australian culture to canvas. Emma utilises large brushstrokes and vibrant colours to portray scenes from Australia's rugged outback, to the beautiful beaches and forests of the southwest. Emma's art has struck a chord with collectors both nationally and internationally.

Emma is inspired by her own extensive travels and her love of the outback is obvious. She has spent months camping from the back of a ute, with a sketch book in hand.

'Camping on a river under a boab tree surrounded by brolgas, bush turkeys and cockatoos. Whistling kites hovering in the smoke of our campfire. Barramundi jumping as my man catches a mudcrab and cooks it on the coals for dinner. I love capturing the simplicity of life in this unique part of our country on canvas.'

Emma has expanded her range into quality Australian made art prints, gifts and souvenirs. All products are proudly Australian-made — most in her own backyard!

Discover more about Emma's art at https://emmablyth.com.au/

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HASS concepts and skills

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1 HASS concepts and skills

1.1 Key concepts in HASS

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you learn the content and concepts covered in this topic.

1.1.1 Overview

Welcome to Year 7 HASS. This subject is all about you: humans. It's about where we live and how we live. It's also about how and where people lived in the past, how people different from you are living now, and what life might be like for people in the future.

HASS stands for **H**umanities **a**nd **S**ocial **S**ciences. In HASS, there are four subjects:

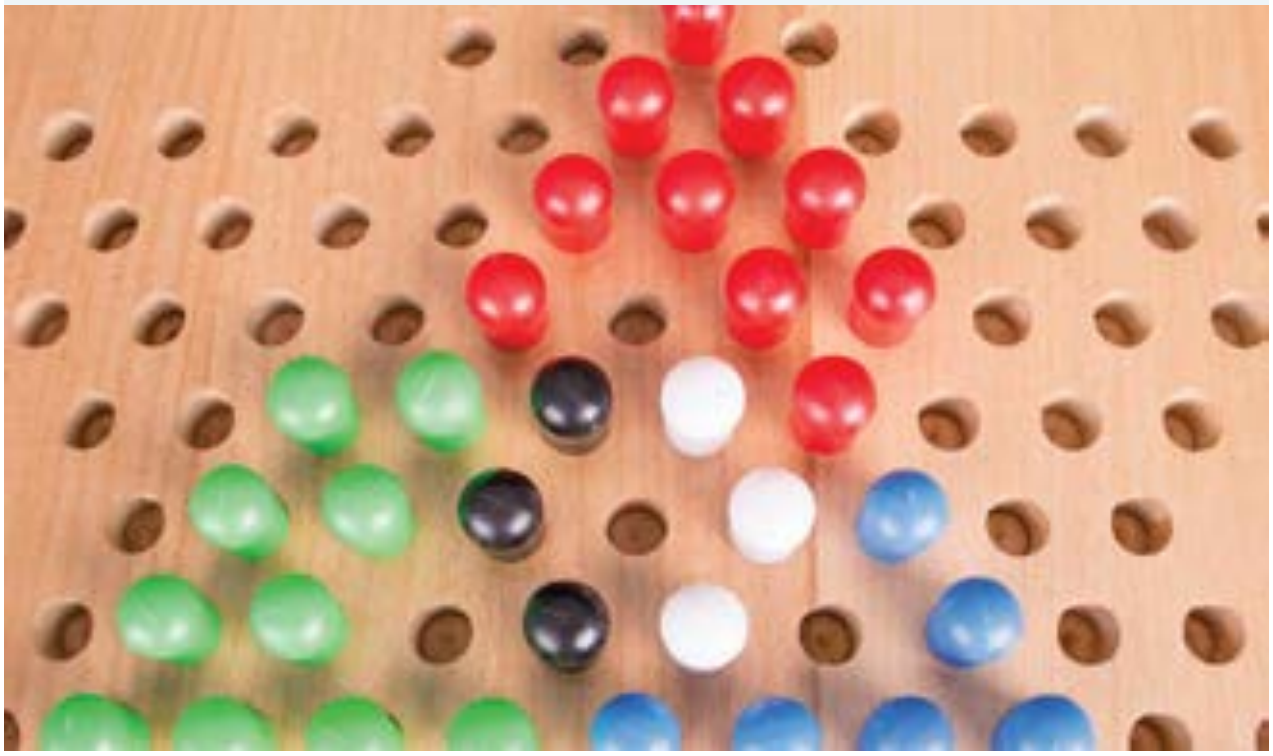
- Civics and Citizenship
- Economics and Business
- Geography
- History.

But HASS isn't just about each of these subjects by themselves; in HASS, you will also explore how these subjects are connected — just like the parts of our world are connected.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4276)

FIGURE 1 Understanding the HASS skills will help you make connections.

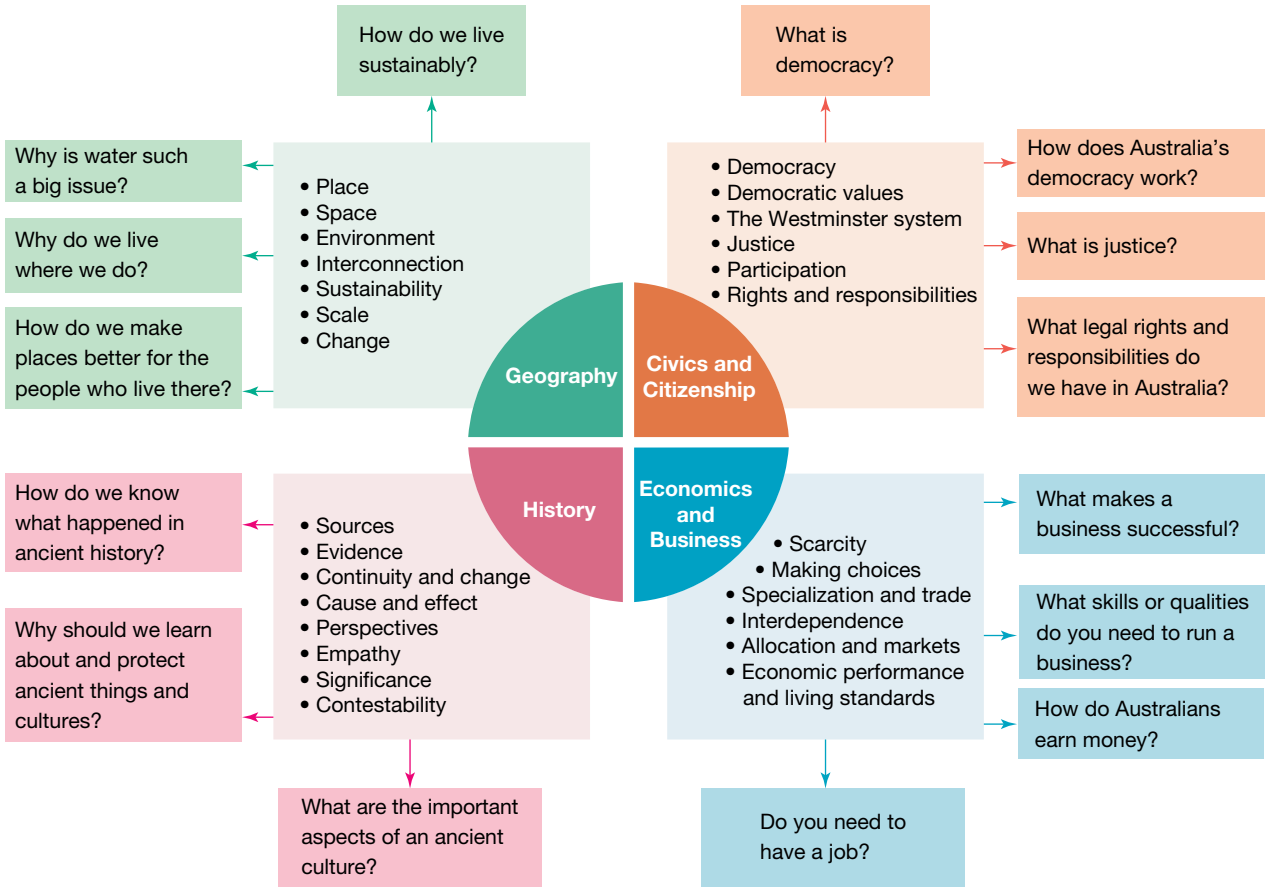


1.1.2 Key concepts in Year 7 HASS

The main concepts (or ideas) in HASS are listed in the diagram that follows. You will get to know what these words mean as you work through each subject this year, and in future years.

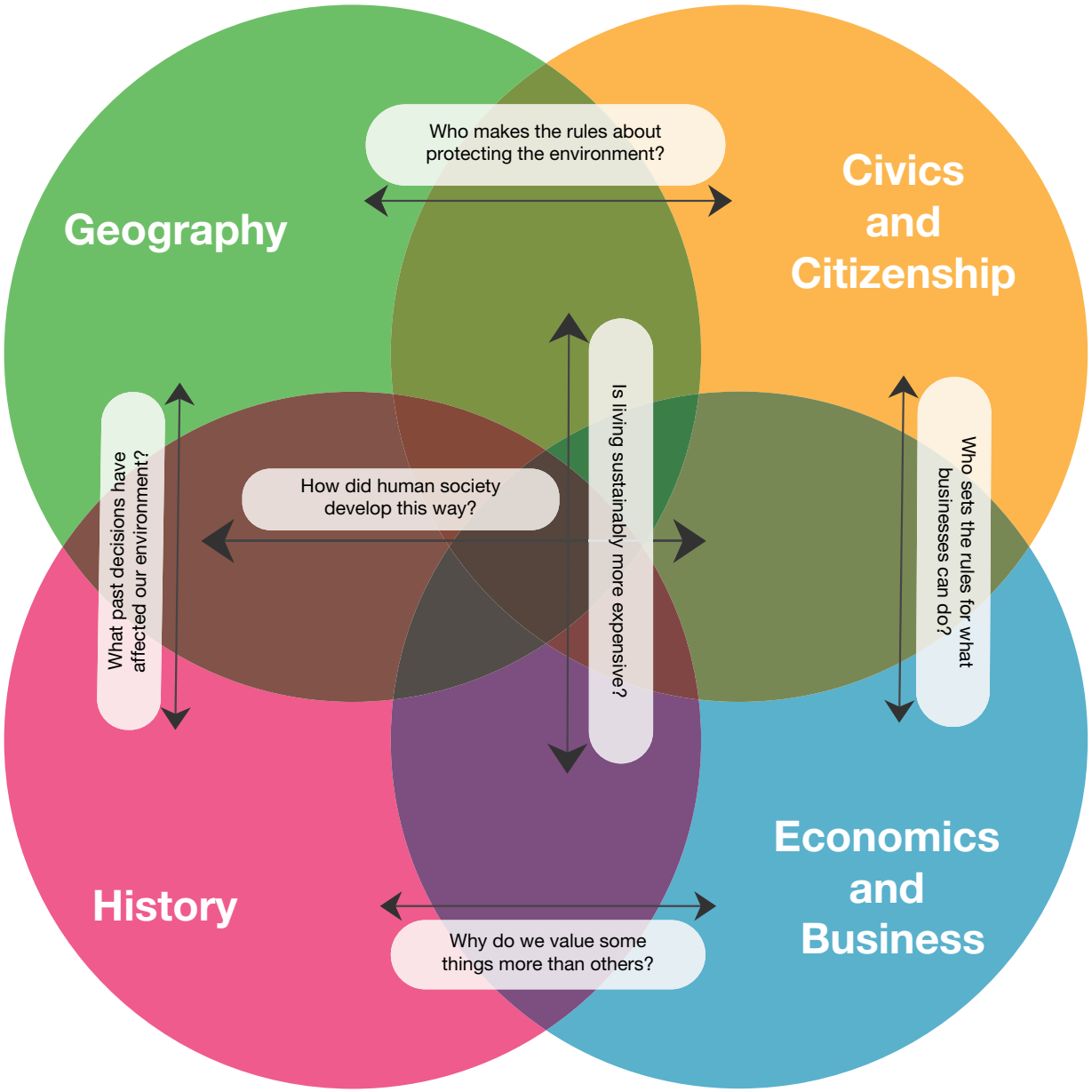
The big questions we try to answer in HASS this year relate to things that affect your everyday life; as individuals, members of teams and families, and members of local and global communities — even if it doesn't seem like they might affect you at the moment.

FIGURE 2 The main concepts in HASS for each subject



Just because there are four subjects within HASS, it doesn't mean they aren't connected. They all connect to each other in many ways. For example, this year, you will explore some of the following connections.

FIGURE 3 The different subjects in HASS are all connected.



1.2 Key skills in HASS

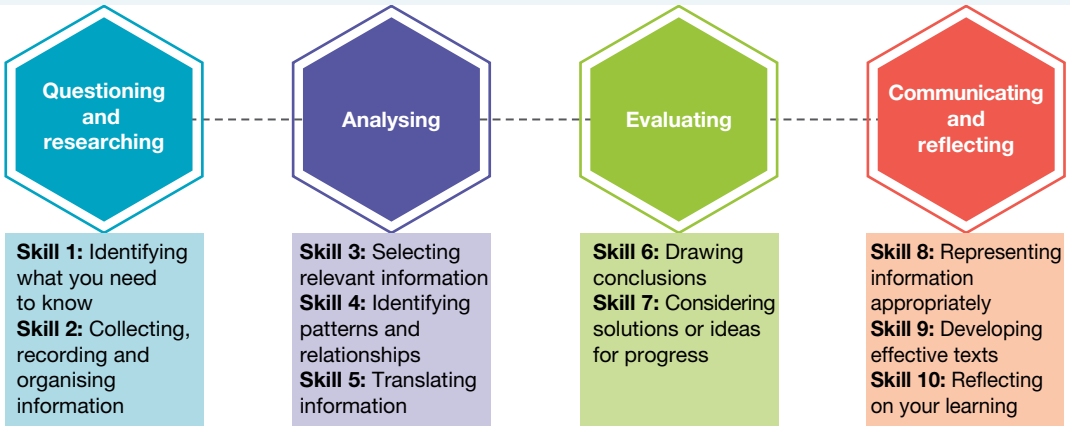
1.2.1 What are the HASS skills?

In HASS, it's important to be curious about the world around you. You will need to investigate and research to learn more about humans and their society.

In primary school, you will have learned some of these skills on a basic level, but as you work through HASS you will learn to use these skills in a more sophisticated or detailed way. You will find the same skills taught in years 7, 8, 9 and 10 HASS, but as you move through school, the level at which you will use these skills will become deeper and more accomplished.

Below is an outline of the four main skills you will learn to help you be more curious, each broken down into a set of smaller steps. Each of these skills will be explained in more detail in this topic.

FIGURE 1 Each HASS skill is made up of a set of smaller skills.



1.2.2 Questioning and researching



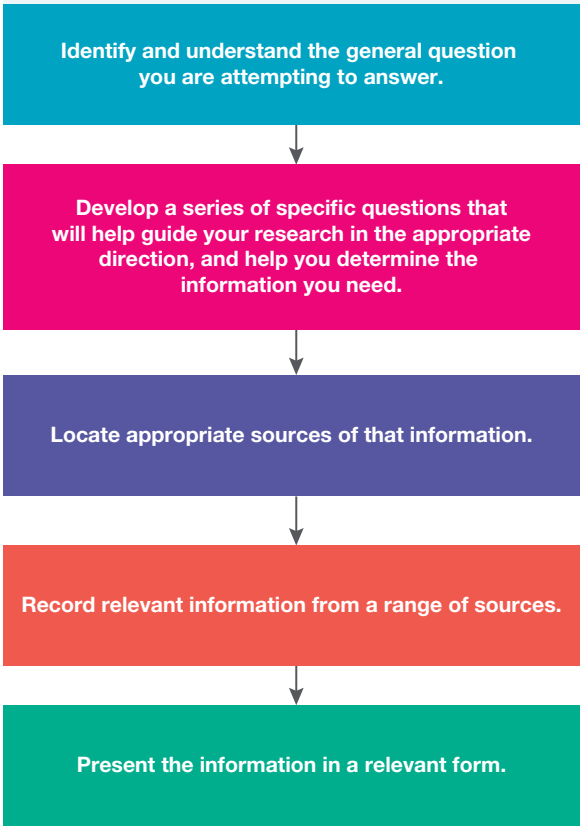
Questioning and researching are connected, multi-step processes.

When you have been given a topic to investigate or a problem to solve, you need to ask good questions to focus your research. Without clear focus questions, it is very hard to find the information you need.

There are two main questioning and research skills you will develop this year across your HASS subjects. You will work on:

- asking good focus questions to improve your research
- ways to check that the information you find is useful, accurate and reliable.

FIGURE 2 The process of researching a topic



1.2.3 Analysing



Analysing is the process of deciding what you are learning from the information you are looking at. Sometimes the information in a source seems easy to find, but for other sources you have to look or think a little deeper.

As a part of this process, you also need to think in more detail about how accurate and reliable the information is. You also need to think about how useful it is. A good way to do this is to look at your hypothesis or focus question and then think about how well you can answer the question or prove your hypothesis using this information.

analysing examining information and opinions closely to see how they are constructed and looking for connections between their parts or with other ideas and opinions

You will be working with many different types of source in HASS this year; for example, maps, written documents, pictures, diagrams and tables of data. Good researchers always consider whether information comes from a **useful source**, an **accurate source** and a **reliable source**. When you look at any source of information — whether it is in HASS, another subject or outside school — you should consider these things.

1.2.4 Evaluating



Evaluating means looking at the information and sources you have gathered, as well as the relationships, trends and viewpoints you have discovered through your analysis. You then come to conclusions about what you have learned and weigh up the benefits or problems associated with possible solutions or actions.

This is the skill where you bring everything you have learned together and make a judgement to answer your hypothesis. Don't be too quick to jump to those conclusions though.

In HASS, you will often find that your evidence leads you to a 'yes, but...', or a 'sometimes' or a 'no, but...' In fact, the more skills you develop in HASS, the more likely you are to reach one of these 'grey area' conclusions. They generally show that you are thinking quite deeply about an issue and can see it from a range of perspectives.

Not having one solution or explanation is a good thing if you can give strong reasons to show why there might be more than one answer to consider.

1.2.5 Communicating and reflecting



Now that you have your notes and your sources of evidence to demonstrate what you have learned, you must think of your audience. For example, if you are creating a poster for your Year 7 classmates, you need to make sure they understand what they are reading and not make it too hard or too easy. You also need to design it in a way they will find interesting. If you are creating a poster for an old person's home, however, you might use a very different design and language.

The final part of any learning process is reflecting on what you have learned. This means looking back at what you have *done* (questioning and researching, analysing, evaluating and communicating) as well as what you have *learned* about the topic you have been investigating.

Reflecting on what went well and what you might be able to do better helps you to learn how to improve your skills and understanding.

1.2.6 HASS skills focus in Year 7

Think of building these HASS skills in the same way you might consider your ability to make a cake. When people begin baking, they start with basic cakes with simple flavours. There might not be any decorations, or the cakes might be a little bit messy or simple. As a person's baking skills improve, they will be able to make more complicated cakes with different flavour combinations and layers, and the decorations will become more complicated and impressive.

A similar process happens with your HASS skills. In primary school, you started by asking simple questions, but, as you learned more, your questions became deeper and more complex.

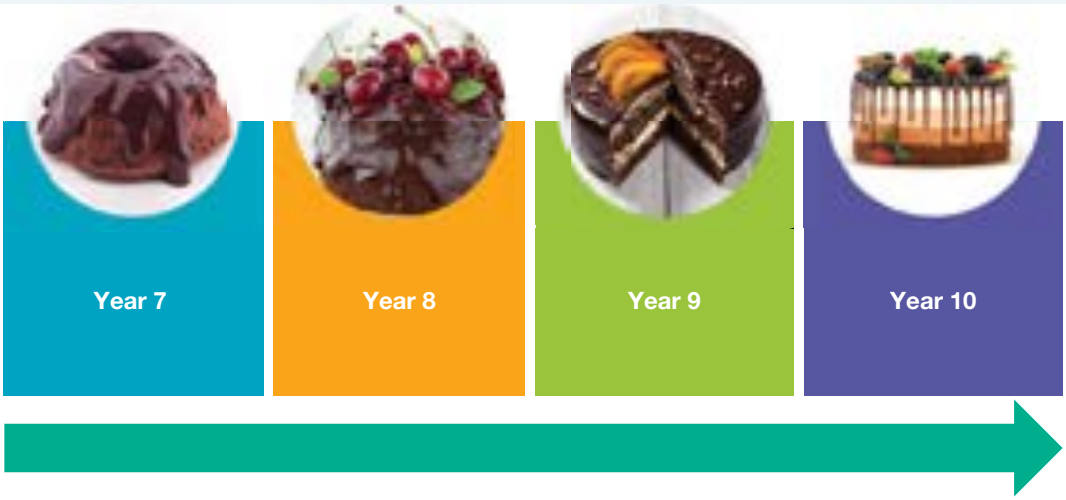
useful source the information helps to answer your research or focus questions

accurate source the information is correct and factual

reliable source trustworthy and well backed-up with strong evidence, able to be relied on

evaluating looking critically at information, including trends, relationships and points of view, to form conclusions or make decisions

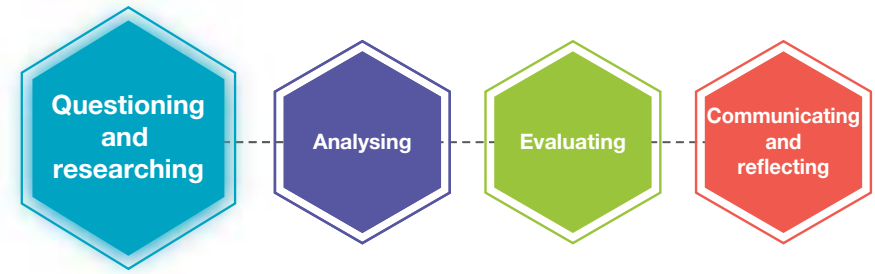
FIGURE 3 Your HASS skills will build in complexity across years 7-10.



1.3 SkillBuilder: Identifying what you need to know

1.3.1 When to use this SkillBuilder

This SkillBuilder develops your questioning and researching HASS skills. Use this SkillBuilder at **the start** of your inquiry process.



1.3.2 Tell me

To **identify** knowledge and perspectives means:

- working out what you know about a topic
- identifying what you believe about a topic or think is true.

Listing what you know and what you think helps you identify what you don't yet know.

Once you know what you need to find out, the best way to look for the answers is to write **focus questions**. This helps you look for the information you need more effectively. Your focus questions will not only help you search for information about what you don't know, they will also help you test whether what you think or believe about a topic is true.



In Year 7 HASS, the focus of this skill is developing focus questions to help you research a topic.

1.3.3 Show me

Imagine you have been given the following topic: Outline why your hometown is the best place to live in Western Australia.

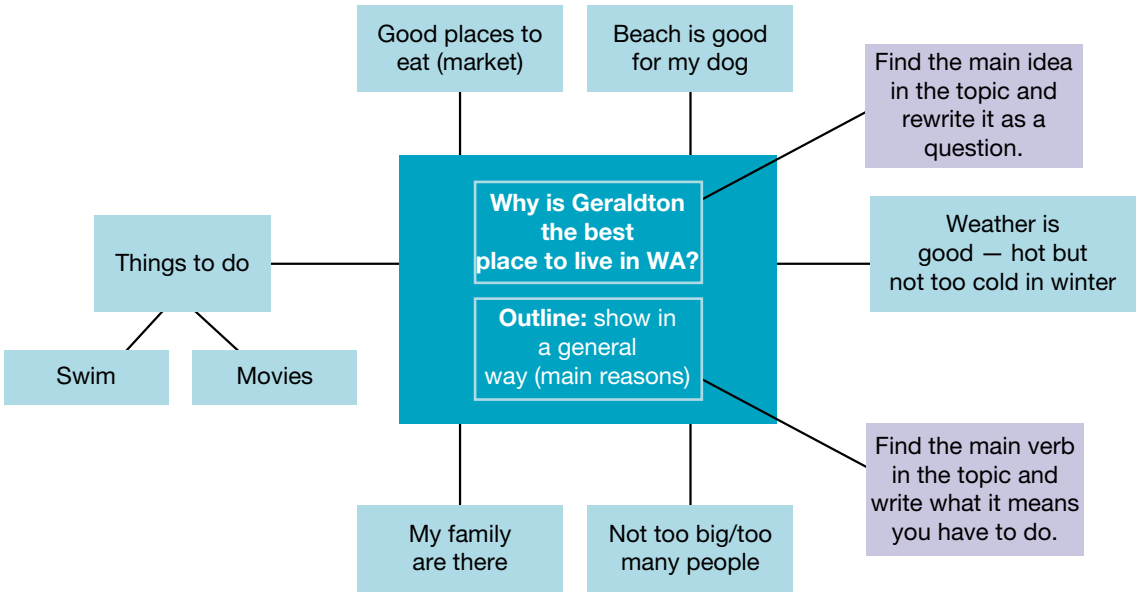
identify to recognise and name
focus questions questions that break a big topic down into its main parts or key areas

Step 1: Identify what you already know or believe.

Find the main idea or event you have been asked to focus on (sometimes rewriting the topic as a question can help you to do this).

- Create a brainstorm of key points or ideas that come to mind when you think about the topic. Think about listing:
  - what you know (fact)
  - what you think you know (possible fact)
  - what you believe (opinion)
  - what others might believe (possible opinion).
- Identify the main verb in the topic and find out what it means — these verbs tell you what you need to do in order to answer the question properly. (Write this in your brainstorm so you remember what the task is.)

FIGURE 1 What a brainstorm of key ideas might look like



WHAT IF I DON'T KNOW ANYTHING?

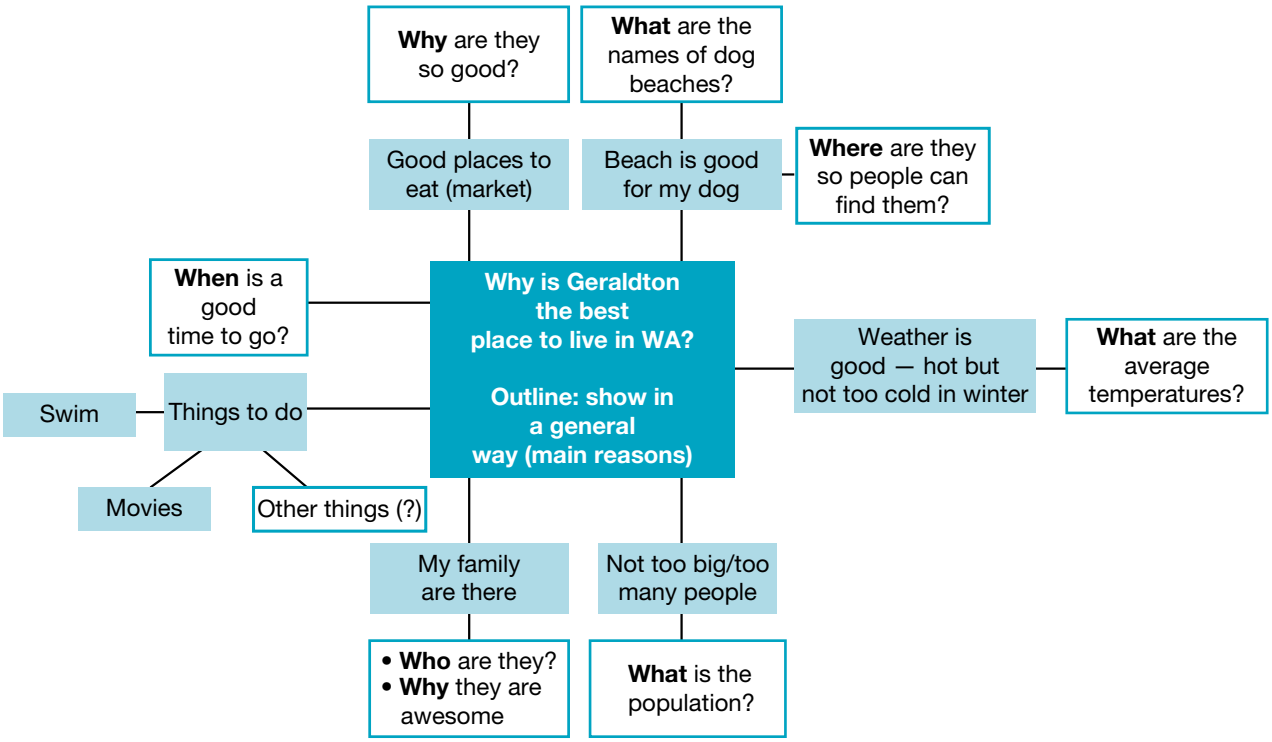
If you feel like you don't know anything about a topic, try some of these tips.

- Think of ways to divide the topic you are brainstorming into parts: in this case, people, places, the environment and things to do.
- Write any words, people or places that you think might be linked to the topic. (Add a ? after an idea if you're not sure it's connected.)
- Write questions (what is that? who is that? where did that happen?)
- Look in the topic for clues or reminders; you could list *place, best* and *Australia* from this topic.
- Go back to your class notes or text to review some of the headings that might remind you of what you have learned.
- Ask yourself: Did I learn something about this last year in HASS? Or in another subject?

Step 2: Identify what you need to know to further your understanding.

- Look at your brainstorm or list. Are there any gaps?
- Use the 5W 1H words (**w**ho, **w**hat, **w**hen, **w**here, **w**hy, **h**ow) to find gaps.
- Add more ideas or questions to your brainstorm in a different colour to fill the gaps.

FIGURE 2 Adding the 5W 1H words to the brainstorm



Step 3: List what you know and what you need to find out.

After brainstorming, create two lists: what you know (but need to fact check), and what you don't know but need to find out.

- Create a table summarising what you already know and what you will need to find out. Try to include details of whether other people might disagree. (Your lists don't need to be very long; but it doesn't matter if there is a lot you need to find out.)
- Use the 5W 1H words to help form your 'What I want to know' questions.

TABLE 1 A summary of brainstorm ideas

What I know	What I want to know
I like the weather (but not everyone does).	What weather do most people like?
I like the size of the town (but not everyone does).	How many people live there?
My family live there and like it.	Why do my family like living there?
There are a lot of different things to do (and dog-friendly).	What things can't you do?
There are a lot of different types of food available.	What kinds of food do most people like? Is it available here?
	What do other people think makes a town good to live in?

Step 4: Write a hypothesis

Based on your list of what you do and don't know, write a **hypothesis**. A hypothesis is an explanation, made on the basis of limited evidence, and is a good basis for a more detailed study or investigation. Anyone who develops a hypothesis is making a guess, based on the evidence they have. When a hypothesis is well supported by solid evidence, we call it a theory.

hypothesis an idea or explanation that is used as a starting point for deeper investigation or research

- With this example topic, you are being asked to *outline*, so your hypothesis should be a single sentence that summarises your ideas.
- If your topic asks you to come to a decision or argue something, your hypothesis will summarise your point of view.

Framing your hypothesis as an 'I think …' sentence can help you to form your ideas more easily. For your final hypothesis, remove the 'I think ...' to make your statement stronger.

TABLE 2 A hypothesis

What I know	What I want to know
I like the weather (but not everyone does). I like the size of the town (but not everyone does). My family live there and like it. There are a lot of different things to do (and dog-friendly). There are a lot of different types of food available.	What weather do most people like? How many people live there? Why do my family like living there? What things can't you do? What kinds of food do most people like? Is it available here? What do other people think makes a town good to live in?
Hypothesis: My town has all the features that make it the best place to live in Western Australia.	

WHAT IF MY HYPOTHESIS IS WRONG?

The point of your hypothesis is to focus your research. It doesn't matter if it is right or wrong. Sometimes when your hypothesis is wrong, it leads to much deeper and more interesting research than if you guessed right from the beginning! A good hypothesis will be easy to argue for and against.

Step 5: Develop focus questions.

After pulling apart the topic into smaller ideas and thinking about it in different ways, you are now ready to write some focus questions.

- Use the 5W 1H process again to break down what you need to research.
- Try to include at least two or three questions from each type.

TABLE 3 Focus questions

What	Where	When	Who	Why	How
What are the average temperatures and rainfall? Are these what people like?	**Where** do people like to eat?	**When** are there events that people might like?	**Who** lives there and what are they like?	**Why** is the town good for families?	**How** do other people decide if somewhere is a good place to live?
What is the population and **what** is it like (ages, jobs, languages)?	**Where** do people work?	**When** is the best time to be there?	**Who** agrees that it's the best place? (Is there data?)	**Why** might other people disagree with me?	**How** well does my town match people's idea of a great town to live in?
What jobs do people do?					

WHAT IF MY QUESTIONS CHANGE AFTER I START RESEARCHING?

Often your questions will change as you go deeper into a topic. If you are half-way through your research and come up with more questions or you need to ask different questions, you can always update your table.

Remember: Writing good focus questions is a many-step process that you will develop over time. Be prepared to practise!

1.3.4 Let me do it

Practise your skills at identifying perspectives and knowledge with the following activities.

- Follow the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Outline the process that led to Australian Federation in 1901.

Economics and Business

Write a biography of an entrepreneur. You need to include the following:

- Early life
- How they became an entrepreneur
- What was their idea? What is their business now?
- How has their idea impacted on the world?
- What characteristics of an entrepreneur have they displayed in their life and success?

Geography

Create a blog that presents **demographic characteristics** of a place that you know well. Use the **ABS** weblink in the Resources tab to find out the demographic characteristics of the area.

demographic characteristics statistics/data about specific people and groups

History

Choose an ancient society that you have studied in class. Create a museum display about your ancient society.

You must cover the following:

- system of government
- daily life
- use of slaves
- religions.

on Resources

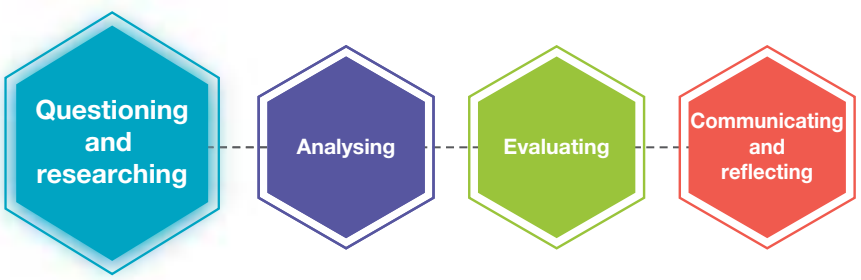
eWorkbook Civics and Citizenship: Level 1 (ewbk-4144), Level 2 (ewbk-4145), Level 3 (ewbk-4146)
Economics and Business : Level 1 (ewbk-4147), Level 2 (ewbk-4148), Level 3 (ewbk-4149)
Geography: Level 1 (ewbk-4150), Level 2 (ewbk-4151), Level 3 (ewbk-4152)
History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

Weblink ABS

1.4 SkillBuilder: Collecting, recording and organising information

1.4.1 When to use this SkillBuilder

This SkillBuilder develops your questioning and researching HASS skills. Use this SkillBuilder **after** you have closely examined your task and your existing knowledge, and identified the range of possible perspectives on the topic. Use this SkillBuilder **before** you start looking for sources of information.



1.4.2 Tell me

This skill involves finding many sources of information to answer your focus questions and fill in the gaps in your knowledge about a topic. This skill also means being able to organise your notes in a way that makes the information easy to use.

Why can't I *just* use Wikipedia?

You might go straight to Wikipedia when you need to answer a question because it's easy, **but** you should *always* check any information you collect from Wikipedia with a source that you know you can trust. Anyone can update Wikipedia entries. Even though Wikipedia has a checking process, not everything on a page might have been checked before you read it!



In Year 7 HASS, the focus of this skill is clearly recording information from different sources to help you research a topic.

1.4.3 Show me

Step 1: Find information from a variety of sources.

To help ensure that your information is correct, you should always use at least two sources to research a topic or question.

- Find different types of sources that answer your focus questions.
- Check you have sources from different authors or organisations.

Imagine you have been asked to write a report that outlines Greta Thunberg's ideas for slowing climate change. After careful brainstorming, you came up with these focus questions and hypothesis.

TABLE 1 Focus questions and hypothesis

What	Where	When	Who	Why	How
What does GT believe we should do about climate change?	**Where** has GT travelled to speak to people?	**When** does GT think effects will get worse?	**Who** are GT's inspirations?	**Why** did GT start her school strike?	**How** did GT become famous?
What has GT done to slow climate change?	**Where** does GT think is the place worst affected by climate change?	**When** did GT start her school strike?	**Who** disagrees with what GT is doing?	**Why** do some people not agree with her?	**How** does GT want people to act?
Hypothesis: Greta Thunberg's ideas to slow climate change are all about making governments and leaders feel guilty about not doing something sooner.					

Type your focus questions into a search engine or library catalogue. Your search will bring up a lot of results, but not all of them are the same types of sources. Good researchers will try to include different types of sources.

Try to use:

- sources that come from at least two different websites or authors/publishers (don't forget sources can be images, videos or audio, not just written)
- **primary sources** and **secondary sources**
- sources that are reliable.

If you search 'Greta Thunberg', there are over 46 million results. The first two are from *Wikipedia* and *Twitter*. Notice that sometimes when you search for topics, you will see the articles organised into different types.

You may find a lot of different articles that seem to answer your focus questions about Greta Thunberg's beliefs and actions, but how do you know that the information is reliable?

primary sources objects and documents that were created or written in the period you are investigating

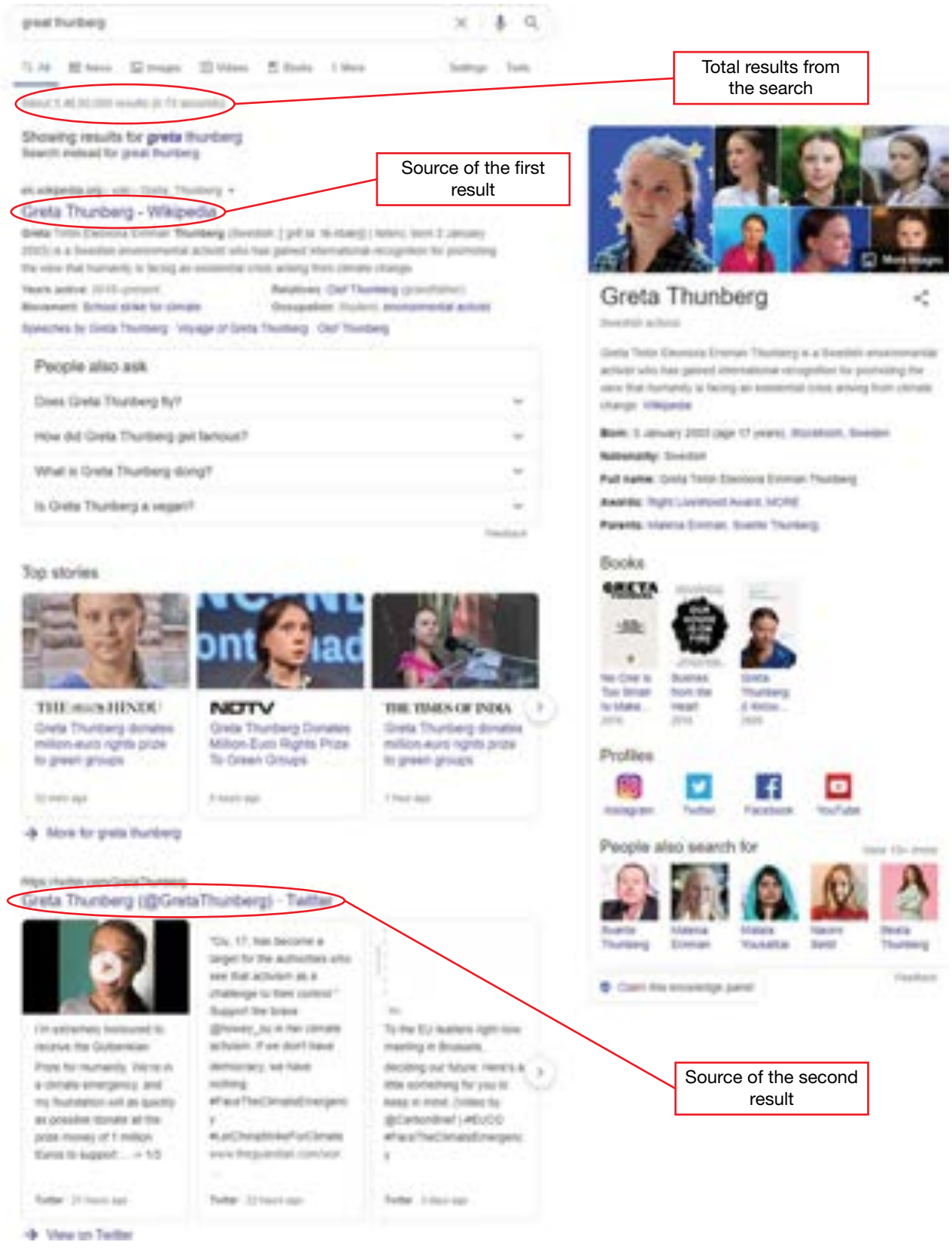
secondary sources reconstructions of the past written or created by people living at a time after the period you are studying

Use the checklist below to check if an online source is likely to be reliable before you use it.

TABLE 2 Quick check: Is your online source likely to be reliable?

	More likely to be reliable	Less likely to be reliable
1. Find the author or organisation	• Person, organisation or charity known for trustworthy information (e.g. the UN or NASA) • Searching the author/organisation online returns detailed information about them and their work • Author/organisation has nothing to gain from you believing them	• No writer or organisation is named • Searching for author/organisation brings up few (or only their own) sites • Author/organisation might gain something from you believing them (e.g. money, votes, sales)
2. Read the headline	Attention-grabbing but language is not emotional (facts, arguments, scientific)	Very dramatic, or over-the top, very emotional language (enemy, hoax, crisis)
3. Look for the article's sources	Lists sources or links to where the information in the article was found	Does not list or link to any sources

FIGURE 1 Overview of the search results for 'Greta Thunberg'



You will look more closely at different types of sources, including primary and secondary sources, in each of your HASS subject areas this year. Different subjects will use different types of sources more often. For example, in Geography you might use more maps than in Civics and Citizenship, or in History you might use more timelines than in Economics and Business.

Step 2: Read your sources carefully.

Examine your source carefully, focusing on finding the answers to your questions.

- Highlight key points.
- Link each highlighted idea to your focus questions.

For example, if you were using this extract from an article of top ten facts about Greta Thunberg from National Geographic Kids, it might look like this when you finished reading.

Notice that there aren't any *notes* yet, only the most important details have been highlighted and numbered to match your focus questions. (Notice the focus questions are there for reference too.)

FIGURE 2 Key points about Greta Thunberg

Keep your focus questions beside you as you read each source.

Who is Greta Thunberg?



What	Where	When	Who	Why	How
What does GT believe we should do about climate change? 1	**Where** has GT travelled to speak to people? 3	**When** does GT think effects will get worse? 5	**Who** are GT's inspirations? 7	**Why** did GT start her school strike? 9	**How** did GT become famous? 11
What has GT done to slow climate change? 2	**Where** does GT think is the place worst affected by climate change? 4	**When** did GT start her school strike? 6	**Who** disagrees with what GT is doing? 8	**Why** do some people not agree with her? 10	**How** does GT want people to act? 12

1) Greta Thunberg is an environmental activist. She was born in Stockholm, Sweden, in 2003. When she was eight, she started learning about climate change. The more she learned, the more baffled she became as to why so little was being done about it.

2) At the age of 11, Greta became so sad about climate change that she temporarily stopped speaking!

3) Greta has Asperger syndrome, a condition that affects how people socialise. But Greta views her condition as a positive, calling it her "superpower"! She says it helps her see the world in black and white, and that there are "no grey areas when it comes to climate change."

4) In August 2018, Greta decided to take action. Instead of going to school she made a large sign that read SCHOOL STRIKE FOR CLIMATE, and sat down outside the Swedish parliament to aim? To make politicians take notice and act to stop global warming.

5) Greta was inspired by teenage activists in Florida, USA, who were protesting to end gun violence. Read more about the protests that Greta inspired!

6) Greta's strike was picked up by the Swedish media, and the word started to spread. Soon enough, tens of thousands of students from around the world joined her Fridays for Future strikes – skipping school on Fridays to protest against climate change.

Number each highlighted part so you know which question it helps to answer (or in a comment or sticky note on a digital page)

6

7

Highlight information in a source that answers your questions.

11

Source: National Geographic Kids UK, published by Creature Media Ltd

Always record the full details of every source

Step 3: Record your information in notes.

Clear and organised notes will help you find the information later. It is important you use the same format for all your notes, as this will help you record your information in a way that is easy for you to understand and find later.

- Make notes in your own words about the information you have found.
- Make sure you have found the answers to all your focus questions.
- Order your notes.

One way you can do this is by handwriting your notes, making sure you use different words and synonyms as appropriate. Writing your notes as dot points, rather than full sentences, helps with this too.

If you are using a computer, it is OK to copy and paste the information into your document but you should always either:

- include all the details of where you found the information or
- re-type it as your own notes underneath the pasted text, making sure you use different words and synonyms as appropriate.

For example, if you were taking notes from the top ten facts about Greta Thunberg from National Geographic Kids, a section of your notes might look like this the example in **FIGURE 3.**

FIGURE 3 Example of notes about Greta Thunberg research

Who is Greta Thunberg?



1) Greta Thunberg is an environmental activist. She was born in Stockholm, Sweden, in 2003. When she was eight, she started learning about climate change. The more she learned, the more baffled she became as to why so little was being done about it.

2) At the age of 11, Greta became so sad about climate change that she temporarily stopped speaking!

3) Greta has Asperger syndrome, a condition that affects how people socialise. But Greta views her condition as a positive, calling it her "superpower"! She says it helps her see the world in black and white, and that there are "no grey areas when it comes to climate change."

4) In August 2018, Greta decided to take action. Instead of going to school she made a large sign that read SCHOOL STRIKE FOR CLIMATE and sat down outside the Swedish parliament. Her aim? To make politicians take notice and act to stop global warming.

5) Greta was inspired by teenage activists in Florida, USA, who were protesting to end gun violence. Read more about the Never Strike protests that Greta inspired!

6) Greta's strike was picked up by the Swedish media, and the word started to spread. Soon enough, tens of thousands of students from around the world joined her Fridays for Future strikes – skipping school on Fridays to protest against climate change.

What	Where	When	Who	Why	How
What does GT believe we should do about climate change? 1	**Where** has GT travelled to speak to people? 3	**When** does GT think effects will get worse? 5	**Who** are GT's inspirations? 7	**Why** did GT start her school strike? 9	**How** did GT become famous? 11
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Use headings so that you know which notes came from which sources

Use headings to separate information from each source.

SOURCE:
National Geographic Kids, published by Creature Media Australia Pty Limited under license from National Geographic Partners.

6. School strike starts August 2018 at Swedish Parliament building

Use your own words or put quote marks around word-for-word information.

7. Inspired by teenagers in Florida (protesting gun violence, not climate)

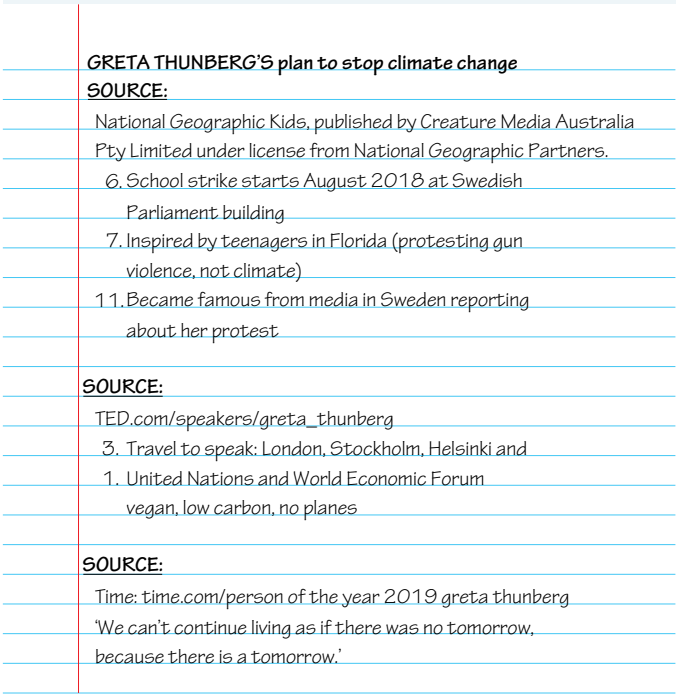
11. Became famous from media in Sweden reporting about her protest

Focus on what will answer your questions — use the focus question numbers to organise your notes.

Source: National Geographic Kids UK, published by Creature Media Ltd

This list doesn't answer all the focus questions yet, and more than one source of information is needed for any research. Keep finding new sources until you can answer all your focus questions.

FIGURE 4 An example of further notes about Greta Thunberg



When you have answers to all your focus questions, put them in order — collect together the notes about each focus question. One easy way to do this is in a table, for example:

TABLE 3 Notes for each focus question

Focus question	Notes	Sources
1. **What** does GT believe we should do about climate change?	Go vegan, no planes, low-carbon use	*Time* magazine
2. **What** has GT done to slow climate change?		
3. **Where** has GT travelled to speak to people?		

EXTEND YOUR NOTE-TAKING SKILLS

When it comes to note-taking, you don't need to invent your own system. Practise your research skills by looking up the following ways of keeping your notes organised.

- Cornell
- Outline
- Mapping

Step 4: Follow ethical protocols or rules.

One of the most important parts of research is to **cite** all your sources. This means that if you use someone else's information or ideas, you need to show what you used, and where and how you used their work.

This rule is important because it helps to show you have not broken the first rule of research: do not **plagiarise**.

- List all the details of every resource you use in your research.
- Include a list of the sources you used in your research in your assignment/work.

cite to give the details of
plagiarise to copy other people's work and present it as though it is your own

WHAT COUNTS AS PLAGIARISM?

Any time you use other people's work (words, images, video or audio) as though it is your own, that is plagiarising — even if it is by accident. When you take notes, you must be careful to rewrite information into your own words or give credit to the sources.

Original text:
Greta's strike was picked up by the Swedish media, and the word began to spread.



Too close:
Her strike was picked up by the media in Sweden, and the news began to spread.



Own words:
Greta became famous around the world after the media in Sweden reported on her protest.

There are many different systems used to show this information. Your school will have a specific referencing format that they use. One of the most common types in HASS is called Harvard referencing.

Notice where you should use full stops, italics and different types of brackets.

TABLE 4 Harvard referencing format

Common reference	How to cite using Harvard referencing format
Books	Author family name, author first name initial. (Year published). *Title of book*. City: Publisher, Page(s). **Example:** Smith, A. (2021). *The life of Greta Thunberg*. Perth: HASS Publishing Emporium, p. 4.
Websites with the author listed	Family name, First initial (Year published). *Page title.* [online] Website name. Available at: URL [Accessed Day Mo. Year] **Example:** Smith, A. (2021). *Developing my skills in HASS*. [online] HASS in WA. Available at: www.HASSEmporiumWA.com.au [Accessed: 21 February 2020]
Website without an author listed	Website name, (Year published). *Page title*. [online] Available at: URL [Accessed Day Mo. Year] **Example:** National Geographic Kids (2020). *Greta Thunberg Facts!* [online] Available at: https://www.natgeokids.com/au/kids-club/cool-kids/general-kids-club/greta-thunberg-facts/ [Accessed: 20 March 2020]

1.4.4 Let me do it

Practise your skills collecting, recording and organising information with the following activities.

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step Worksheet from your online Resources.

Civics and Citizenship

Find useful, reliable and accurate sources that outline the process that led to Australian Federation in 1901 and collect your notes in an organised way.

Economics and Business

Find useful, reliable and accurate sources about your chosen entrepreneur, and collect your notes in an organised way.

Geography

Find useful, reliable and accurate sources about the demographic characteristics of a place that you know well, in addition to the **ABS** weblink in the Resources tab, and collect your notes in an organised way.

History

Find useful, reliable and accurate sources about an ancient society and collect your notes in an organised way.

on Resources

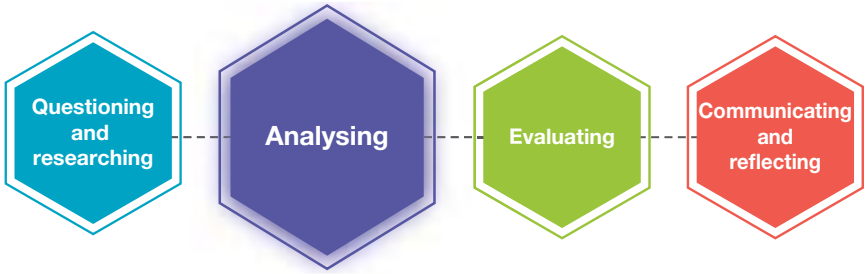
eWorkbook Civics and Citizenship: Level 1 (ewbk-4144), Level 2 (ewbk-4145), Level 3 (ewbk-4146)
Economics and Business: Level 1 (ewbk-4147), Level 2 (ewbk-4148), Level 3 (ewbk-4149)
Geography: Level 1 (ewbk-4150), Level 2 (ewbk-4151), Level 3 (ewbk-4152)
History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

Weblink ABS

1.5 SkillBuilder: Selecting relevant information

1.5.1 When to use this SkillBuilder

This SkillBuilder develops your analysing HASS skills. Use this SkillBuilder **after** you have refined your list of inquiry questions. Use this SkillBuilder **before** you start to make detailed notes from each source.



1.5.2 Tell me

Not all information you collect or notes you make will be directly useful to your task. Some of the information you find might also turn out to be more useful than you first thought. To be useful, information has to be relevant to your topic and your focus questions, but information also might be relevant even if it doesn't immediately seem related.

- If you learn a lot and it helps you answer the question, then it is really useful.
- If you don't really understand what it is saying, or it doesn't answer your question, then it is not useful at all.
- You might find some information that is *somewhat* useful. You will not be able to answer focus questions from only one source, so write down the useful information and keep looking.



In Year 7 HASS, the focus of this skill is finding information that is right for your specific research task.

1.5.3 Show me

Step 1: Identify what you are learning from the information you have found.

Sometimes the information you are looking for is clearly stated in a source, but for many sources you will have to think about what it suggests or hints. This is called making an **inference**.

After you have collected your information, think about what the information suggests.

- Think carefully about your sources, look for details you might have missed or information that is *suggested* rather than stated.
- Think about the task and your focus questions, decide if there is anything you should have researched but haven't yet.

For example, look closely at **FIGURE 1**. Examine the background and foreground. Don't forget the information in the caption is part of the source.

To take all the lessons possible from a source, you need to examine what is there and then consider what it suggests. What can you learn from looking at the source and reading the caption?

inference to infer, or make an inference, is to come to a reasonable decision about what evidence suggests; to make an educated guess

This process is like looking for clues to solve a mystery: what does this source *mean*, rather than only listing what it *shows* or *tells*.

For example, below are some of the clues in **FIGURE 1.**

- It is a photo taken in 1930 in New York City.
- The worker is building a skyscraper.
- The iron worker is a man with a moustache wearing overalls, gloves and a hat.
- He is working many storeys high, sitting on the building frame, but there is nothing to stop him falling off the building — ropes, harness etc.
- The air in the background looks quite smoky or foggy.
- There are wooden planks in the foreground.

What does this suggest? Building skyscrapers in New York in the 1930s was very dangerous work.

FIGURE 1 An iron worker at the Empire State Building construction site, 1930, New York City, USA.



WHAT IF I CAN'T FIND ANY CLUES?

Don't worry about your ideas being wrong or too simple. You're just coming up with ideas at this stage. If you are stuck for ideas, imagine yourself in the scene or event that is being shown or discussed.

- What is good?
- What is bad?
- What would you want to know more about?

EXTEND YOUR ANALYSIS SKILLS: WHAT CAN'T YOU SEE?

Sometimes what is missing from a source tells you just as much as what is there.

1. Make a list of what you can see in the image below.
2. Think about how the same activity or situation might have been different in another time or place, or from a different person's point of view.
3. Based on what you see and what you know, think about what might have caused the difference.

Look again at **FIGURE 1** from the 1930s and think about how a picture of a building site might be different today.

FIGURE 2 Iron workers at the 32nd floor of the Esso Building in New York City, USA, 1954.



For example:

- A building site today would have a lot of power tools. There are no power tools in **FIGURE 1**; the worker is using a hand tool. This might mean: the whole skyscraper might have been built by hand. This is a reasonable inference to make.
- A worker on a building site today would have a hard hat to protect their head and harness to stop them from falling. This worker has no safety equipment but gloves. This could suggest that safety laws have changed since the 1930s, or that some types of safety equipment had not been invented yet.

Use **FIGURE 2** to practise finding the clues to what is missing in a source. (Don't forget the caption is an important part of the source!)

Step 2: Decide how accurate and reliable the information is.

Some sources are more reliable and accurate than others for specific tasks, so you should never use a source unless you know it can be trusted and is suited to the task you are completing.

bias prejudice or one-sidedness; seeing something from just one point of view

- Test your source for reliability.
- Consider the purpose of the source and the creator's perspective (point of view).
- Identify if there might be **bias** in the source.

To test whether the information you have collected from a source is right for the task, use this checklist.

Checklist: Is my source reliable and accurate?

- ☐ **What** type of source is it?
- ☐ **Who** wrote or created this source?
- ☐ **When** was the source created?
- ☐ **Why** was the source created?
- ☐ What **evidence** does the source provide?
- ☐ What was happening at the time the source was created (context)?
- ☐ What is the **perspective** of the source?
- ☐ What **other perspectives** or points of view might people have about the source?
- ☐ What have I **learned** from this source?

For example, which of the following sources would be the most reliable and accurate if you were trying to decide whether your town really is the best place to live in WA?

A table can sometimes help you see which is or isn't most likely to be reliable.

TABLE 1 Organise the information in a table

What is the source?	**FIGURE 3**: Employment data from the Australian Bureau of Statistics (ABS) about your town from the last two Censuses (2011 and 2016)	**FIGURE 4**: An online review from a travel site for backpackers looking for work in regional WA
What is the data?	Unemployment rate (%) 2011: 5.5 Unemployment rate (%) 2016: 8.8	**Heaps of work** Review by: anon. 21 January 2021 Spent two months here packing tomatoes, stayed in backpackers in High Street. Awesome people, heaps of work in the area. See Pete at the co-op in William St for work boots and tips on who's hiring.
What do I know about the source?	• **What:** Unemployment rate data • **Who:** ABS (Aust Govt.) • **When:** 2011 and 2016 • **Why:** Reported in the censuses • **Evidence:** Of the unemployment rate (people without jobs) in the town • **Context:** Census collects information about Australians every five years. • **Perspective:** Neutral reporting of data • **Other perspectives:** People living there or wanting to move would see this as a bad sign. • **Key lesson:** Data show unemployment grew between 2011 and 2016.	• **What:** Online review • **Who:** Anonymous (unnamed) • **When:** 21 Jan 2021 • **Why:** Review • **Evidence:** Of work available as a tomato picker • **Context:** Information for other backpackers looking for short-term work • **Perspective:** Positive experience — found work and loved town • **Other perspectives:** Could see this as negative (taking work from local people), or positive (backpackers bringing in tourist money, maybe there are more jobs now than in 2016?) • **Key lesson:** There is seasonal work in the town being done by tourists — have things changed?
Is it likely to be accurate and reliable?	Very likely to be reliable and accurate **Why: FIGURE 3** is more likely to be accurate and reliable because it was published by a well-known and respected government organisation. It uses data that are recorded and published by the government over time to show trends. This source is less likely to be biased and more likely to be accurate. **But:** It is also over five years old, so it might be out of date.	Less chance of being reliable or accurate **Why: FIGURE 4** was written about the town by a visitor, who stayed in the town for a short time while working there. It doesn't give a broad or long-term view of work in the area, it is just one person's experience. We also don't know who the author is — maybe it's Pete! **But:** It is more recent than the other source, so maybe things have changed? Time to find some more recent data to check.

EXTEND YOUR ANALYSIS SKILLS: IS IT FAKE NEWS?

When you are learning about current events in HASS subjects, you will rely on sources from the news media. The internet makes it easy to access news sources, but has also made it easy for people to post things that are not true. It can be difficult to know what is true.

You may have heard the term 'fake news'. This is information that is false and deliberately misleading. It is designed to change or control a reader's point of view. Fake news can also be called 'disinformation'.

People create and share fake news for political and social reasons; some people even use it to make money. Fake news can also create distrust and disagreement because you may read one thing on a topic and your friend may read another.

Just because someone calls information 'fake news', it doesn't mean that it is 'fake news'; always test the information yourself.

Looking closely at information sources will help you form your own opinions on current topics and will help you learn in an unbiased way.

Practise using the 'Is my source reliable and accurate?' checklist using written sources.

Enter the question 'Is climate change real?' into a search engine.

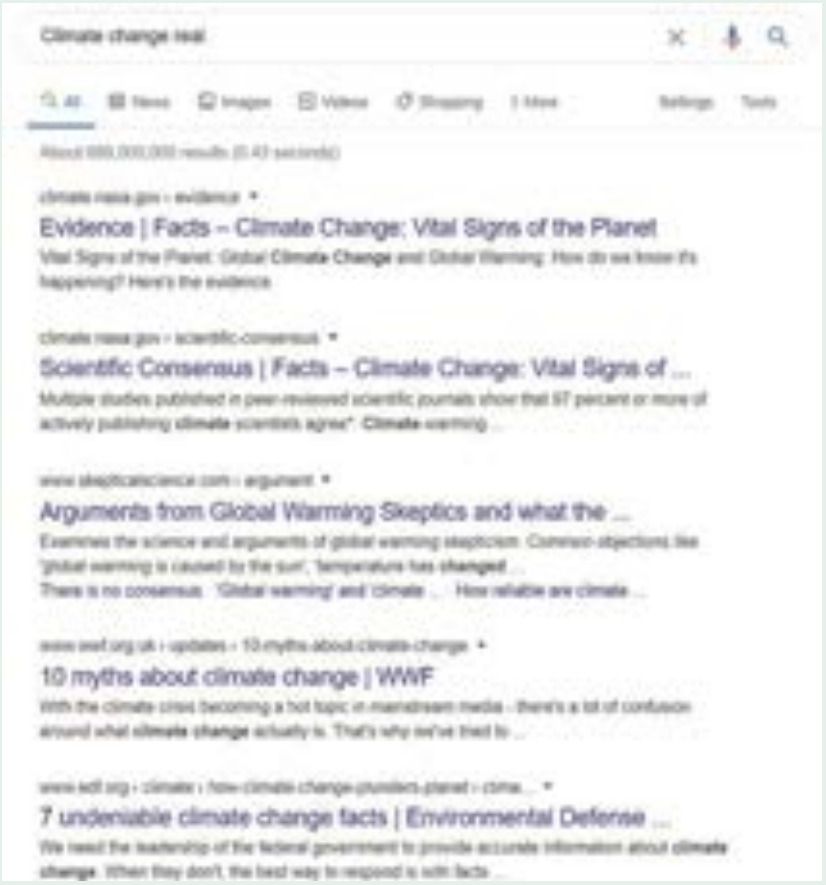
Follow the checklist to decide whether you can trust what you read. If the source does not pass the checklist test, the information may not be reliable.


FAKE NEWS

Where is the economy heading?

The Road to Recovery

This Week Best Investment In Stock Market


Climate change real

Evidence | Facts – Climate Change: Vital Signs of the Planet

Scientific Consensus | Facts – Climate Change: Vital Signs of ...

Arguments from Global Warming Skeptics and what the ...

10 myths about climate change | WWF

7 undeniable climate change facts | Environmental Defense ...

1.5.4 Let me do it

Practise your skills selecting relevant information with the following activities.

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Carefully analyse sources outlining the process that led to Australian Federation in 1901.

Economics and Business

Carefully analyse sources about the life of your chosen entrepreneur.

Geography

Carefully analyse data about the demographic characteristics of a place that you know well.

History

Carefully analyse data about an ancient society.

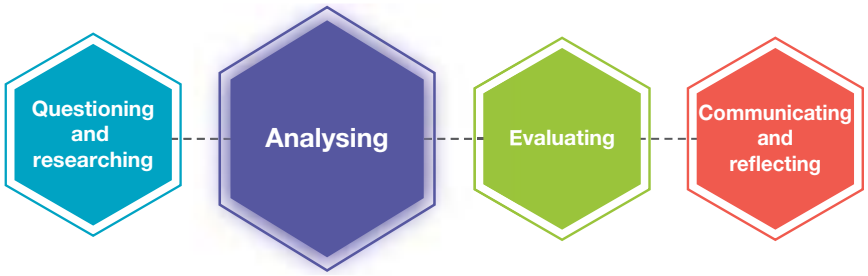
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History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.6 SkillBuilder: Identifying patterns and relationships

1.6.1 When to use this SkillBuilder

This SkillBuilder develops your analysing HASS skills. Use this SkillBuilder **after** you have collected sources that appeared to be reliable and useful. Use this SkillBuilder **before** you start to write your response.



1.6.2 Tell me

When you have decided the source is reliable, accurate and useful, you then need to see if you notice any patterns or relationships between the information and data you have found.

Ask yourself: what information is similar and what information presents a different viewpoint or idea?

Once you have written this information down, explain how these relationships and viewpoints impact on the information and sources you have found. Do they prove or disprove your hypothesis? Do they provide new questions to research?



In Year 7 HASS, the focus of this skill is looking for links (similarities or differences) and patterns.

1.6.3 Show me

Looking for links and patterns can seem difficult but as you practise these skills, they do become easier. Let's have a look at an easy process to help you learn.

Step 1: Identify any relationships or trends that you notice.

Look at your notes carefully. Can you see any connections in the information? Are there similar events that happened at different times or events that had flow-on effects or started a chain reaction? These connections are also called **relationships**.

One example of a relationship you might find within your information is **cause and effect**. A cause and effect relationship is one in which an event or action leads to other things.

A simple example might be if you put money into a savings account, the total goes up. If you take money out, it goes down. There is a cause and effect relationship. Cause: depositing money regularly. Effect: your total savings rise. Cause: withdrawing money regularly. Effect: your total savings go down. A more complex example of a relationship might be the causes and effects of not being able to find a job.

A **trend** is the way something moves in a general direction. Think about saving money, for example: if you keep putting money into a savings account, the total will get bigger, even if you make a withdrawal from time to time. The total is moving in an upward trend if you deposit more than you withdraw over a long time . If you regularly take more money out than you put in, you will see a downward trend in your total savings.

relationship the link connecting two or more people or things

cause and effect the concept that every event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences

trend the direction in which something is developing, moving or changing

FIGURE 1 Issues or events might have many causes and many effects, both positive and negative.

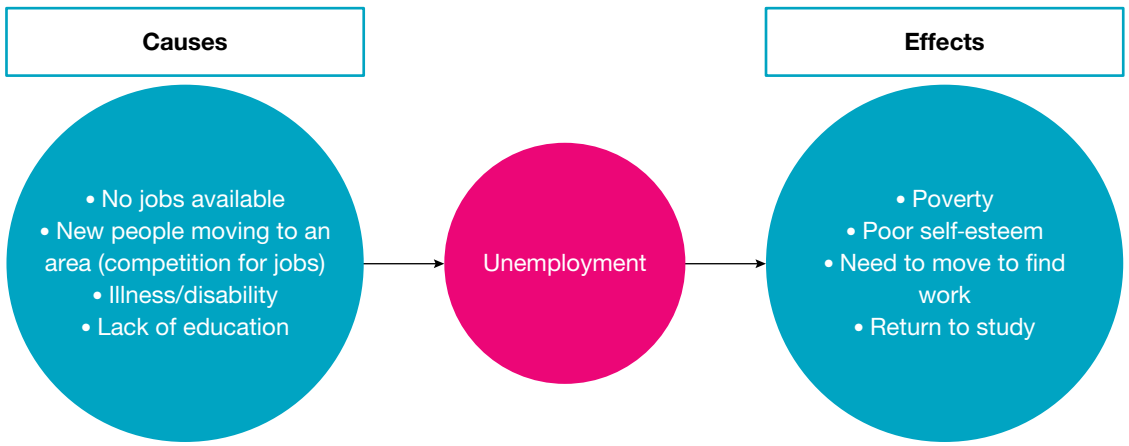


FIGURE 2 There may be some individual results that go up or down, but a trend describes a general or overall direction of change.

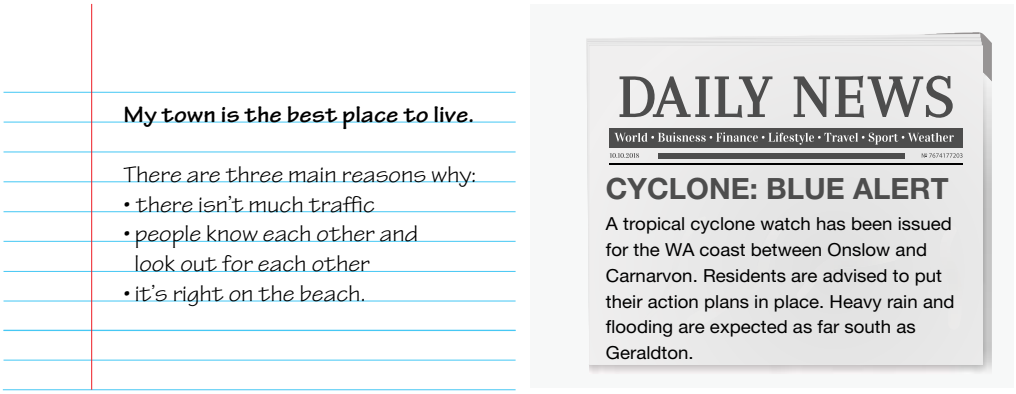


Step 2: Identify different viewpoints and perspectives.

Next you need to look for different viewpoints. For example, if you are researching whether your town is the best place to live, you might believe that it is, but other people may have different ideas. *Your* viewpoint is your perspective.

Other people may think a different town is better. They may prefer to live in a tent in the middle of the desert, or a big apartment in a city. They may not want to risk experiencing a cyclone or being cut-off from town by floods. This is *their* perspective of the topic.

FIGURE 3 New information may affect your perspective.



Step 3: Explain how these viewpoints impact on the information you are looking at.

You now need to think about if considering the points of view of others changes how you think. Do you now think that living in the middle of nowhere sounds great? Or maybe that your town is a bit crowded? Or has looking at others' perspectives made you even more convinced that your town is the best place to live?

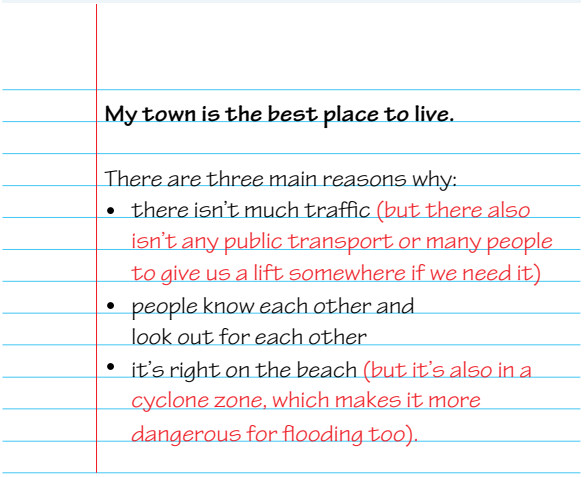
If your perspective has changed, what was it that changed your mind? Maybe it was the fact that you have been camping and it was wonderful. Or you think people raised some issues about your town that you haven't noticed before.

When you analyse a source, consider the following questions:

- What new information is here that supports my view?
- What points of view are shown that are different to my view?
- Why might people believe different things to me?
- Do their reasons change my mind?

A good researcher always keeps their mind open to being shown that their original ideas, or their hypothesis, might not be the only way to look at an issue. A good researcher also understands that what you believe to be true about an issue, or how you feel, depends on your perspective.

FIGURE 4 Consider how hearing someone else's perspective might make you think differently.



1.6.4 Let me do it

Practise your skills finding patterns and relationships with the following activities.

For more help with this activity:

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Find relationships or trends in the process that led to Australian Federation in 1901. Think about the other perspectives people may have had about Federation.

Economics and Business

Find relationships and trends between the characteristics of entrepreneurs and how successful they have been in their businesses.

Geography

Find relationships and trends between different demographics of the place you know well. For example, are there lots of schools in areas where there are lots of school-aged children?

History

Find relationships and trends between the different aspects of your ancient society. For example, does the system of government allow the ownership of slaves?

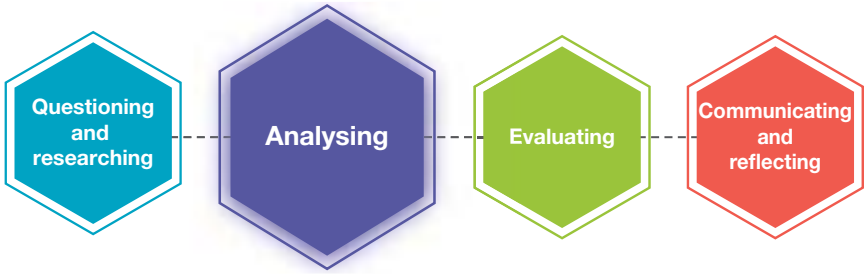
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History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.7 SkillBuilder: Translating information

1.7.1 When to use this SkillBuilder

This SkillBuilder develops your analysing HASS skills. Use this SkillBuilder **after** you have collected sources that appeared to be reliable and useful. Use this SkillBuilder **to start writing** your response.



1.7.2 Tell me

When you present your information, you need to write it into your own words and present it in the way that gets your message across most clearly.

This shows other people reading it that you haven't copied someone else's work and that you understand what you are talking (or writing) about. By using subject specific words, you are also showing your audience you understand the topic you are presenting. It helps you to be more precise and exact with your ideas too.

Translating information is also about finding the right way to show your information. This might mean showing data sets in graphs or tables or creating a diagram or chart to show information.



In Year 7 HASS, the focus of this skill is finding the right way to show your information.

1.7.3 Show me

Putting information into your own words is important because it helps you understand the information in a different way. Again, this takes practice, but use these steps and it will become easier.

Step 1: Present the information you found in your own words.

As we said in the introduction, you need to present information in your own words to show you have understood what is being said and what you learned. It is also important because you don't want to plagiarise someone else's work. The author worked hard to write their information in their own words and it's not fair if someone else takes credit for it.

While you may have taken care not to copy other people's words in your notes, before you start writing it is a good time to:

- look up words that you wrote down in your notes but don't really understand
- include all the correct technical or subject-specific terms.

FIGURE 1 When you think deeply about an issue, you will see both sides of the story.



Step 2: Create diagrams or visuals to show information, if needed.

Sometimes you will need to present information and evidence in different ways. This could be to show similarities and differences between relationships, or to present data and statistics that help prove your hypothesis.

What you need to notice in this step is the phrase 'if needed'. Sometimes people will make graphs and charts because they look good but which actually don't supply the information that is needed to prove the hypothesis. So, if you decide you need a diagram or visual aid, make sure you know what it is trying to prove. One informative and clear diagram is much better than several pretty diagrams that don't say a lot.

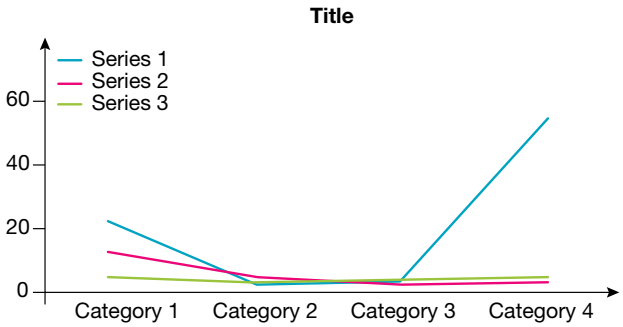
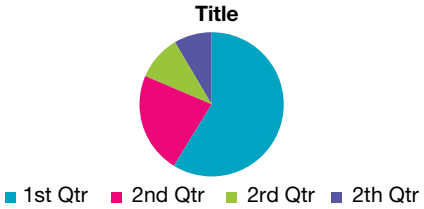
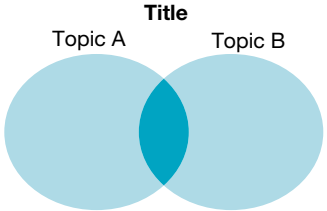
Even with a diagram, you need to include all the details to show where your information was sourced.

WHAT IF I DON'T KNOW WHICH FORMAT IS BEST?

There are many examples of different visuals in your textbooks or in reliable online sources. If you have a data set or piece of information that you want to show visually, look for a similar data set or pieces of information to see what kind of format works. You shouldn't copy the style and design of the example, of course, but you can use examples to help you decide which format works with which types of information.

Some diagrams or visual aids you could be asked to use include:

TABLE 1 Examples of diagrams and visual aids

Type	What it looks like	Examples of what it might show
Flow chart		Processes, step-by-step instructions, to show that one event or thing leads to or causes another
Graph		Trends (patterns of change over time) and comparing data
Hand drawing		Diagrams, field sketches, often with labels to highlight important features
Map	 ***Source:*** Spatial Vision	Directions, landscapes
Pie chart		Parts or percentages of a whole
Venn diagram		Similarities and differences between two or more things

1.7.4 Let me do it

Practise your skills finding the right way to show your information with the following activities.

For more help with this activity, you might:

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Carefully review the information you have collected and the observations you have made about the process that led to Australian Federation in 1901. Find the best way to divide and show this information.

Economics and Business

Carefully review the information you have collected and the observations you have made about your entrepreur. Find the best way to divide and show this information.

Geography

Carefully review the information you have collected and the observations you have made about the area. Find the best way to divide and show this information.

History

Carefully review the information you have collected and the observations you have made about the ancient civilisation. Find the best way to divide and show this information.

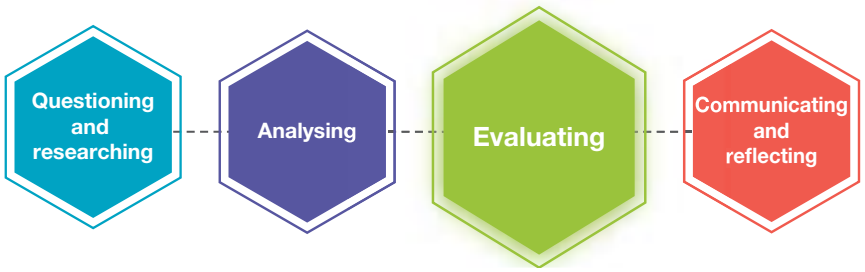
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Economics and Business: Level 1 (ewbk-4147), Level 2 (ewbk-4148), Level 3 (ewbk-4149)
Geography: Level 1 (ewbk-4150), Level 2 (ewbk-4151), Level 3 (ewbk-4152)
History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.8 SkillBuilder: Drawing conclusions

1.8.1 When to use this SkillBuilder

This SkillBuilder develops your evaluating HASS skills. Use this SkillBuilder **after** you have collected sources that appear to be reliable and useful. Use this SkillBuilder **to start writing** your response.



1.8.2 Tell me

Drawing conclusions means making a judgement or decision about what you have learned. The answer isn't always obvious. Sometimes the answer isn't a clear 'yes or no', 'right or wrong' or 'less or more'. Humans and human society are often a little more complicated than that.



In Year 7 HASS, the focus of this skill is forming a point of view: what do you think or believe?

1.8.3 Show me

Through your analysis and drawing conclusions from your analysis you can now form your own point of view. This may be the point of view you had right from the beginning or it may be completely different. You just need to make sure it is an *informed* point of view.

An informed point of view is one based on reliable evidence, clear examples and well-explained ideas.

Step 1: Look for problems or issues related to the topic or your research.

Look back over your research. Can you see any problems? Could one of your sources be unreliable and you missed it? There may be an issue that you have not noticed. Will this change the overall analysis of your information?

Read through the notes you have taken. There may be something you still aren't clear about. This is an issue with your research. Go back to your source and re-read it. You will need to re-write that dot point so that it is clear and informs your decision making.

HAVEN'T I DONE THIS ALREADY AT OTHER STAGES?

Remember researching and communicating your ideas is a circular process; you might have to go back to check sources a few times to answer all your questions properly.

Step 2: Decide whether your hypothesis was right.

Now that you have resolved the issues and problems with your research or the topic, look back at your hypothesis. Were you right? Is your hometown the best place to live? Or is somewhere else better or just as good?

When you present your argument, you need to link back to your hypothesis and say if you were right or wrong. You also need to say *why* you were right or wrong.

One way of doing this is to create a PMI chart.

- The **P** is a list of all the 'pluses' (good outcomes or benefits — on the positive side).
- The **M** is a list of all the 'minuses' (the bad outcomes or negatives — the minus side).
- The **I** is a list of what is still 'interesting'— the questions or ideas that you know are important or relevant, but you can see how they might fit on both the P and the M sides. (These are often your 'grey areas' that might not have an answer at all. They might be both positives and negatives at the same time.)

For example, if you were creating a PMI to consider whether your research supported your hypothesis that your hometown was the best place to live in WA, you might list some of these variables.



P	M	I
Warm weather with regular rainfall	Unemployment going up	Mining and fishing industries
Cheaper houses than Australian average	Can flood / have cyclones	Growing tourist industry
Strong farming industry	Long drive to next main town	

1.8.4 Let me do it

Practise your skills assessing your hypothesis and drawing conclusions with the following activities.

For more help with this activity, you might:

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Carefully evaluate the information you have collected and the observations you have made about the process of Federation.

Economics and Business

Carefully evaluate the information you have collected and the observations you have made about your chosen entrepreneur.

Geography

Carefully evaluate the information you have collected and the observations you have made about the best place to live in WA.

History

Carefully evaluate the information you have collected and the observations you have made about your chosen ancient society.

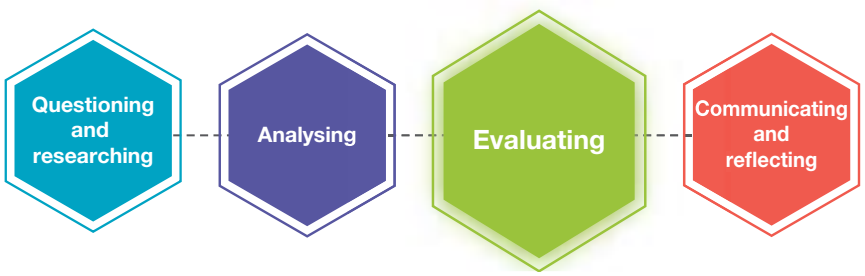
on Resources

eWorkbook Civics and Citizenship: Level 1 (ewbk-4144), Level 2 (ewbk-4145), Level 3 (ewbk-4146)
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Geography: Level 1 (ewbk-4150), Level 2 (ewbk-4151), Level 3 (ewbk-4152)
History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.9 SkillBuilder: Considering solutions or ideas for progress

1.9.1 When to use this SkillBuilder

This SkillBuilder develops your evaluating HASS skills. Use this SkillBuilder **after** you have collected sources that are reliable and useful. Use this SkillBuilder **to start writing** your response.



1.9.2 Tell me

One of the things you can be asked to do is provide a solution to a problem or how to move forward from one place to another. There may be many solutions and you might be unable to settle on just one. This is fine. Just make sure you outline all the good solutions and why you wouldn't just pick one of them. Maybe one solution would work in one place but not in another. Maybe two solutions will help solve the problem. Just be clear in your explanation.

Sometimes there may be one clear solution. Again, explain the solution and why it is the best one. Or there may be no clear solution but some ways that can make things better than they currently are. This is generally true for really complex problems, like climate change. Explain why there is no one clear solution but outline the ideas on how you can move forward.



In Year 7 HASS, the focus of this skill is weighing up the costs and benefits of change.

1.9.3 Show me

Use the steps below to clarify if there are clear solutions or just ideas for change. A solution is a change that will solve a problem. An idea for change might not make things better or worse for everyone, it might just make things different.

This can seem overwhelming at first: thinking logically and following a process will really help you get better at it.

Step 1: Think of possible solutions to problems, or ideas for change.

Using the information and data you have collected, brainstorm lists of solutions or ideas for change. Once you have written as many as you can think of, go back and look at each one.

- Ask yourself if it would work — why or why not?
- If it wouldn't work, cross it off your list and write a brief reason why.
- If it would work, put a tick next to it and a brief reason why.
- If it is a possible, put a question mark next to it and a brief reason why.

Work through the list until you have solutions or ideas for change that seem possible, then identify the effects these ideas or solutions would have. The effect is the change that would take place if the idea or solution were used to fix the problem. These can be positive, negative or neutral (no change).

Decide which of these they would be and briefly explain why. Ideally good solutions and ideas will have a positive or neutral effect on the problem. A negative effect just makes the problem bigger.

Step 2: Weigh up whether the effects are worth the consequences.

When you have discarded ideas that would have negative effects, it's time to look at the positive and neutral effects of the remaining solutions. This is when you ask yourself: 'Is it worth it?'

How will people and the environment involved be affected or changed? If it is positive, then it is worth the consequences. Sometimes if the effects are neutral, you need to think about if it is worth implementing the solution at all. Over time, will the change become positive or negative?

FIGURE 1 Considering solutions means weighing up the positive and negative effects.



One way of weighing up the effects is a cost–benefit analysis. A **cost–benefit analysis** is a detailed examination of the strengths and weaknesses of different alternatives to see whether the benefits outweigh the costs. The idea behind a cost–benefit analysis is that you should decide to act on an alternative only if the benefit is greater than the cost.

A good cost–benefit analysis:

- identifies potential need for change
- suggests actions to make the change
- calculates the costs and benefits of each action
- compares the costs and benefits to determine if the benefits outweigh the costs
- makes a decision about the best alternative to recommend.

For example, if you decide after your research that your town might not be the best place to live in WA after all, you might want to consider some suggestions for how to improve life for everyone who lives there.

cost–benefit analysis an examination of the strengths and weaknesses of different options in order to see if the benefits are greater than the costs

What we need to change: We have a higher crime rate than most towns in Australia.

TABLE 1 Cost–benefit analysis

Possible actions	Costs	Benefits
More police		
More things for people to do		
More jobs and help for people who don't have much money		

1.9.4 Let me do it

Practise your skills thinking of solutions to problems and weighing up ideas for change with the following activities.

For more help with this activity, you might:

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Evaluate whether the process that led to Australian Federation was successful, and whether it might have had better outcomes for some groups.

Economics and Business

Evaluate whether the entrepreneur you have researched is a positive role model for young people wanting to start a business.

Geography

Carefully review the information you have collected and the observations you have made. Based on what you have learned, suggest one change that might be made in the area to improve life for the people who live there. Explain the consequences of this change and what impact you think it would have.

History

Carefully review the information you have collected and the observations you have made. Suggest how life could have been improved for one group of people in that society. Explain the consequences of the change and the impact it would have had on the society as a whole.

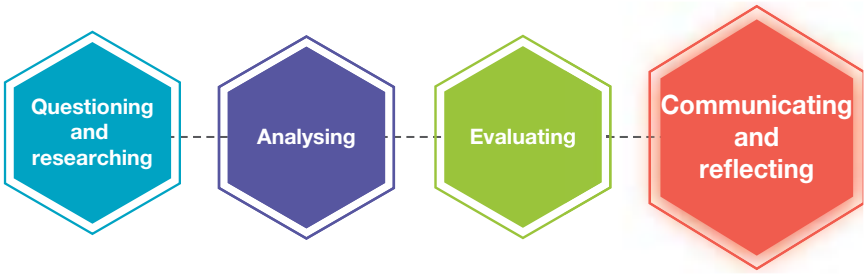
on Resources

eWorkbook Civics and Citizenship: Level 1 (ewbk-4144), Level 2 (ewbk-4145), Level 3 (ewbk-4146)
Economics and Business: Level 1 (ewbk-4147), Level 2 (ewbk-4148), Level 3 (ewbk-4149)
Geography: Level 1 (ewbk-4150), Level 2 (ewbk-4151), Level 3 (ewbk-4152)
History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.10 SkillBuilder: Representing information appropriately

1.10.1 When to use this SkillBuilder

This SkillBuilder develops your communicating and reflecting HASS skills. Use this SkillBuilder **to help with creating** your response.



1.10.2 Tell me

Representing information appropriately is making sure you are saying what you want to say in the right way. There is no point representing the government system of Ancient Rome as a graph. The information will make no sense. However, if you represent the different parts of the government system in a diagram that shows how it works, people will understand what you are saying and they will learn from it.

You need to look at what you are being asked to do, your hypothesis and your information. What is the best way to make sure you are addressing all three of these things? This could be something like an infographic, a persuasive text or an oral presentation with a PowerPoint of key information.



In Year 7 HASS, the focus of this skill is information clearly.

1.10.3 Show me

For the skill of showing information clearly, you need to remember your audience. To present information clearly is to make it easy for them to understand and interesting for them to read or listen to. The aim is for your audience to learn something.

Step 1: Choose the right way to let others know what you have discovered.

By now you are going to have plenty of information that will prove or disprove your hypothesis. But you will only have a certain number of words, space or time to present your information. You will need to look back over it and decide what you want the audience to know. You know from your research what information is reliable and accurate so that part is done but now you need to select the important information.

Ask yourself, what information answers the questions? What information best presents your viewpoint? Once you have decided, highlight or tick those key points and diagrams. Now copy and paste them or write them into your presentation.

A word of warning: In the same way much of the information you read on the internet provided a very specific perspective, you need to be careful that your perspective isn't the only viewpoint presented. Make sure you include some other views as well. You want people to learn but also to make up their own minds in an unbiased way.

FIGURE 1 Before you present information, you need to decide which information to include and how to present it.



Step 2: Identify the best ways to show data and sources.

Once you have done this, think about the best way to present the information. Often your teacher will tell you what form your communication could take. Some examples and tips for how to use them are included below.

Since you are in Year 7 you will have plenty of time to practise. If you are able to choose your format, try different styles. This allows you to find what interests you and to practise at the same time

TABLE 1 Different ways to present your information

Format	Top tips
Oral presentations	• Speak slowly and pause between ideas. • Use only key information in your PowerPoint. (The majority of your information should be spoken because people don't want to read something long while they are listening to you say the same thing.) • Use pictures.
Reports or essays	• Carefully select your headings (they should clearly show a reader what information is in the section; they are a tool to find information, so don't leave your reader guessing). • Make sure the information matches these headings.
Newspaper articles	• Follow the conventions of a newspaper article; cover the 5W 1H words in the opening paragraph, then give more detail as you go. • Use appropriate language — correct and quite formal.
Websites	• Use small chunks of information and visuals. • Leave space in the design rather than trying to cram too much in. • Only make your reader scroll if necessary — use links and menus instead.
Infographics, posters or visual displays	• Information should be in bite-sized chunks. • Graphs, tables and pictures should be relevant and placed near information that allows them to make sense.

1.10.4 Let me do it

Practise presenting information in a way that suits your purpose.

For more help with this activity, you might:

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Carefully review the information you have collected and the observations you have made about the process of Australian Federation. Write a report that includes a timeline of major events, and any other visuals you think will help to display your ideas.

Economics and Business

Carefully review the information you have collected and the observations you have made about your entrepreneur. Write a biography, including a timeline of major events in the person's life, and any other visuals you think will help to display your ideas.

Geography

Carefully review the information you have collected and the observations you have made. Write a blog post that includes a map of the area you have researched, and at least one graph and one table showing important information.

History

Carefully review the information you have collected and the observations you have made. Create four display boards for the museum. Include a timeline of key events, at least one diagram and a table showing important information.

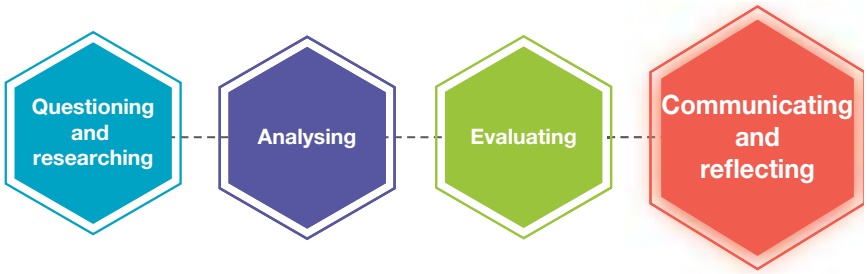
on Resources

eWorkbook Civics and Citizenship: Level 1 (ewbk-4144), Level 2 (ewbk-4145), Level 3 (ewbk-4146)
Economics and Business: Level 1 (ewbk-4147), Level 2 (ewbk-4148), Level 3 (ewbk-4149)
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History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.11 SkillBuilder: Developing effective texts

1.11.1 When to use this SkillBuilder

This SkillBuilder develops your communicating and reflecting HASS skills. Use this SkillBuilder **to help with creating** your response.



1.11.2 Tell me

Developing effective texts involves making texts that allow the reader to learn something. When you write your first draft, read it carefully. Are you interested in what you are reading? Is it easy to understand? In the places where you think you could improve, make changes that will make your text more easily understood.



In Year 7 HASS, the focus of this skill is using effective paragraph structure and vocabulary.

1.11.3 Show me

Remember, you can always ask your teacher for help. They can provide you with the paragraph structure your school uses and make sure you are using the right words in the right way. But for now, let's have a look at the best way for you to do this.

Step 1: Create strong paragraphs (using evidence) to explain ideas.

There are many different ways to write a paragraph, but all paragraphs have the same basic features.

1. **Thesis statement or argument:** This is a sentence that states the main point you are going to be arguing in that paragraph. Look back to the beginning of your research. What did you want to prove and what were your reasons for this?
   Example: My town is the best town to live in because the weather is great.
2. **Explanation:** Why you think your thesis statement is correct. This should be more specific than your opening sentence.
   Example: The weather in my town is great because it is warm in summer and we can go to the beach. It rains in winter, which means everything grows well.

FIGURE 1 Being able to go to the beach may be an argument in favour of your town being the best.



3. **Examples:** Provide examples of what you mean. This proves you know what you are talking about: you haven't just made up an idea. This is where your research comes in handy.
   Example: In summer the temperatures are around 30 degrees, which means the beach is lovely during the day. In winter we get about 50 millimetres of rainfall over the whole winter. This means that our dams can fill up, and gardens and crops are healthy.
4. **A concluding or linking sentence:** You want your paragraphs to flow nicely and a good concluding sentence allows the reader to follow your argument easily. This concluding sentence should link back to your overall topic.
   Example: Because the weather is so nice all year round, people want to come and live here as it means they have a nice life.

Step 2: Use terms that are correct and appropriate.

Once you have a draft, look over it. Do you have the right words in the right places? More importantly do you know what they mean? If you are unsure, look them up or change them. If you can't understand them, will your audience be able to?

It's great to experiment with language but be careful with your words. Don't suffer from 'big words syndrome' just because you think it will score extra marks or make you sound smarter.

Using smaller words that are clear and used correctly is always better than using long, complicated words incorrectly. If you are not completely sure what a word means, look it up or find an alternative that you know is correct.

1.11.4 Let me do it

Practise writing a strong paragraph with good subject vocabulary.

For more help with this activity, you might:

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Read through your report and make sure every paragraph has a thesis statement, explanations, evidence and a linking sentence. Make sure all your words make sense.

Economics and Business

Read through your report and make sure every paragraph has a thesis statement, explanations, evidence and a linking sentence. Make sure all your words make sense.

Geography

Read through your report and make sure every paragraph has a thesis statement, explanations, evidence and a linking sentence. Make sure all your words make sense.

History

Read through your report and make sure every paragraph has a thesis statement, explanations, evidence and a linking sentence. Make sure all your words make sense.

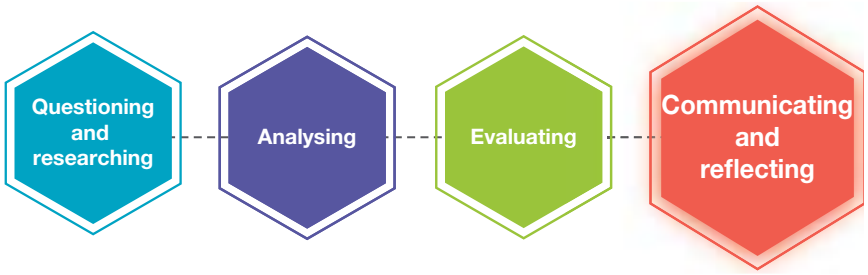
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Geography: Level 1 (ewbk-4150), Level 2 (ewbk-4151), Level 3 (ewbk-4152)
History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.12 SkillBuilder: Reflecting on your learning

1.12.1 When to use this SkillBuilder

This Skill Builder develops your communicating and reflecting HASS skills. Use this SkillBuilder **after** you have completed your inquiry task.



1.12.2 Tell me

This process means thinking about what you learned and how well you are developing the skills of HASS.

Ask yourself questions such as:

1. What did I learn?
2. How can I apply this to my life?
3. How well did I research?
4. What can I improve next time?

In a reflection, it is important to be as specific as possible. This is how you learn.

Instead of: I wrote my questions well.

Try giving more detail: I wrote the 5W 1H questions well, but I think I can improve my evaluative questions for next time. I can do this by making them more specific to the hypothesis I am proving.



In Year 7 HASS, the focus of this skill is explaining how you might use what you have learned in the future.

1.12.3 Show me

Try to reflect on each step in the process. This might seem like a big job but just look at each step and glance through what you've done. Chances are you have been reflecting and changing as you went along.

Step 1: Look back at your process and what you learned and could do better next time.

There are many great ways to reflect on what you have learned and how you went about the process. One way is two stars and a wish: What are two things you thought you did well in, or really enjoyed? What is one way you can improve in the process for next time?

- What did I do well?
- What could I do better next time?
- What did I learn?

For example:

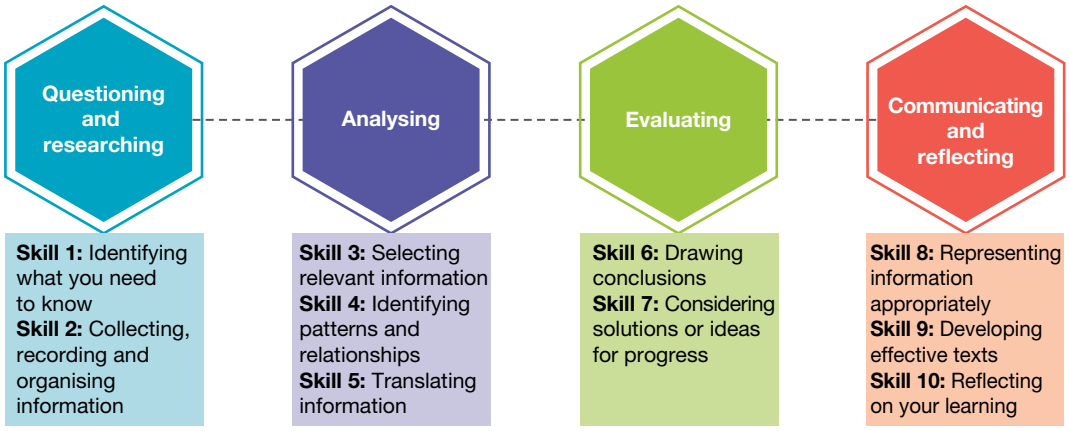
Two stars

1. I found really good sources.
2. I was able to communicate what I learned from the sources in a great PowerPoint presentation.

One wish: I think I could have evaluated the information better and provided stronger ideas and solutions.

Try to do this for each step in the process.

This doesn't need to be a huge analysis of what you did and did not do, but a few words that will make you really proud of yourself and some ideas on what to do better. The next time you are asked to use these skills, you can look back on the improvements and say, 'This time I need to work on…' Then you can focus on that particular part to improve.



Step 2: Ask yourself questions about how the task could apply in your life.

When you have reflected on how you might improve your HASS skills further, think about how the concepts and skills you have learned from a task might be useful in your life outside school.

These thoughts don't need to be about the topic, they can be things like:

- When I look things up on the internet I will know what makes a website reliable or unreliable.
- I will be able to structure my paragraphs in a more effective way for all my subjects.
- I can reflect on what I have learned in a better way for other subjects.

1.12.4 Let me do it

Think about how your HASS skills are developing.

For more help with this activity, you might:

- Follow the short version of the steps in the **Review** section at the end of this topic.
- Use the detailed steps in the **Show me** section.
- Complete a step-by-step **Worksheet** from your online Resources.

Civics and Citizenship

Look back through all your research and communication. List what you did well and what can you improve. Explain three ways that you might use the knowledge and skills you have gained in other areas of your life.

Economics and Business

Look back through all your research and communication. List what you did well and what can you improve. Explain three ways that you might use the knowledge and skills you have gained in other areas of your life.

Geography

Look back through all your research and communication. List what you did well and what can you improve. Explain three ways that you might use the knowledge and skills you have gained in other areas of your life.

History

Look back through all your research and communication. List what you did well and what can you improve. Explain three ways that you might use the knowledge and skills you have gained in other areas of your life.

on Resources

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History: Level 1 (ewbk-4153), Level 2 (ewbk-4154), Level 3 (ewbk-4155)

1.13 Review

1.13.1 Key knowledge summary

Questioning and researching

1. Develop focus questions to help you research a topic.
   - Step 1: Identify what you already know or believe.
   - Step 2: Identify what you need to know to further your understanding.
   - Step 3: List what you know and what you need to find out.
   - Step 4: Write a hypothesis.
   - Step 5: Develop focus questions.
2. Record information from different sources.
   - Step 1: Find information from a variety of sources.
   - Step 2: Read your sources carefully.
   - Step 3: Record your information in notes.
   - Step 4: Follow ethical protocols or rules.

Analysing

3. Find information that is right for your specific research task.
   - Step 1: Identify what you are learning from the information you have found.
   - Step 2: Decide how accurate and reliable the information is.
4. Look for links (similarities or differences) and patterns.
   - Step 1: Identify any relationships or trends that you notice.
   - Step 2: Identify different viewpoints and perspectives.
   - Step 3: Explain how these viewpoints impact on the information you are looking at.
5. Find the right way to show your information.
   - Step 1: Present the information you found in your own words.
   - Step 2: Create diagrams or visuals to show information, if needed.

Evaluating

6. Form a point of view.
   - Step 1: Look for problems or issues related to the topic or your research.
   - Step 2: Decide whether your hypothesis was right.
7. Weigh up the costs and benefits of change.
   - Step 1: Think of possible solutions to problems, or ideas for change.
   - Step 2: Weigh up whether the effects are worth the consequences.

Communicating and reflecting

8. Show information clearly.
   - Step 1: Choose the right way to let others know what you have discovered.
   - Step 2: Identify the best ways to show data and sources.
9. Use effective paragraph structure and vocabulary.
   - Step 1: Create strong paragraphs (using evidence) to explain ideas.
   - Step 2: Use terms that are correct and appropriate.
10. Explain how you might use what you have learned in the future.
    - Step 1: Look back at your process and what you learned and could do better next time.
    - Step 2: Ask yourself questions about how the task could apply in your life.

1.13.2 Key terms

accurate source the information is correct and factual
analysing examining information and opinions closely to see how they are constructed and looking for connections between their parts or with other ideas and opinions
bias prejudice or one-sidedness; seeing something from just one point of view
cause and effect the concept that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences
cite to give the details of
cost–benefit analysis an examination of the strengths and weaknesses of different options in order to see if the benefits are greater than the costs
demographic characteristics statistics/data about specific people and groups
evaluating looking critically at information, including trends, relationships and points of view, to form conclusions or make decisions
focus questions questions that break a big topic down into its main parts or key areas
hypothesis an idea or explanation that is used as a starting point for deeper investigation or research
identify to recognise and name
inference to infer, or make an inference, is to come to a reasonable decision about what evidence suggests; to make an educated guess
plagiarise to copy other people's work and present it as though it is your own
primary sources objects and documents that were created or written in the period you are investigating
relationship the link connecting two or more people or things
reliable source trustworthy and well backed-up with strong evidence, able to be relied on
secondary sources reconstructions of the past written or created by people living at a time after the period you are studying
trend the direction in which something is developing, moving or changing
useful source the information helps to answer your research or focus questions

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4276)
Reflection (ewbk-4156)
Student learning matrix (ewbk-4143)

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 1 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

1.3 SkillBuilder: Identifying what you need to know

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

Weblink
- ABS

1.4 SkillBuilder: Collecting, recording and organising information

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

Weblink
- ABS

1.5 SkillBuilder: Selecting relevant information

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.6 SkillBuilder: Identifying patterns and relationships

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.7 SkillBuilder: Translating information

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.8 SkillBuilder: Drawing conclusions

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.9 SkillBuilder: Considering solutions or ideas for progress

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.10 SkillBuilder: Representing information appropriately

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.11 SkillBuilder: Developing effective texts

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.12 SkillBuilder: Reflecting on your learning

eWorkbook
- Civics and Citizenship: Level 1, Level 2, Level 3
- Economics and Business: Level 1, Level 2, Level 3
- Geography: Level 1, Level 2, Level 3
- History: Level 1, Level 2, Level 3

1.13 Review

eWorkbook
- Reflection (ewbk-4156)
- Student learning matrix (ewbk-4143)

To access these online resources, log on to **www.jacplus.com.au**.

Civics and Citizenship

CIVICS AND CITIZENSHIP CONCEPTS AND SKILLS

2 Civics and Citizenship concepts and skills 50

DESIGNING OUR POLITICAL AND LEGAL SYSTEM

3 The Australian Constitution 76

4 The Australian government 99

5 The legal system and you 115



2 Civics and Citizenship concepts and skills

2.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

2.1.1 Introduction

As a student in Civics and Citizenship, you are developing the knowledge and skills that you will need to be an active part of our society now and into the future. In your study of Civics and Citizenship, you will cover topics around Australia's systems of government and the justice system. This subject helps you understand how our society is run and how the legal system works. Studying Civics and Citizenship may also be necessary for your chosen future career.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4277)

FIGURE 1 Australian citizenship gives both rights and responsibilities.



2.2 Concepts in Civics and Citizenship

LEARNING INTENTION

By the end of this subtopic you will be able to identify the six Civics and Citizenship concepts and explain why they are important.

2.2.1 Why we study Civics and Citizenship

Compared to many places in the world, Western Australia is generally a safe place to live. Reasons include:

- we have laws enforced by police that apply to the whole community
- public roads are built and maintained by local councils and state government
- many essential services are provided by government, such as electricity, hospitals and the post
- Western Australia has comparatively low unemployment levels compared with other countries.

Most of these factors depend on having a stable and secure government, and on the people who we elect to government (parliamentarians) being accountable to the people who elected them (voters).

DISCUSS

Even though you may not notice it on a day-to-day basis, government decisions and laws passed by parliament affect many areas of your life. The political beliefs that influence government decisions also affect you and Australia as a whole. Being a citizen of a country means you have certain rights, but it also means you have responsibilities. It is your responsibility to care about these ideas and to engage with the society that your vote will help shape in the future. Understanding the laws of Australia can also be very important to you personally. It will help you to protect your rights and keep your responsibilities.

Brainstorm as a class what your responsibilities are:

- as a member of this class
- as a member of a household or living community
- as someone who lives in a community, town or suburb
- as an Australian.

How will your rights and responsibilities change as you get older?

HASS skills: Communicating and reflecting
Civics and Citizenship concept: Rights and responsibilities
General capability: Personal and social capability

2.2.2 What are the main concepts in Civics and Citizenship?

Democracy

Democracy is a political system in which citizens choose the way in which they are governed (how and by whom the country is run). Australia is a democratic country because we elect (vote for) people to run our local, state and federal (national) governments.

FIGURE 1 The Houses of Parliament in London are in an area called Westminster, home of the Westminster system of government.



Democratic values

Democratic values are the standards or instructions that shape a democracy. The values that shape our Australian democracy include having free and fair elections; having

consistent rules that governments and courts have to follow; respecting individuals' freedom to have their own views, ideas and beliefs; and equality of race, religion, gender and ethnicity. You will explore these values in more depth as you study the different parts of our political system.

The Westminster system

Westminster is the area of London in which the British parliament is found. Australia's system of government is based on the British system, which is known as the Westminster system. You will learn about the basic structure of this system and begin to understand the benefits and problems with the way this system has developed over time.

FIGURE 2 Parliament House in Canberra is the home of the Federal Parliament. Can you identify how the design reflects different parts of Australian society?



Rights and responsibilities

The study of Civics and Citizenship is not only about what the government or legal system provides or protects for us as citizens, such as the right to vote or the right to practise our religion. With these rights also come responsibilities. You will study what the system needs us to do to keep it working well. This includes responsibilities such as voting and keeping our democratic values.

Justice

The idea of justice is that people are treated fairly and in a way that is morally right in the eyes of the law. That doesn't mean that everyone who commits a crime gets the same punishment; it means that they receive a fair punishment. This is one of the key values in the Australian legal system, but that does not mean it is always achieved.

Participation

The concept of participation is about how you as an individual can be involved in the political and legal systems in Australia in the future. This year you will study how citizens can be involved in the justice process as witnesses or jurors; and the process for changing the Australian Constitution through a referendum.

2.2.3 Your focus in Year 7

This year you begin your study of these concepts with the design of our political and legal systems. In particular, you will learn about:

- the purpose and value of the Australian Constitution
- the concept of the separation of powers between the **legislature**, executive (the prime minister and key members of the government) and judiciary (courts and judges)
- the division of powers between state/territory and federal levels of government in Australia
- the different roles of the House of Representatives and the Senate
- how Australia's legal system aims to provide justice
- how citizens participate in providing justice through their roles as witnesses and jurors
- the process for constitutional change through a referendum.

legislature the parliaments, or bodies, who have been elected to make laws to run a country or state

SOURCE 1 Extract from Abraham Lincoln's Gettysburg Address

'... that this nation, under God, shall have a new birth of freedom — and that government of the people, by the people, for the people, shall not perish from the earth.' Abraham Lincoln, 19 November 1863



Abraham Lincoln was President of the United States of America during the American Civil War, when a number of southern states formed the 'Confederacy' and sought to break away from the Union. Lincoln's short speech at the dedication of the Soldiers' National Cemetery in Gettysburg, Pennsylvania has become historic for many reasons. One of these reasons was the way he described democracy, without even using the word. But what does government 'by the people' look like? Democratic systems of government are appealing for a number of reasons, including the fact that they aim to be representative. In your study of Civics and Citizenship, you will learn more about the liberal democratic system of government that Australia chose to adopt in 1901.

2.3 Skills in Civics and Citizenship

LEARNING INTENTION

By the end of this subtopic you will be able to name the key HASS skills and explain why they are important.

2.3.1 What skills will you build this year?

The skills you will develop across all of your HASS subjects fall into four main groups. While you will work on building these skills across all of your HASS subjects this year, you will use these skills in specific ways in Civics and Citizenship in Year 7.

2.3.2 Questioning and researching

Questioning and researching involves locating relevant and detailed information and/or data from a range of appropriate sources. In Civics and Citizenship this year, you will construct questions to frame research, and use a variety of methods to collect relevant information. You will need to use ethical protocols in gathering this information, and determine the best recording methods. It will also be important to identify differences between primary sources (e.g. a cartoon, speech, artefact) and secondary sources (e.g. reference books, such as a dictionary or encyclopedia).

2.3.3 Analysing

Analysing involves interpreting information to identify the main features or ideas, then examining the information closely to determine how the parts relate to the whole.

In Civics and Citizenship this year, you will be analysing a variety of sources including political advertising, speeches, media releases, court judgements, cartoons and news reports.

The skills you develop will help you to decide what kinds of information you can rely on to be accurate, how to know if information is current, and how to spot bias in information that is presented as fact. You will also build your skills analysing different types of data, such as graphs, tables and charts of election results or opinion poll results.

FIGURE 1 People often use cartoons and memes to make points about political decisions. What point do you think this cartoonist is making?



2.3.4 Evaluating

This year, you will also learn to draw evidence-based conclusions by evaluating information and/or data. You will consider information and data from different points of view, and think about whether a source might be providing mixed or inaccurate information. This will help you to understand an issue in detail so that you can suggest possible ways that problems or challenges could be resolved.

2.3.5 Communicating and reflecting

The ability to communicate and share your ideas with other people is also an important part of Civics and Citizenship. This year, you will reflect on findings from your research, and build your ability to express your views clearly.

You will learn how to write and present descriptions and explanations using suitable and appropriate language. You will also learn how to present information to suit a specific audience. Communicating your ideas this year will be done in many different ways; for example, writing essays, delivering oral presentations and debates, creating tables of data and drawing cartoons.

FIGURE 2 To communicate your ideas well, you need to think about who your audience is. How would you explain why it's important to vote to grandparents? Would this be different from how you would explain it to your friends?



2.3.6 SkillBuilders in this topic

In addition to these broad skills, there is a range of essential practical skills that you will learn and practise as you study Civics and Citizenship. The SkillBuilder topics in this section will tell you about the skill, show you the skill and let you apply the skill to the topics covered.

The SkillBuilders you will use in Year 7 are listed below:

1. Notetaking
2. Writing inquiry questions for research
3. Writing argument paragraphs
4. Writing a submission
5. Debating an issue
6. Creating political media

2.4 SkillBuilder: Notetaking

LEARNING INTENTION

By the end of this SkillBuilder you will be able to create organised notes by using the Cornell Notetaking system. Notetaking is part of the Questioning and researching skill.

At a year 7 level, you should be able to locate relevant and detailed information and/or data from a range of appropriate sources.

2.4.1 Tell me

Cornell Notetaking is a system for taking notes during class, organising these notes, and reviewing them later on. The purpose of Cornell Notetaking is to help you remember the material that has been covered in class, and to revise material you have learned previously.

Do you remember what you had for breakfast on Monday five weeks ago? It is unlikely that you would unless there was a specific reason to, such as it having been your birthday, or you burnt the toast and set smoke alarms off!

Our brain usually remembers information if it is significant for some reason (that's why significant events are described as memorable), or if the brain has gone over the information multiple times. It is difficult to quote lines from a movie if you have seen it only once. But if you see the same movie multiple times, and tell friends about your favourite part, and repeat quotes from the movie, then you will probably remember some quotable lines!

Taking notes is similar — in that we need to USE and go over information for our brain to RETAIN the information. In this way, the information can be 'transferred' from the short-term to long-term memory. Taking notes by hand helps you retain information, whether you are listening to a teacher, watching a documentary, reading a textbook or doing research on a website. The Cornell Notetaking method was developed at Cornell University by Professor Walter Pauk in the 1950s. Pauk's notetaking method provides a structure for notetaking that means the notes can also be used for revision or research purposes. Pauk devised an approach to notetaking called the '5 Rs' — record, reduce, recite, reflect, review. This is shown in **FIGURE 1**.

FIGURE 1 The five Rs of notetaking

Record: During the lecture, write all meaningful information legibly.
Reduce: After the lecture, write a summary of the ideas and facts using key words as cue words.
Recite: To study properly, you must recite all the information in your own words without looking at your notes or the text.
Reflect: Think about your own opinions and ideas. Raise questions and record original ideas.
Review: Before reading or studying new material, take ten minutes to quickly review your older notes. Skim over the main ideas and details.

Source: Pauk, W. (1989). *How to Study in College* (4th Ed.). Boston, MA: Houghton Mifflin.

In Civics and Citizenship this year, you will use this skill to take notes in class and revise these later on. In later years, you will also learn how to use Cornell Notetaking for research tasks.

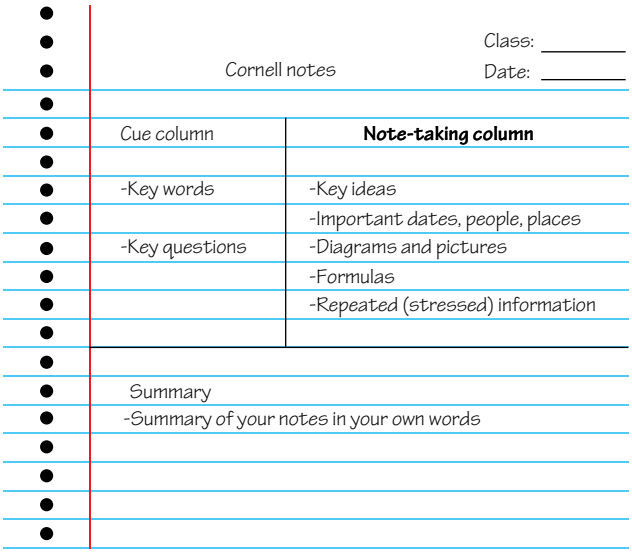
2.4.2 Show me

Page layout

The blank lined page is divided into four sections:

- top
- left column
- right column
- bottom section.

FIGURE 2 How to set up your page for the Cornell Notetaking method



Top

Allow enough space to record the title of the book/name of website/textbook chapter, date, topic heading etc.

Right-hand column (approximately 70 per cent of the page width)

Most information is recorded in this column in dot-point form. This means you can record information quicker than writing full sentences.

Left-hand column (approximately 30 per cent of the page width)

This column is used for the key ideas that are in the notes. To use the system for revision, key questions about the material in the notes should be written in this column.

Bottom section (approximately 8 lines from the bottom, full width of the page)

The bottom section of the page is used for writing a *summary* of the information in the right-hand column above. Generally, this is done a short while after the session (such as in the evening after your class that day).

The Cornell Notetaking format can also be used for research notetaking. Record the details of the information source at the top of the page. Record relevant information in dot point form in the right-hand column. In the left-hand column, note key ideas, people or dates that help link information from different sources (and therefore different pages of notes).

2.4.3 Let me do it

2.4 ACTIVITY

Use the information and tips in this SkillBuilder to practise writing notes using the Cornell method.

Be sure to rule up your page correctly, so that you can follow the structure. Choose any section of this textbook and write out Cornell notes for that chapter, following the steps above.

2.5 SkillBuilder: Writing inquiry questions for research

LEARNING INTENTION

By the end of this SkillBuilder you will be able to write inquiry questions for your research in Civics and Citizenship. Writing inquiry questions is part of the Questioning and researching skill in HASS.

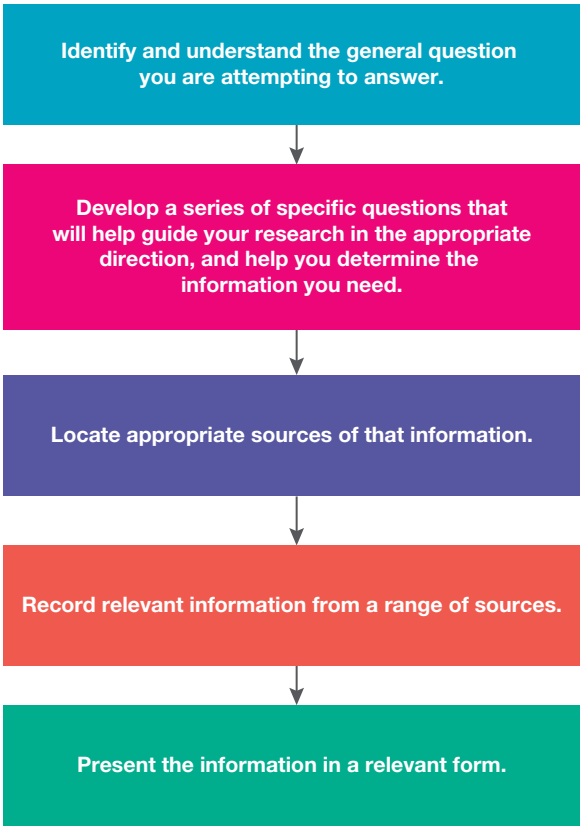
At a year 7 level, you will learn how to break a research topic or question into smaller parts that make it easier to find relevant information and/or data from a range of appropriate sources. In Civics and Citizenship, writing inquiry questions is an important part of writing detailed descriptions, explaining processes and supporting your point of view with evidence.

2.5.1 Tell me

Research is investigating a particular topic or event, and collecting information to help you understand it in detail. To do this investigation well, it is important to have some questions to guide your investigation (inquiry). Simply searching key terms online will return a lot of information, and not all of it will be related to what you have been asked to research, so inquiry questions help you to narrow this information down to things that are directly relevant.

In Civics and Citizenship this year, you will use this skill to start investigating topics from sources such as this textbook and websites. In later years, you will learn how to create inquiry questions for broader research tasks.

FIGURE 1 The general process of researching a topic



2.5.2 Show me

Imagine you have been asked to investigate how the Australian Constitution was written. You need to plan your investigation and break it into some clear steps. The steps can be summarised like this:

Step 1

Your first step is to clearly identify the essential *key question*. This could be expressed as:

'What steps were taken to develop and pass the Australian Constitution?'

Step 2

Once you understand the key question you are being asked to answer, break this question down into its parts.

- Look for the main topic idea.
- Look for the information you are being asked to discuss about that topic.

'What steps were taken to create and pass the Australian Constitution?'

- **Main topic idea:** Australian Constitution
- **Information to find:**
  Steps to create
  - Where did the idea come from?
  - What were the different views expressed?
  - How did they negotiate?
  - How did they come to an agreement?

  Steps to pass
  - Who wrote the document?
  - How did they make it official?

Step 3

It is now necessary to break this down into a series of more specific *inquiry* questions. Brainstorming using the 5-W, 1 H format will also help with this. These inquiry questions could include:

1. What were some reasons for the Australian colonies wanting to unite?
2. Who or what started the process? (Was there an individual, a group of people or a significant event that began the process?)
3. How or why did each of the colonial governments become interested in pursuing the idea of federation?
4. What organisations were set up to support the idea?
5. Who were the founding fathers? (What were their names? Which colonies did they represent?)
6. What specific steps did the founding fathers use to develop a constitution?
7. When and where did they meet to carry out these processes?
8. Which other countries did the founding fathers look at for ideas?
9. What important principles did they include in the Constitution?
10. Did they have the complete support of all colonies? Were some colonies harder to convince than others? How were they convinced?
11. What were the final legal processes that were necessary for the Constitution to come into effect?

Step 4

Road-test your inquiry questions.

- Can you find some information about each question in your textbook or class notes? They may not answer every question in detail but if there is some mention, you are likely on the right track.
- Type your questions, one at a time, into a search engine. Are there plenty of results? Do they look like they are from reliable, accurate sources?

2.5.3 Let me do it

2.5 ACTIVITY

Practise the skill of using inquiry questions for research by selecting one of the research topics below and working through steps 1, 2 and 3.

Research topics:

- Investigate the 1999 Referendum
- How do Australian citizens participate in the justice process?

To do this complete a step-by-step **Worksheet** from your online Resources.

2.6 SkillBuilder: Writing argument paragraphs

LEARNING INTENTION

By the end of this SkillBuilder you will be able to write argument paragraphs.

Writing argument paragraphs is part of the Communicating and reflecting skill in HASS. Year 7 students are expected to be able to present an explanation or argument, in a straightforward way, and to communicate this in a written form, such as an essay.

2.6.1 Tell me

Many times in your academic career at school and beyond, you will be asked to write essays. An effective essay has several characteristics:

- it clearly explains the background of an issue
- it contains evidence and examples of the issue
- it discusses the positives and negatives of an issue.

This last feature is best demonstrated through argument paragraphs. An argument paragraph is not what we might typically think of as an argument, like you might have with a friend. An argument paragraph discusses either a positive or a negative aspect of an issue — it presents an argument in a 'scholarly' or academic way.

WHAT IF I HAVEN'T PLANNED MY PARAGRAPHS?

This stage of writing can begin only after you have planned your whole essay or discussion. If you don't have a plan for the main point in each paragraph, and how your writing will be structured overall, you are not ready to write your paragraphs yet!

2.6.2 Show me

Step 1

The first step in creating a strong argument paragraph is understanding the structure that is expected of this kind of argument.

An argument paragraph is a section of an essay that presents a point of view. It begins with a topic sentence. The paragraph will then explain the point of view and support it with evidence. Finally, a linking sentence will draw the reader's attention back to the key questions being discussed. In this way, an argument paragraph follows the TEEL structure.

Step 2

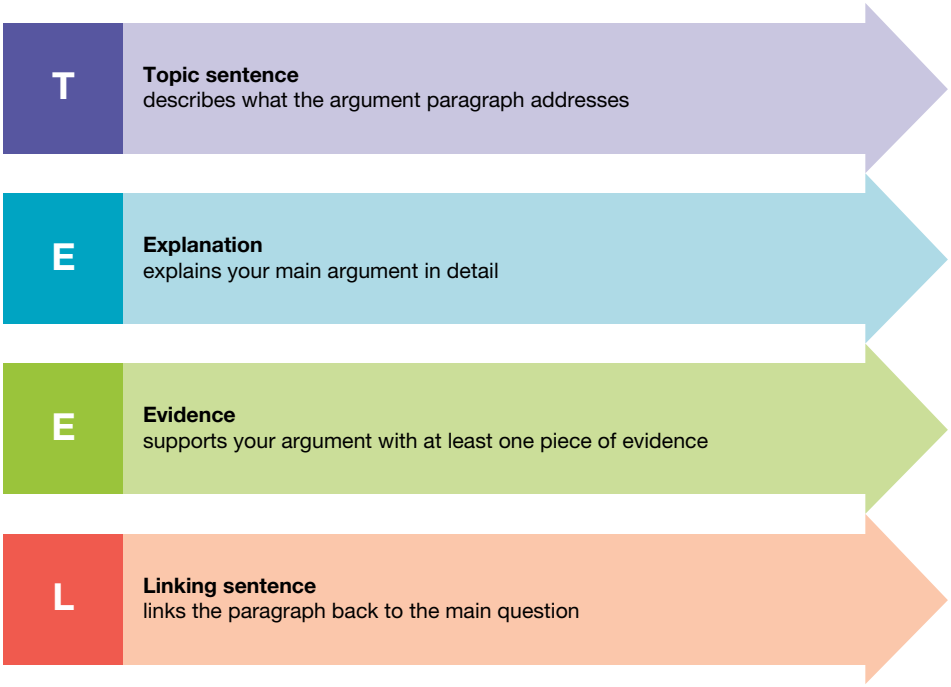
Writing argument paragraphs in an essay is straightforward if you think about and use the TEEL structure. Let's see how to do it with the following example.

After studying justice, the presumption of innocence, and the importance of a fair trial, imagine your teacher has given you the following news article 'Juries need to be told how they're allowed to use the internet to ensure fair trials'.

Your teacher then asks you to write an essay focusing on the following statement:

"It is important that court cases in Western Australia are open and transparent to the public, therefore social media should be allowed in WA courts."

FIGURE 1 Using the TEEL structure will help you organise your argument paragraph.



JURIES NEED TO BE TOLD HOW THEY'RE ALLOWED TO USE THE INTERNET TO ENSURE FAIR TRIALS

Juries are supposed to consider evidence without influence or bias from the outside world. However, the widespread access to and use of the internet and social media threatens to undermine this, with significant consequences for our criminal justice system and those within it.

FIGURE 2 What jurors see online could affect their choice in the courtroom.



Given courts cannot effectively police smart-phone use they must adapt to it. This week the Tasmania Law Reform Institute completed its year long inquiry into courts and the information age, and has recommendations as to how they can adapt.

The right to a fair and unbiased trial by your peers

An accused person's right to a fair trial is the most fundamental principle of our criminal justice system. It is a phrase that describes a system that affords an accused person many protections. That system relies on jurors being impartial and returning a verdict that is based solely on the evidence that is presented within the courtroom.

In the past this was readily easy to achieve. Juror communications during trial hours and even after them could be controlled.

…

The shift in the way people access news, information and communications in the modern age has changed this reality.

Almost every Australian has access to the internet via their smartphone or other devices, social media use is habitual among much of our population, and the internet is a ubiquitous source of information for most people.

Jurors are no different — in fact, they represent the wider Australian community these statistics describe. While jurors' smart phones are removed from them during trial, they cannot be before or after the trial period, nor at the beginning or end of the day. As a result jurors may intentionally, or simply by habit, seek out or communicate information about the trial.

Use and misuse of social media

Between 2018 and 2020 the Tasmanian Law Reform Institute conducted an inquiry into juror misuse of the internet and social media during trials. The institute concluded there is likely to be a high, but unquantifiable and undetectable, level of misuse.

However, there is evidence across Australian jurisdictions that jurors have used their internet-connected devices to:

- research legal terms or concepts or other information relevant to the trial. A West Australian juror in a drug-related trial obtained information online about methylamphetamine production
- research the accused, witnesses, victims, lawyers or the judge. Two South Australian jurors sitting in a blackmail trial against multiple defendants conducted online searches about the accused which disclosed past outlaw motorcycle gang affiliations
- communicate with people involved in the trial. Multiple New South Wales jurors on a long-running fraud trial became Facebook friends, sharing posts such as a digitally altered photo of one of the jurors wearing a judge's wig

…

Misuse is under-reported. In those few instances where reports are made, fellow jurors, rather than court officers, tend to be the ones who raise the issue. Indeed, it is an important part of their role.

….

Educate, inform and encourage self-regulation

The law reform institute ultimately concluded it is impossible for, and beyond the capacity of courts to completely police juror internet use. It has thus recommended not reforming the law, but rather strengthening and standardising juror education and directions. These recommendations are divided across two stages of jury selection, as part of an overall strategy:

- pre-selection: prospective jurors should receive improved training and information about the role of the juror and the risks of internet use
- post-selection: once a jury has been selected, judges need to explain to jurors what dangers arise from using the internet to access and publish on social media, seeking information about the case, parties, court officers, lawyers, and self-conducted research into legal concepts or sentences. The report has recommended the court adopt minimum standard directions, but also have the flexibility to make specific directions relevant to any particular trial.

The report recommended certain current practices and laws should remain unchanged, including:

- removing phones from jurors while they are in court (even though the effect is limited it avoids juror distraction)
- leaving contempt (punishment) laws in place for those jurors who intentionally ignore court training and directions. That might include monetary fines and, in severe cases, imprisonment.

This process is aimed at encouraging self-regulation among jurors, by educating them how to curtail their internet use and why it's so important.

Source: The Conversation Media Group Ltd. Jemma Holt and Brendan Gogarty. Juries need to be told how they're allowed to use the internet to ensure fair trials. 22 January 2020. Retrieved from https://theconversation.com/juries-need-to-be-told-how-theyre-allowed-to-use-the-internet-to-ensure-fair-trials-130127 [Online Resources].

Step 3

Plan your paragraph, using the TEEL structure.

T	What is the argument I am making in this paragraph?	Rules of court cases have to be followed.
E	What is the reason I believe this argument is true or important?	The rules are important for a trial to be fair: the current rules are to give everyone a fair chance to present their evidence. Jurors seeing information on social media might change their view of what they see and hear in court.
E	What evidence can I use to back up my argument?	Rules: each side presents their case and evidence to jurors BUT: when there is extra information they may not be able to weigh up the cases fairly (e.g. researching previous convictions that are not related)
L	How does this link to the main topic?	Social media use in courts should be controlled.

The paragraph below is an example of the kind of paragraph that you would find in this essay. The paragraph was written using the TEEL structure. The different parts of the paragraph have been colour-coded to make it easier to see TEEL in action (**T**opic**, E**xplanation**, E**vidence**, L**ink).

FIGURE 3 Example of an argument paragraph written using the TEEL structure



2.6.3 Let me do it

2.6 ACTIVITY

Use the information and tips in this SkillBuilder to practise writing your own argument paragraphs. Be sure to use the TEEL structure as it will help you logically organise your thoughts and arguments.

Here are some essay topics you can use to form the basis of your argument topics. To do this, complete a step-by-step **Worksheet** from your online Resources.

You will need to do some research before writing your practice paragraphs.

1. Witnesses should be allowed to provide written, instead of oral, testimony.
2. Juries are unqualified to make judgements of law.
3. 'Presumption of innocence' protects guilty people more than those wrongly accused.
4. Criminal trials should be held as soon as there is enough evidence to prosecute someone.

2.7 SkillBuilder: Writing a submission

LEARNING INTENTION

By the end of this SkillBuilder you will be able to write a simple submission. Writing a submission is part of the Communicating and reflecting skill in HASS.

Year 7 students are expected to be able to communicate ideas through a variety of methods, including structured writing, such as essays. Another application of this skill is in the form of a formal submission to an organisation or government body.

2.7.1 Tell me

A formal submission is a letter or email to an organisation or government body asking for a specific action to take place, or expressing an opinion on an issue. Submissions from the public are often called for by parliamentary committees investigating community issues, or current bills going through parliament. Any Australian citizen or resident may write a formal submission to government. Formal submissions are also used to request permission from government agencies (e.g. permission to hold a community event).

A submission is similar to an essay in that it should have a clear structure and developed ideas, but it is different because it often asks for the recipient to take action, and may be more personal (often written in the first person, 'I …').

The purpose of learning how to write a submission is to apply written communication skills in 'real-world' scenarios, and to enable you to be an active participant within our democratic society.

2.7.2 Show me

Your submission may be one of hundreds of letters sent to that government department or parliamentary committee, therefore it is important that is it clear and concise (short).

Follow this process:

1. Research or investigate the issue to clearly identify specific problems that need addressing, and possible solutions that may solve those problems.
2. Research and identify the people or organisations that have responsibility for the issue (or may have influence in addressing the issue). Monitor public information channels to find out if there are opportunities for public submissions, such as Parliamentary Committees and Inquiries.
3. Write your submission. You may wish to include relevant evidence to support your position, such as research, photographs, results of a survey, or a signed petition.
4. Send your submission.

Step 1

Identify the specific issue/s you wish to have addressed.

> Max lives near an intersection with a new roundabout. Max has seen several cars and trucks hit the roundabout in recent weeks.
>
> Specific issue: Traffic safety with the new roundabout

Step 2

Research or investigate the issue to clearly identify specific problems that need addressing, and possible solutions that may solve those problems.

> Max was wondering what was causing the vehicles to hit the roundabout, so he had a few questions: Were people driving dangerously? Was the roundabout clearly visible? Was the road surface slippery? Max drove through the intersection himself, and walked on the footpath around the roundabout. Max noticed that it was not easy to see the roundabout from one direction (driving from the north), and it was not lit at night.
>
> Specific problems: The roundabout can't be seen easily from the north, and it is not lit at night.

Step 3

Research and identify the people or organisations that have responsibility for the issue (or may have influence in addressing the issue). Monitor public information channels to find out if there are opportunities for public submissions, such as Parliamentary Committees and Inquiries.

> Max wasn't sure which level of government was responsible for the road, so he rang Main Roads in Western Australia. The person he spoke to was able to tell Max that the road was maintained by his local government (council).
>
> Responsible organisation: Local council

Step 4

Write your submission.

The following tips are a useful guide to writing your submission.

- Clearly address the issue (or terms of reference for a parliamentary committee).
- Ensure your points are relevant and highlight your own perspective.
- Begin with a short introduction about yourself or the organisation you represent.
- Emphasise the key points so that they are clear.
- Outline how problems can be addressed.
- Include only documents that directly relate to your key points.
- Include only information you would be happy to see published on the internet (if writing to a parliamentary committee).

WHAT IF I CAN'T FIND A SPECIFIC PERSON TO WRITE TO?

In this example, if Max couldn't find out who in his local government the most appropriate person was, he could address the submission to 'whom it may concern'. In this case, include a very brief summary of the issue at the start of a submission letter. If you are emailing, you should state the issue in the 'subject' line of the email.

Max could write the following submission:

Dear Mr Jones,

I write to express concern with the safety of the new roundabout at the intersection of Tom Road and Jones Street in the suburb of Highwater.

I live on Tom Road in Highwater, close to the intersection of concern. I do acknowledge that roundabouts are generally safer than other forms of controlled intersection and I congratulate Council for selecting this method of traffic control.

However, the design of the roundabout, and lack of visual markers for traffic approaching the intersection from the north on Jones Street, are concerning. Although the roundabout is new, there are already considerable tyre and scrape marks from vehicles going over the island kerbing, suggesting that many drivers have not seen the roundabout until it was too late to stop.

Specific problems with the roundabout are:

1. the roundabout is around a bend, so drivers don't see it until they are at the roundabout
2. there is no street lighting
3. there is only one sign from the north on Jones Street.

I believe that the roundabout could be made much safer with the following suggestions:

1. Additional street signs warning of the roundabout on all roads, but especially on Jones Street to the north of the intersection.
2. That the street lighting on Tom Road be extended so that the roundabout at Jones Street is lit at night.
3. Reflective markers on the road kerbing.

I have included photographs of the roundabout and the approach from the north on Jones Street as evidence of these issues.

I look forward to hearing from you with regards to this manner.

Kind regards,

Max Safety

Step 5

Send your submission.

Members of parliament and local councils generally have websites and social media accounts that provide contact details. These details usually include email and postal addresses.

2.7.3 Let me do it

2.7 ACTIVITY

Practise the skill of writing a formal submission by selecting one of the following examples and working through the steps. If it is an issue that genuinely concerns you, then you may choose to send the submission to the relevant organisation.

Examples for different levels of issue:

That your school:
- establishes an eSports competition
- modifies the school uniform
- implements a free breakfast program for students
- has the library open after hours for students.

That your local government:

- builds a skate park in public open space
- has regular street-sweeping, especially in bike lanes
- provides bins for 'Green Waste' as well as general rubbish.

To do this, complete a step-by-step **Worksheet** from your online Resources.

on Resources

Weblinks Making a submission (Parliament of NSW)
Making a submission to a Senate Committee (Australian Parliament House)

2.8 SkillBuilder: Debating an issue

LEARNING INTENTION

By the end of this SkillBuilder you will be able to follow the basic rules and structures of debating an issue. Debating an issue is part of the Communicating and reflecting skill in HASS.

Writing a submission requires students to present an argument from a particular point of view based on well-researched evidence.

FIGURE 1 Being a confident speaker can help you to persuade your audience. What signs are there in this image that the student presenting is a confident speaker?



2.8.1 Tell me

A debate is a discussion about an issue. The issue is presented as a statement — for example, 'Using a jury is the best way to make sure a trial is fair'. Participants in the debate take it in turns to put forward arguments for and against the statement.

Unlike an argument you might have at home, a debate follows strict rules of conduct.

Why is debating useful in Civics and Citizenship?

A debate requires the participants to carefully investigate an issue and critically analyse both sides of the question. Participating in a debate can develop research skills. It can also help individuals gain confidence in public speaking. The skills used in debating, including researching and analysing information, are considered especially useful in the legal profession. As such, debating is used by lawyers, and by people involved in politics, such as members of parliament.

THE RULES AND STRUCTURE OF A DEBATE

Affirmative team

The first speaker should:

a. greet the audience
b. state which team he or she is representing and the issue
c. introduce the other team members, describe their roles and the team's view
d. argue the team's case and state how the second speaker will build on this case.

The second speaker should:

a. explain how his or her speech will build on the affirmative team's view
b. argue against (rebut) the first speaker from the negative team
c. add new examples to support the affirmative team's view.

The third speaker should:

a. argue against (rebut) the negative team's case
b. summarise the main arguments of the debate
c. restate the affirmative view, explaining why it is the stronger case
d. avoid introducing new arguments.

Negative team

The first speaker should:

a. introduce the team members, describe their roles and the team's view
b. state why the negative team does not accept the affirmative team's view of the topic
c. argue against (rebut) the points made by the first speaker of the affirmative team
d. state how the second negative speaker will build on the team's case.

The second speaker should:

a. explain how his or her speech will build on the negative team's view
b. argue against (rebut) the two previous speakers from the affirmative team
c. add new examples to support the negative team's view.

The third speaker should:

a. argue against (rebut) the affirmative team's case
b. summarise the main arguments of the debate
c. restate the negative view, explaining why it is the stronger case
d. avoid introducing any new material.

Conduct of a debate

The members of each team take it in turn to present their arguments in three to four minutes. The affirmative team's first speaker starts the debate. The following case study illustrates how a formal debate is conducted.

Elements of a good debate

A good debate:

- has members from each team taking turns to present their cases
- starts with the first speakers from each team introducing their teams and their team's view
- continues with the second speakers rebutting the previous speakers and adding new examples to support their team's view
- finishes with both third speakers rebutting the other team's case, summarising the main arguments and restating their team's view
- has arguments that take only three to four minutes.

FIGURE 2 Political debates are often shown on television before an election. Would you be more likely to vote for a party with a leader who sounds impressive in a debate?



2.8.2 Show me

A formal debate follows a set of rules. In a debating contest there are two teams of three speakers, each of whom plays a defined role. One team argues in favour of the topic (the affirmative team) and the other team argues against the topic (the negative team). You can prepare for a debate by following the steps below.

Step 1

Form a team of three people. Find out whether your team is to debate in favour of or against the topic. As a team, examine the topic carefully and discuss what you think it is about. You may need to use a dictionary to find a definition of key words contained in the topic statement.

Step 2

Work out what arguments support your team's case. List them in order of importance.

Step 3

Work out what arguments do not support your team's case. This will help you to anticipate what your opponents will say.

Step 4

Carry out research to help fully develop your arguments. As part of your research, consider interviewing other students and the adults you know to learn their attitudes to the issue.

Step 5

a. Divide the arguments you have collected among the members of the team.
b. Decide which team members will be the first, second and third speakers. Agree on what each member will say.

Step 6

Many people find public speaking very uncomfortable. Even if you don't get nervous when you speak in front of other people, you can always learn how to improve your performance by evaluating the debate when it is over. You can also learn from evaluating performances other teams.

Use the following to evaluate a debating performance:

1. Was the team's viewpoint clearly outlined?
2. Were the speakers' statements well researched?
3. Did the speakers give clear reasons to support their view?
4. Were examples used to support arguments?
5. Were responses to arguments made by the other team given effectively?
6. Were the concluding statements convincing?
7. Did speakers speak loud enough to be heard?
8. Did speakers make good eye contact with the audience?
9. Did speakers speak at a good pace (not too fast or too slow)?
10. Was the overall performance of the team effective?

2.8.3 Let me do it

2.8 ACTIVITY

Complete the following activities to practise this skill.

Work with a partner to complete the following activity

Step 1	Select one of the following topics: **a.** 'Our legal system should not presume that an accused person is innocent.' **b.** 'Judges should participate in finding evidence and questioning witnesses in criminal trials.' **c.** 'Legal aid should be provided to all people accused of a crime.'
Step 2	Work on your own to compile a list of as many arguments as you can for each side of the topic.
Step 3	Convince your partner in two minutes that you support the topic.
Step 4	Your partner has two minutes to question you about the topic.
Step 5	Reverse the roles in steps 3 and 4 above.

Class debate

As a class, decide on the topic to be debated. Follow the steps given above to prepare for and conduct the debate.

2.9 SkillBuilder: Creating political media

LEARNING INTENTION

By the end of this SkillBuilder you will be able to create a cartoon, meme or advertisement to express a point of view about a political issue. Creating political media is part of the Communicating and reflecting skill in HASS.

At a Year 7 level, students should be able to represent information and use appropriate formats to suit a particular audience and purpose. This involves an understanding of the audience, and modifying the presentation of information to suit that audience.

2.9.1 Tell me

Political media can take many forms.

- Political cartoons use pictures, words and humour to represent ideas about a person or issue from a point of view.
- Political parties use advertisements to highlight the positive aspects of one party, or the negative aspects of another.
- Political memes are like cartoons — they use humour to highlight an aspect of a person or issue, using a reference that the intended audience understands.

Political media often present information about a person or issue from a particular point of view. This is done deliberately to highlight an issue, provide support for people or to criticise a decision or action.

Part of identifying and using bias relates to **objective** and **subjective**information.

- Objective information is where data or events are presented without **emotive words** or opinion. For example, describing a car accident as a 'traffic collision' is objective.
- Subjective information is where information is presented based on opinion or bias. For example, describing the same car accident as 'a horror smash' is subjective. This is because 'horror smash' is a very emotive phrase that has been used to get a strong reaction from the reader.

2.9.2 Show me

Step 1

The first step is to understand how this form of communication works. Creating political media can be tricky — it requires understanding of the person or issues, and the intended audience, as well as being creative. As stated above, cartoons and political advertisements will generally present one viewpoint of an issue rather than a broad discussion of all points of view. Presenting only one viewpoint is not necessarily a problem, and that is often the purpose of political media.

When creating political media cartoons, start by understanding the issues and people involved. If you want to create a meme, you need to make sure that the intended audience is familiar with the reference image, or that it speaks for itself.

objective objective information is where data or events are presented without emotive words or opinion

subjective subjective information is where information is presented based on opinion or bias

emotive words words that create a strong emotional reaction

Step 2

Work out the perspective and angle you want to present. Is the issue something you feel should be celebrated or criticised? Do you want to make the reader angry or sad, or to take a certain viewpoint?

Think about how the perspective can be presented, both visually and in words. Think about the colours, facial expressions of the people, symbols and style that will give clues to the audience about the message and perspective. The language used by you as the author can be direct or subtle, as some terminology is not as obvious or emotive as others.

Case study: COVIDSafe

There are many examples of political cartoons, advertisements and memes. This case study shows how an issue can become the focus of a political cartoon.

In early 2020, Australia was dealing with the pandemic of a new Coronavirus, first identified in 2019. As such, the shortened name for this virus was 'COVID-19'. One method of identifying people who may have had the virus was called 'contact tracing'. If someone was confirmed to have the virus, a team of people would try to work out who that infected person had had significant contact with in the previous 14 days. This usually involved a lot of phone calls. To simplify this process, and identify potential new infections sooner, some countries (such as Singapore) developed phone apps to help determine if someone had come into contact with someone else who was COVID-19 positive.

In April 2020, the Australian government introduced its version of such an app — called COVIDSafe. Prior to this, there had been concerns raised by different sections of the Australian community about the safety of data held by the Australian government. Australian data retention laws require phone companies and internet service providers to retain specific user data for two years. Because of these concerns, some people were worried that the COVIDSafe app could send private data to the government.

These concerns meant the federal government took great steps to reassure the Australian public that user data could only be accessed by those people who needed to conduct 'contact tracing' for potential COVID-19 infections, and that the data would be deleted in a short period of time.

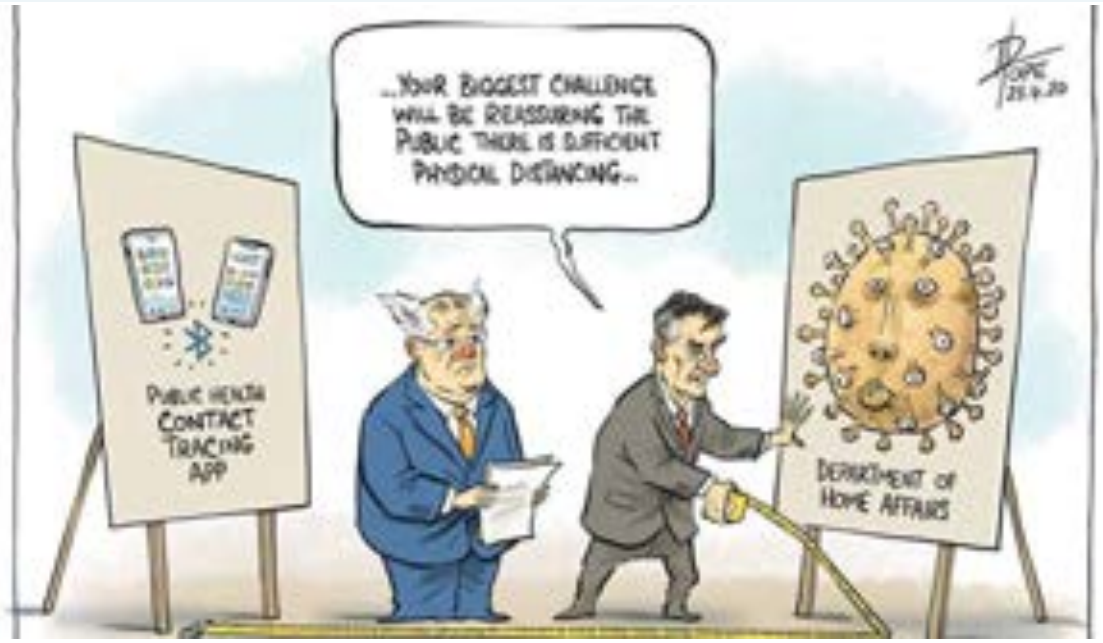
FIGURE 1 is a screenshot of the COVIDSafe app. You can see that there is information to explain to the user what the app is for and how the app works. This aims to reassure users that the app is safe.

Some cartoonists addressed this issue of people being cautious about giving the government more information, and one of these cartoons was created by cartoonist David Pope **(FIGURE 2)**. Here the cartoon refers to public concern about the Department of Home Affairs having access to information about people that might be used for other purposes.

FIGURE 1 The COVIDSafe app.



FIGURE 2 Cartoonist David Pope's take on COVIDSafe privacy issues



The cartoon shows a likeness of Home Affairs Minister Peter Dutton, who has been drawn as the Coronavirus. The Chief Medical Officer for the Australian Government, Brendan Murphy, is shown with the measuring tape, explaining to the Prime Minister, Scott Morrison. The measuring tape and the text in the speech bubble are a play on the concept of social distancing. You should note that the depictions of the three people are a recognisable likeness of each person.

Step 3

Draw drafts of your advertisement, cartoon or meme (political cartoonists and advertising companies create many amazing drafts that never get published!) When you have finished a draft, test it with friends or family members (or someone from the audience you want to appreciate your work) to see if they can identify:

- the issue
- the people or situation
- the main message.

The purpose of creating this media is to get your point across, so keep on drafting until your test audience understands. Then, create the final version.

2.9.3 Let me do it

2.9 ACTIVITY

Create a political advertisement, cartoon or meme about an issue that is current in state or federal politics. This means that you need to start by watching or reading the news to be aware of current issues. You should note the language and bias that are used to make the audience feel a certain way about the issue.

2.10 Review

2.10.1 Key knowledge summary

2.2 Concepts in Civics and Citizenship

- Democracy is a political system in which citizens choose the way in which they are governed.
- Democratic values are the standards or instructions that shape a democracy.
- Australia's system of government is based on the British system, which is known as the Westminster system.
- The study of Civics and Citizenship is about what the government or legal system provides or protects for us as citizens (rights) and the responsibilities that come with these rights.
- The idea of justice is that people are treated fairly and in a way that is morally right in the eyes of the law.
- Participation in the political and legal system is how individuals can help make decisions and create change in society.

2.3 Skills in Civics and Citizenship

- The skills you will develop across all your HASS subjects fall into four main groups.
- Questioning and researching involves locating relevant and detailed information and/or data from a range of appropriate sources.
- Analysing involves interpreting information to identify the main features or ideas, then examining the information closely to determine how the parts relate to the whole.
- You will learn to draw evidence-based conclusions by evaluating information and/or data.
- The ability to communicate and share your ideas with other people is also an important part of Civics and Citizenship.

2.10.2 Key terms

emotive words words that create a strong emotional reaction
legislature the parliaments, or bodies, who have been elected to make laws to run a country or state
objective objective information is where data or events are presented without emotive words or opinion
subjective subjective information is where information is presented based on opinion or bias

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4277)
Reflection (ewbk-4194)
Student learning matrix (ewbk-4175)

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 2 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

2.4 SkillBuilder: Notetaking

eWorkbook
- SkillBuilder: Notetaking (ewbk-4163)

2.5 SkillBuilder: Writing inquiry questions for research

eWorkbook
- SkillBuilder: Writing inquiry questions for research (ewbk-4164)

2.6 SkillBuilder: Writing argument paragraphs

eWorkbook
- SkillBuilder: Writing argument paragraphs (ewbk-4165)

2.7 SkillBuilder: Writing a submission

eWorkbook
- SkillBuilder: Writing a submission (ewbk-4166)

Weblinks
- Making a submission (Parliament of NSW)
- Making a submission to a Senate Committee (Australian Parliament House)

2.8 SkillBuilder: Debating an issue

eWorkbook
- SkillBuilder: Debating an issue (ewbk-4167)

2.9 SkillBuilder: Creating political media

eWorkbook
- SkillBuilder: Creating political media (ewbk-4168)

2.10 Review

eWorkbook
- Reflection (ewbk-4194)
- Student learning matrix (ewbk-4175)

To access these online resources, log on to **www.jacplus.com.au**.

3 The Australian Constitution

3.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

What is the constitution and why do we have it?

3.1.1 Governing Australia

Can you imagine playing your favourite sport without any rules? All sports have rules so that the players know what is allowed on the field of play, and what is not. The way we are governed in Australia also has rules. Such rules outline the powers of those governing us, and what they are and are not permitted to do in exercising those powers. This set of rules is known as the Australian Constitution.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4278)
Video eLesson The Australian Constitution (eles-2076)

FIGURE 1 The Australian Constitution was created to protect citizens by setting out the rules for governing Australia.



3.2 Why we have a constitution

LEARNING INTENTION

By the end of this subtopic, you will be able to explain the reasons we have a constitution, including its advantages and disadvantages.

3.2.1 The creation of our Constitution

During the 1890s, the idea of joining the six colonies on the Australian continent to create one united country had a lot of support. This united country of Australia would need a new national government, while still retaining the existing parliaments to make laws for their respective states. Representatives of the different colonies met on several occasions to create a set of rules that would allow for a division of powers between these parliaments.

After the gold rush era of the 1850s, the population of all six Australian colonies grew rapidly. During the 1880s, the population rose from just over 2 million to around 3 million. By 1890, over 60 per cent of the population had been born locally (that is, in the Australian colonies rather than overseas). Large numbers of these people felt a greater loyalty to the colonies of their birth than to the countries of their parents' birth. It was not surprising that many saw the unification of the colonies into one country — the Commonwealth of Australia — as a desirable idea.

During the 1890s, representatives of the different colonies held meetings to develop a **constitution**. These men are often referred to as the 'founding fathers' of our Constitution. (No women took part in the process!) None of the colonial governments wanted to hand over all their law-making powers to a central government, so they had to adopt a structure that would allow these powers to be shared.

FIGURE 1 Representatives of the colonies met on a number of occasions to draft a constitution for the proposed federation of Australia.



FIGURE 2 *Opening of First Federal Parliament by HRH the Duke of Cornwall & York* by Charles Nuttall, 1901



When a group of states decide to join together and hand over some of their powers to a central government, this arrangement is known as a **federation**. In this arrangement, it is important that everyone understands which powers are retained by the states and which powers will be taken over by the central government. This was a major reason for the development of the Australian Constitution. It allowed the state parliaments to keep some law-making powers for issues that could be managed at the state level. At the same time, it gave the central parliament the power to make laws of national importance. Before Federation, for example, each colony had its own currency, army and navy. With Federation, it made sense to have one consistent currency and a national defence force.

By 1898 the main principles of the new Constitution had been agreed to, and each of the colonies held a **referendum** to allow their citizens to vote

constitution a set of rules that determines the structure of government and its law-making powers

federation the formation of a united country from a number of separate states or colonies, with law-making power shared between the national government and the governments of each of the states

referendum a process of allowing the people to vote on an important issue

on whether they wished to join this new federated Australia. By 1900, a majority in all six colonies had voted in favour, and the new Constitution was passed into law by the British Parliament. The newly created Commonwealth of Australia came into being on 1 January 1901. Elections for the national parliament were held in March of that year, and the newly elected parliament was opened in Melbourne's Exhibition Building on 9 May 1901. Federal parliament then met in Victoria's Parliament House until 1927, when it was transferred to the new national capital of Canberra.

on Resources

Weblink Federation

3.2.2 Why have a constitution?

Not all countries in the world have a written constitution such as Australia's. The United States of America is one country that, like Australia, is a federation guided by a written constitution. However, some countries that are similar to Australia in many ways have no single constitutional document. Australia, Canada and New Zealand all recognise the British monarch as their head of state and have similar systems of government, but neither Canada nor New Zealand has a written constitution. Their rules of government are contained in a number of different pieces of **legislation**.

FIGURE 3 The Australian Constitution guarantees freedom of religion for all Australians.



FIGURE 4 Adolf Hitler became a dictator in Germany in 1933 by suspending the protections in Germany's constitution.



Advantages of having a constitution

1. A constitution provides a system of rules that a government is required to follow. In Australia, it means that laws have to be made by a democratically elected parliament, not by any individual.
2. A written constitution can include some rights and freedoms to be enjoyed by all citizens of the country. For example, the Australian Constitution guarantees freedom of religion.
3. In Australia, the Constitution aims for a clear distinction between the powers of the federal parliament and the powers of the state parliaments.

Disadvantages of having a constitution

1. A written constitution can be difficult to change as society changes. Australia today is not the same as the colonies of the 1890s when the Constitution was written, and yet we are still bound by a document that is over 100 years old. Back then, it was illegal for anyone to bathe on public beaches between 6 am and 8 pm. Imagine if such a law still existed today!
2. Any written document can be open to interpretation. Some words have a number of different meanings. People could argue over those meanings, making a constitution less clear than we would want.

legislation a term used to describe laws passed by parliament

3. Enforcing a constitution depends on the willingness of everyone to obey it. In some countries, **dictators** have seized power by force and refused to follow the constitution of that country. In 1933, for example, Adolf Hitler seized complete power in Germany. Although Germany had a constitution at the time, Hitler used his majority support in the German Parliament to pass laws suspending many of the safeguards (protections) in that constitution, including passing the Enabling Act, which gave him the power to introduce any law. These suspended safeguards included rights such as free expression of opinion and freedom of the press, as well as constitutional protections that made sure executive government did not have excessive power. The new laws made it easier for Hitler to persecute his political opponents and minority groups such as the Jewish people. Once he gained complete control of Germany, Hitler murdered more than six million Jewish people.

dictator a person who has absolute power within a country, and who usually cannot be voted out of power by democratic elections. A government headed by a dictator is usually referred to as a dictatorship.

3.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6	Questions 2, 7, 8	Questions 3, 5, 9, 10

Check your understanding

1. Outline two reasons the idea of a federated Australia became popular during the 1880s and 1890s.
2. Explain the process by which the Australian Constitution came into existence.
3. In your own words, explain the meaning of the term ‘federation’.
4. What is the main feature of a federation?
5. Identify one advantage and one disadvantage of having a constitution.

Apply your understanding

6. The current states of Australia were originally British colonies. Thinking about this Australian context, what do you think a colony is?
7. Under the new federation model proposed by the colonies, powers need to be shared between state and federal governments. Give at least two reasons for this.
8. Which freedoms or groups in Australia could possibly be threatened if a dictator seized power?
9. How could a written constitution not be clear to everyone?
10. After reading about the advantages and disadvantages of having a written constitution, do you believe it is a positive or a negative feature of our system of government? Outline your opinion in writing and compare it with the opinions of your classmates.

For sample responses to every question, go to www.jacplus.com.au.

3.3 Sharing the power

LEARNING INTENTION

By the end of this subtopic, you will be able to explain how power is shared between the government and courts, and between federal government and state governments.

3.3.1 The separation of powers

FIGURE 1 Our parliamentary system is based on the Westminster system. Westminster is a district of London in which the British Parliament is located.



The Australian continent had been colonised by the British, and the vast majority of white colonisers were of British origin, so the founding fathers looked to the British Westminster system of government as a model for the new Australian Commonwealth government. The Westminster system had a long history, dating back to the Middle Ages, and had a number of safeguards designed to protect its citizens. One such safeguard was known as the 'separation of powers'. Under the separation of powers, government functions are shared across three 'arms' of government: the legislative, the executive and the judicial. This means that the power to make laws (legislative) is separate from the power to put those laws into action (executive), and that both of these arms are separate from the power to enforce the law and settle legal disputes (judicial). This also means we have a court system that is presided over by independent judges who are sworn to uphold principles of justice and fairness. The concept of the separation of powers can be traced back to the signing of the Magna Carta in England in 1215.

The Magna Carta

During the years 1199 to 1216, England was ruled by King John, who believed he had absolute power to do as he wished. As king, he could make any laws he wanted to, and he also had the power to act as a judge to decide on the fate of any of his subjects who might come before a court. This meant that he could find anyone he didn't like guilty of a crime, whether they were genuinely guilty or not. He sometimes used this power to heavily tax the people, and to confiscate the lands of some of the powerful barons in the kingdom. In 1215, these barons rebelled against the king, and demanded that he guarantee them certain rights. They presented these rights to the king in a 'Magna Carta' (Latin for 'Great Charter') and demanded that he sign it as a promise that he would respect these rights. These rights included freedom from excessive taxes, and the right to own and inherit property. It also established a Council of 25 barons to act as an advisory group for the king, and to ensure he did not abuse his powers. This is seen by many as the beginnings of a body, such as a parliament, to limit the powers of the king. Another significant clause in the Charter related to legal entitlements before the courts. Clause 39 read:

> No free man shall be arrested or imprisoned … or outlawed or exiled or in any way victimised, neither will we attack him or send anyone to attack him, except by the lawful judgement of his peers or by the law of the land.

This effectively reduced the power of the king to imprison anyone without a proper legal process. It is the beginning of the idea of an independent judicial arm of government, free of the influence of the king, and also reinforces the principle of trial by jury. This is stated in the words 'lawful judgement by (one's) peers'. A person's peers are those considered to be their 'equals' in society.

The separation of powers in the Australian Constitution

The Australian Constitution supports the idea of the separation of powers to allow for three arms of government:

1. legislative arm
2. executive arm
3. judicial arm.

3.3.2 The legislative arm

The legislative arm is the parliament, which has the power to make new laws and to change or **repeal** existing laws. It consists of two separate 'houses' — the House of Representatives and the Senate — together with the Governor-General as the representative of the British monarch (currently Queen Elizabeth II). A proposed law is known as a Bill. To become law, a Bill must be debated and voted on by both houses of parliament, and then approved by the Governor-General. It then becomes known as an Act or a statute, which are the formal names of laws that have been passed by parliament.

FIGURE 2 When all government ministers meet together, they are known as the Cabinet. Such meetings usually take place in the Cabinet Room in Parliament House.



3.3.3 The executive arm

The executive is the arm of government with the responsibility of putting the laws into action. Executive power officially lies with the Governor-General, but it is usually exercised by government ministers. These are members of parliament who have special responsibility for particular areas of government. For example, the minister for defence is responsible for administering all laws that relate to the defence forces; the minister for immigration is responsible for laws dealing with migrants wishing to come to Australia; and the minister for the environment is responsible for those laws that are designed to protect the environment. Public servants and other government employees are part of the executive arm of government.

FIGURE 3 The High Court of Australia has the power to interpret and enforce the Constitution.



3.3.4 The judicial arm

The judicial arm includes the **judiciary** and the courts, which are responsible for enforcing the law and settling disputes that might arise under the law. The courts can also ensure that the law is applied fairly and equally to everyone, so they are a safeguard for our rights and freedoms. The High Court of Australia has the power to interpret and enforce the Constitution. It can make sure that neither the legislative arm nor the executive arm acts in a way that is outside the constitutional powers of that arm. Once a judge has been appointed, he or she cannot be easily removed by the executive arm. This means that judges can be independent and make decisions without being influenced by others.

repeal to remove a law so that it no longer applies

judiciary a collective name given to the judges who preside over law courts

Why do we have the separation of powers?

The separation of powers provides a system of checks and balances on the power of government. This works in the following ways:

- Members of parliament can make laws but have to face elections on a regular basis. If laws prove to be unpopular or unfair, the people can vote for new and different members to replace them.
- An independent judiciary has the power to ensure that parliament and the executive are acting within the limits of the Constitution. This is a way of protecting individual freedoms. The High Court can declare any law invalid if it is contrary to the Constitution.
- Government ministers have to gain the approval of a majority of both houses of parliament if they want to bring in any new laws. If they cannot convince enough members, the law will not be passed.
- Government ministers are all members of parliament, and are individually accountable (or answerable) to parliament. They are required to answer questions in parliament about actions they take as part of their executive role.

DISCUSS

'The separation of powers exists to protect us from the abuse of power.'

1. Discuss what this statement means.
2. List arguments to support the statement.
3. List arguments to counter the statement.
4. Which do you support? Explain why.
5. Use your responses to hold a class debate or discussion.
6. Use your responses to write an extended response. (This can be as well as or instead of the class discussion.)

General capability: Critical and creative thinking

3.3.5 The division of powers

One of the key reasons for having a constitution is to reinforce the rights of citizens in a **democracy** such as Australia. Our Constitution does this by ensuring that no one person or organisation within our structure of government has all the power. Instead, power is shared in a number of ways, and the Constitution reinforces this arrangement.

FIGURE 4 The federal government controls the issuing of currency to ensure the same money is used throughout Australia.



Most of the colonial parliaments that were to become state parliaments after federation had been in existence since the 1850s. State parliaments were accustomed to passing laws and governing their areas of Australia, and everyone expected them to continue doing this after 1901. For this reason, the Constitution supports the idea of a division of powers between the state parliaments and the federal parliament. Law-making powers are divided in such a way that national issues can be handled by the central government, while state governments can concentrate on providing essential services for their citizens.

democracy a political system according to which citizens choose the way in which they are governed

Section 51 of the Constitution is the part of the Constitution that outlines the specific role and power of the federal government. It lists all the areas of government that are the responsibility of the federal parliament. These are usually referred to as the 'specific powers', and they include:

- trade and commerce with other countries
- postal and telephone services
- the defence forces
- quarantine regulations
- immigration and emigration issues
- weights and measures used in Australia
- the banking and currency systems
- relationships with other countries (through our embassies and diplomats).

Any area of government not included in Section 51 remains the responsibility of state parliaments. Examples include:

- health and hospitals
- police and emergency services
- primary and secondary education
- transport, including public transport, road rules and road construction.

The powers that remain with state parliaments are known as the 'residual powers'.

Although not mentioned in the Constitution, another level of government — local government — operates in Australia. Local government is carried out by city and municipal councils. These councils usually have responsibility for:

- parks and recreational facilities, such as swimming pools and sports grounds
- town planning
- rubbish removal
- maintenance of local streets
- libraries and kindergartens.

FIGURE 5 The provision of essential services such as firefighting is the responsibility of state governments.



FIGURE 6 Public swimming pools are valuable facilities provided by local councils.



on Resources

Interactivity Time out Responsibilities (int-1207)

FIGURE 7 The division of powers and the separation of powers

LOCAL GOVERNMENT
There are around 900 local government bodies in Australia (usually called councils).
Council members are called aldermen or councillors. The head of the council is called a mayor or a shire president.
Councils operate under state laws. They make rules, called by-laws, on local issues.

STATE GOVERNMENT
Each of Australia's six states and two territories has its own parliament. All parliaments have lower houses. All but Queensland and the two territories have upper houses (legislative councils).

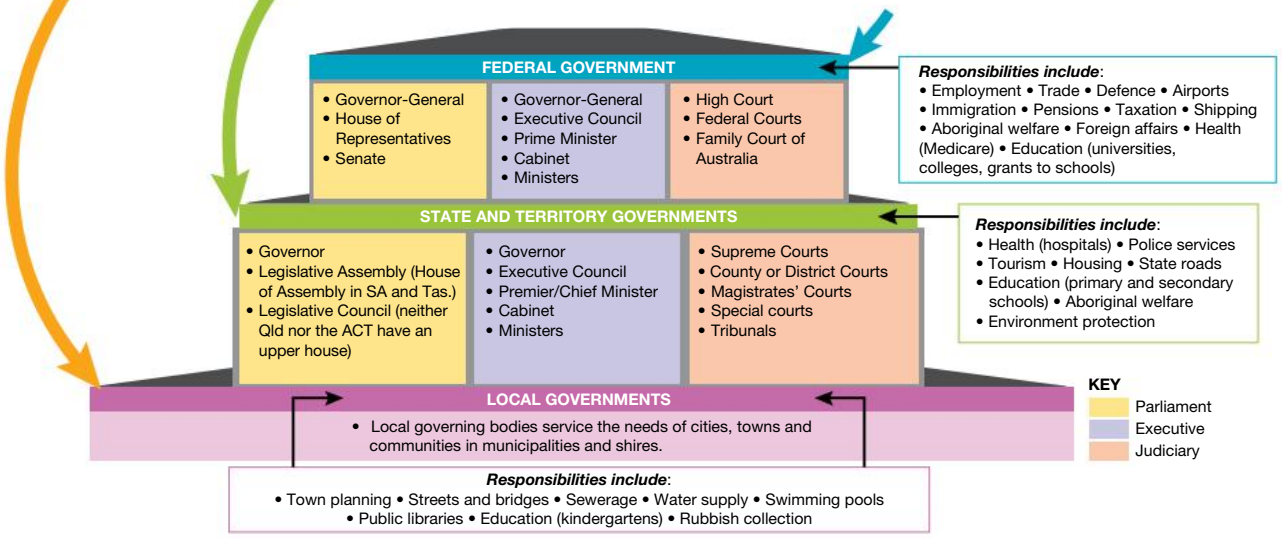
The process of government is similar to that of the federal government. However, the head of government is the Premier (or Chief Minister in the territories) and the head of state (who represents the British monarch) is the Governor.

FEDERAL GOVERNMENT
There are two houses of federal parliament — an upper house (the Senate) and a lower house (the House of Representatives).

The Prime Minister is the head of government. Ministers are appointed to look after particular government portfolios or departments.

The Cabinet, which includes the Prime Minister and a group of senior ministers, makes the key government decisions.

The Executive Council is chaired by the Governor-General, who represents the British monarch as head of state.



3.3 ACTIVITY

Using internet resources, find out who currently performs the following roles in our system of government. For each one, indicate in a table whether their role is legislative, executive or judicial:

a. the minister for defence
b. your local member of the House of Representatives
c. the Chief Justice of the High Court
d. the WA state minister for education.

HASS skills: Questioning and researching
Civics and Citizenship concepts: Democracy, Democratic values

3.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 7, 8	Questions 4, 5, 9, 10

Check your understanding

1. Outline the role of each of the following arms of government, and provide an example of each:
   a. legislative arm
   b. executive arm
   c. judicial arm.
2. List three examples of the responsibilities of each of the following levels of government:
   a. federal government
   b. state government
   c. local government.
3. Explain each of the following:
   a. specific powers
   b. residual powers.
4. Referring to **FIGURE 7**, what is the difference between the division of powers and the separation of powers?
5. Outline the role of the Governor-General.

Apply your understanding

6. For each of the following, indicate whether the role is legislative, executive or judicial:
   a. members of parliament
   b. government minister
   c. High Court judge
   d. the Cabinet.
7. Of the three levels of government, federal, state and local, which has most influence on ordinary people? Give reasons or examples to support your opinion.
8. In what way is the executive arm not completely separate from the legislative arm of government?
9. Explain why it is significant that the High Court has the power to interpret the Australian Constitution?
10. 'The separation of powers is an important safeguard of our rights and freedoms in Australia.' Do you agree or disagree with this statement? Give reasons for your answer. For help with the skill of evaluating and communicating, see topic 1 HASS skills and concepts.

For sample responses to every question, go to www.jacplus.com.au.

3.4 Changing the Constitution

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the steps required to change the Australian Constitution.

3.4.1 The process for changing the Constitution

When the founding fathers developed our Constitution, they wanted to make sure that it could not be changed by politicians seeking to gain more power for themselves. They also wanted to make sure that the two most populous states, New South Wales and Victoria, could not dominate government in a way that could disadvantage the smaller states. For these reasons, they made sure that it would not be easy to change the Constitution.

The process for changing the Constitution is contained in the last part of the document — chapter 8, section 128. The following steps must be observed if any change is to occur:

- Any proposed change to the Constitution must first be approved by a majority of members of both houses of the federal parliament.
- Within six months of being approved by the parliament, the proposed change must be put to the people to vote in a referendum. All registered voters are entitled to have a say.

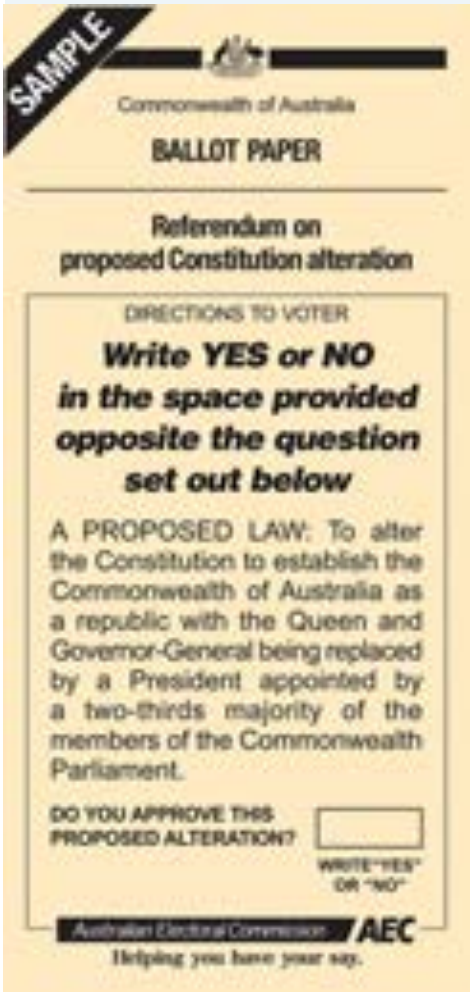
- The referendum will usually be in the form of a question asking the voters whether or not they approve of the change. Voters write the word 'Yes' or 'No' in a box on the voting paper to signify their support or opposition to the proposed change (see **FIGURE 1**).
- For the change to be approved, more than 50 per cent of all voters in Australia must vote yes to the proposal.
- In addition, there must be a majority in favour in at least four of the six states.
- If the above requirements are met, the proposal goes to the Governor-General for final approval and the change is made to the Constitution.

The double majority

As you can see from the steps in changing the Constitution, it is not enough for a majority of all voters in Australia to approve a change to the Constitution. A majority in favour in at least four of the six states is also needed. This principle is known as the 'double majority', and is a requirement for constitutional change outlined in Section 128 of the Constitution.

The founding fathers introduced the need for a double majority because they wanted to make sure that the states with larger populations could not out-vote the states with smaller populations, and so change the Constitution to gain some advantage for their own inhabitants. Throughout most of Australia's history, New South Wales and Victoria have been the biggest states in terms of population. Today, with over 14 million people between them, they make up more than 50 per cent of our population of just over 25 million, and elect 86 of the possible 151 members of the House of Representatives (see **FIGURE 3**).

FIGURE 1 A ballot paper from the referendum held in 1999



on Resources

Video eLesson Referendums (eles-2288)

DISCUSS

Do you think that Australia should become a republic? Would you have written 'yes' or 'no' in the 1999 referendum? Discuss as a class.

General capability: Critical and creative thinking

Remember that the Constitution was developed by representatives of the original six colonies that were to become states within the new Commonwealth of Australia. These men knew that they were giving up some of their colonial powers to the new federal parliament. Many of those who represented the smaller states such as Western Australia were suspicious of the motives of the larger states, and were afraid that New South Wales and Victoria might try to dominate the others. For this reason, they insisted on the inclusion of the double majority to protect the interests of the smaller states. Without this double majority, it would be possible for the voters in the two largest states to out-vote the combined voters in the other four states and two territories.

3.4.2 Where do proposals for change come from?

Proposals to change the Constitution can come from several sources. For example, a number of state governments may get together and decide that a particular change would be valuable. Sometimes the federal government will hold an inquiry into a particular issue, and this may lead to recommendations for constitutional change. At times community pressure has led to government recognising the need for a change. This occurred in the 1960s when many people campaigned to have the federal government gain the power to make laws for Aboriginal and Torres Strait Islander peoples (see subtopic 3.5). Proposals for change have also come from special constitutional conventions, such as that held in 1998 to consider the issue of Australia becoming a republic (see subtopic 3.5).

FIGURE 2 The Constitution can only be changed through a vote of the people.



No matter where a proposal comes from, it usually needs the support of the government of the day to have any prospect of bringing about constitutional change. This is because the proposal must have the majority support of the parliament before it can be put to a referendum. As covered in subtopic 3.5, it has been very difficult to achieve constitutional change since federation. For this reason alone, a government will want to make sure strong popular support exists for any proposal before considering the cost and effort of holding a referendum.

FIGURE 3 Population and number of seats in the House of Representatives



FIGURE 4 In 1998, a special constitutional convention was held in the old Parliament House in Canberra to consider the issue of Australia becoming a republic.



3.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 6	Questions 3, 7, 8	Questions 1, 5, 9

Check your understanding

1. Rewrite the following stages for constitutional change in the correct order:
   - The proposed change is put to the people to vote in a referendum.
   - The proposal goes to the Governor-General for approval.
   - The proposed change must achieve a double majority for the referendum to be successful.
   - A proposed change to the Constitution must be approved by a majority of members of both houses of the federal parliament.
   - Voters write the word 'Yes' or 'No' in a box on the voting paper to signify their support or opposition to the proposed change.
2. Identify two possible sources of proposals for changing the Constitution.
3. What is a double majority?
4. What has to happen for a double majority to be achieved?
5. Using **FIGURE 3** to help you, explain why the founding fathers felt it was necessary to include the double majority as a requirement for constitutional change.

Apply your understanding

6. If a referendum to change the Constitution was approved by the majority of voters in Western Australia, Victoria and Queensland, as well as the two territories, explain why the proposed constitutional change would not be achieved.
7. Imagine that there has been a proposal to hold a referendum to change Section 128 of the Constitution so that the double majority is no longer required for constitutional change.
   a. Outline one argument in favour of making such a change and one argument against the change.
   b. Do you believe that this proposal would be successful at a referendum? Give reasons for your answer.
8. There have recently been suggestions that our Constitution should include recognition of Australia's Aboriginal and Torres Strait Islander peoples, and their previous occupation and ownership of the land. Outline two things that might have to occur for such a proposal to be put to a referendum.
9. Most proposals for constitutional change come from the parliament, such as the constitutional convention shown in **FIGURE 4**. Should it be possible for the general public to initiate constitutional change, perhaps through a petition to parliament? Explain why you think this would be a good idea or a bad idea.

For sample responses to every question, go to www.jacplus.com.au.

3.5 Difficulties in changing the Constitution

Aboriginal and Torres Strait Islander readers are advised that this topic may contain photos of or references to people who have died.

LEARNING INTENTION

By the end of this subtopic, you will be able to explain attempts to change the Constitution in the past, some successful and some not.

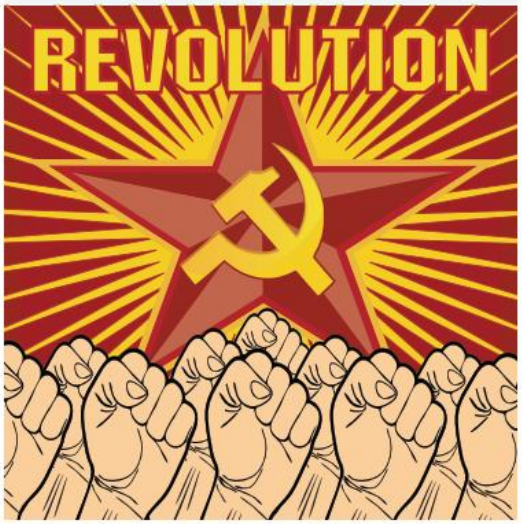
3.5.1 Why is it difficult to change the Constitution?

The founding fathers wanted to make sure that the Constitution could not be changed too easily. They also wanted to ensure that Australia would have a form of government that was stable and predictable. Consequently, only a small minority of proposals for change have ever succeeded through the referendum process.

communism a belief system that promotes the overthrow of existing society and its replacement with one in which all property and possessions are shared equally, and resources are controlled by the government

There have been 44 occasions since 1901 when proposals for constitutional change were put to the voters of Australia through the referendum process, and only 8 of them were successful. Let us look at some examples.

FIGURE 1 The Communist Party was considered a threat to Australia's security.



1951 — banning the Communist Party

In the years following World War II, **communism** spread through a number of countries. In eastern Europe, countries that had been occupied by Russia at the end of the war were ruled by communist governments. China became a communist country in 1949. Australia also had an active Communist Party at the time. The Australian government, led by Prime Minister Robert Menzies, believed the Communist Party to be a threat to national security. In September 1951, the Menzies government proposed a change to the Constitution to give the government the power to ban the Communist Party in Australia.

Many people campaigned against this proposal because they believed it was against the principles of freedom of speech and freedom of association. Even people who were not Communist Party members or supporters opposed the proposal. The referendum failed to gain a majority of votes, losing by 49.4 per cent to 50.6 per cent. It did gain majority support in Western Australia, Tasmania and Queensland, but it did not have a double majority and so it failed. The Communist Party only had a relatively small number of supporters and members, and most Australians were strongly opposed to communism. Nevertheless, the failure of the referendum is a good example of the unwillingness of Australian voters to change the Constitution without strong community support for the change.

1967 — recognising Aboriginal and Torres Strait Islander peoples

When the Constitution was drafted, the federal parliament was specifically denied the power to make laws affecting Aboriginal and Torres Strait Islander peoples. Only the states could make laws in relation to those Aboriginal and Torres Strait Islander peoples living within their own borders. Section 127 of the Constitution specifically excluded Aboriginal and Torres Strait Islander peoples from being counted in the official **census**. This was seen to be discriminatory by many people, because it was effectively denying the existence of Aboriginal and Torres Strait Islander peoples. The rights of Aboriginal and Torres Strait Islander peoples varied from state to state, so it was felt a consistent national approach was needed to ensure that they could enjoy the same rights as all other Australians.

From the early 1960s, Aboriginal and Torres Strait Islander leaders began campaigning strongly to remove Section 127 from the Constitution, and to change the clause that prevented the federal parliament from making laws affecting Aboriginal and Torres Strait Islander peoples. In 1967, a referendum to make these changes was put to the voters. It was strongly supported by all political parties as well as the general public. This proposal became the most successful constitutional referendum in Australia history. Over 90 per cent of voters were in favour across the country, with a majority in favour in every state. As a result of this constitutional change, the federal government has been able to pass laws such as the Racial Discrimination Act, which aims to ensure that all Australians are treated equally, regardless of their racial or ethnic origins. It has also allowed the federal parliament to make laws relating to land rights.

1999 — becoming a republic

During the 1990s, support grew for the idea that Australia should become a republic. This would have required the removal from the Constitution of references to the British monarch, and of the Governor-General as the monarch's representative. The position of head of state would be occupied by an Australian president. There were different ideas about how such a president might be appointed. Some believed that he or she should be directly elected by the Australian voters, while others believed the president should be appointed by the parliament.

In 1998 a constitutional convention was held in Canberra, attended by representatives from a variety of political and community groups. The convention was given the task of coming up with a proposal to put to voters in a referendum. After much discussion, the convention proposed a model by which the president of an Australian republic would be appointed by a vote of the federal parliament. A successful presidential nominee would need to be supported by two-thirds of those members. The proposal was opposed both by people who wanted to retain the British monarch as head of state and by those who wanted a president to be directly elected by the voters. Without broad community support, the referendum did not win majority support throughout the country or gain a majority in any state.

census a regular survey used to determine the number of people living in Australia. It also has a variety of other statistical purposes.

FIGURE 2 Oodgeroo Noonuccal (also known as Kath Walker) was a leading campaigner for Aboriginal rights in the 1960s.



FIGURE 3 The Australian Republican Movement and Australians for Constitutional Monarchy campaigned actively in 1999.



on Resources

Weblinks Australian Republican Movement

Australians for Constitutional Monarchy

3.5 ACTIVITY

Despite the loss of the referendum in 1999, many people still believe that Australia should eventually become a republic. On the other hand, media coverage of the younger generation of the royal family, which has closely followed the marriages of Prince William to Kate Middleton in 2011 and Prince Harry to Meghan Markle in 2018, has revived interest in the Monarchy.

Using the **Australian Republican Movement** weblink and the **Australians for Constitutional Monarchy** weblink in the Resources tab, list three arguments in favour of Australia becoming a republic and three arguments against. Compare your arguments with your classmates. Your teacher may be able to organise a class debate on the issue.

General capability: Critical and creative thinking

3.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 7, 8	Questions 4, 5, 9, 10

Check your understanding

1. Using **FIGURE 1** as evidence, explain why the Menzies government wished to ban the Communist Party in Australia.
2. Why was this referendum unsuccessful, despite the unpopularity of communism among Australians?
3. **FIGURE 2** shows Oodgeroo Noonuccal, a leading campaigner for Aboriginal rights. Which two issues were the subject of the 1967 referendum relating to Aboriginal rights?
4. What process was used to develop the model voted on in the 1999 republic referendum?
5. Which two groups campaigned against the republic referendum, leading to its defeat?

Apply your understanding

6. Using internet resources, identify three pieces of legislation that have been passed as a result of the federal parliament gaining the power to make laws for Aboriginal Australians.
7. Using the examples of the 1951 and 1999 referendums, brainstorm three reasons it is very difficult for a constitutional referendum to be successful in Australia.
8. Australia's Constitution was written in the 1890s. Some people believe that many parts of it are now out of date, but that it is too hard to change. Do you agree or disagree with this opinion? Give one reason for your agreement or disagreement.
9. In the USA, constitutional change happens when both houses of Congress pass the necessary motion, and three-quarters of state legislatures also pass the same motion. No public referendum is held. Would this be a better way to change the Australian Constitution? Give a reason why you agree or disagree with this method.
10. Should a national constitution be as difficult to change as Australia's, or is it more important to keep our system of government as stable as possible? Give reasons for your answer.

For sample responses to every question, go to www.jacplus.com.au.

3.6 Thinking Big research project: An Australian republic?

Scenario

Despite the loss of the referendum in 1999, many people still believe that Australia should eventually become a republic. On the other hand, media coverage of recent royal marriages, the births of royal babies and royal visits to Australia has revived interest in the monarchy. Both sides of the debate believe passionately in their position, but many Australians do not understand the issue, or the arguments proposed by each side.

FIGURE 1 Australian Republic Movement members campaigning for an Australian head of state



Task

Your task is to produce a PowerPoint presentation that explains the issue of whether Australia should become a republic, what has to happen for this to occur, and the arguments proposed by each side. You do not have to form an opinion yourself, but you should present enough information to help others form their own opinion on the issue.

Process

Follow these steps to complete this task:

- Open the ProjectsPLUS application for this topic. Click on the **Start new project** button to enter the project due date and set up your project group. Working in pairs will allow you to share ideas and responsibility for various aspects of the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. In the **Media centre** you will find an assessment rubric and some weblinks that will provide a starting point for your research.
- Use the websites in the Media Centre to find out:
  - What is a Head of State?
  - Australia is a *constitutional monarchy*. What does this term mean? What are the features of a constitutional monarchy?
  - What is a *republic*? What is the difference between a constitutional monarchy and a republic?
  - What changes might need to be made to the Australian Constitution for Australia to become a republic?
  - What are the arguments usually put forward ***in favour*** of Australia becoming a republic? Select the five arguments that you think are the strongest, and explain each.
  - What are the arguments usually put forward ***against*** Australia becoming a republic? Select the five arguments that you think are the strongest, and explain each.
- Your PowerPoint presentation should have one idea per slide. It will usually represent a single sentence summary of a larger amount of information. In presenting information in a PowerPoint format, you should be prepared to provide extra information and explanation relating to each slide, not merely read from the slide.
- Once you have completed your presentation, submit it to you teacher for assessment and feedback, or present it to your class.

FIGURE 2 Australians for a Constitutional Monarchy wish to retain the British monarch as Australia's head of state.



on Resources

Thinking Big research project An Australian republic? (pro-0240)

3.7 Review

3.7.1 Key knowledge summary

3.2 Why we have a constitution

- The way we are governed in Australia is determined by a set of rules. This set of rules is known as our Constitution.
- The Constitution outlines the powers of those governing us, and what they are and are not permitted to do in exercising those powers. Commonwealth and state parliaments are all expected to operate within the rules laid out in this Constitution.
- The law courts are also expected to uphold the rules contained in the Constitution, and to ensure that all individuals and organisations act within these rules.
- A constitution was necessary because Australia already consisted of six self-governing colonies. Because a national parliament would be introduced to govern the new nation, it was important to have a clear statement about how power would be shared between the national parliament and the six existing parliaments.

3.3 Sharing the power

- Under our Constitution, we have a separation of powers. This means that power is separated between the legislative arm of government, which makes laws, the executive arm, which implements (or carries out) the laws, and the judicial arm, which resolves disputes that may arise under those laws.
- The Constitution also provides for a division of powers between the state parliaments and the federal parliament. Law-making powers are divided in such a way that national issues can be handled by the central government, while state governments can concentrate on providing essential services for their citizens.

3.4 Changing the Constitution

- Our Constitution can only be changed through a referendum in which a double majority vote in favour of the proposed change.

3.5 Difficulties in changing the Constitution

- It is relatively difficult to change our Constitution. Constitutional change has been attempted on 44 occasions, and only 8 of them were successful.

3.7.2 Key terms

census a regular survey used to determine the number of people living in Australia. It also has a variety of other statistical purposes.

communism a belief system that promotes the overthrow of existing society and its replacement with one in which all property and possessions are shared equally, and resources are controlled by the government

constitution a set of rules that determines the structure of government and its law-making powers

democracy a political system according to which citizens choose the way in which they are governed

dictator a person who has absolute power within a country, and who usually cannot be voted out of power by democratic elections. A government headed by a dictator is usually referred to as a dictatorship.

federation the formation of a united country from a number of separate states or colonies, with law-making power shared between the national government and the governments of each of the states

judiciary a collective name given to the judges who preside over law courts

legislation a term used to describe laws passed by parliament

referendum a process of allowing the people to vote on an important issue

repeal to remove a law so that it no longer applies

3.7.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

What is the constitution and why do we have it?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4278)
Reflection (ewbk-4202)
Crossword (ewbk-4201)
Student Learning Matrix (ewbk-4195)

Interactivity The Australian Constitution crossword (int-5311)

3.7 Review exercise

Multiple choice

1. Why did the idea of a federated Australia became popular during the 1880s and 1890s?
   - **A.** Gold had been discovered in the 1850s.
   - **B.** More than half the population had been born in Australia.
   - **C.** The colonies were too small to govern themselves.
   - **D.** The colonies wanted to hand over their residual powers.
2. A federation is a country in which
   - **A.** state government send representatives to a national parliament.
   - **B.** there is no division of powers between the central government and state governments.
   - **C.** there is a division of powers between different state governments.
   - **D.** there is a division of powers between the central government and state governments.
3. The Australian Federal Parliament has responsibility for laws relating to
   - **A.** recreational facilities.
   - **B.** defence forces.
   - **C.** public transport.
   - **D.** secondary schools.
4. State governments have responsibility for laws relating to
   - **A.** postal services.
   - **B.** quarantine of animals from overseas.
   - **C.** health and hospitals.
   - **D.** maintenance of parks.
5. Local councils have responsibility for
   - **A.** weights and measures.
   - **B.** emergency services.
   - **C.** telephones services.
   - **D.** libraries.

6. What does the separation of powers refer to?
   - **A.** The powers exercised by the different levels of government
   - **B.** The separation of the two houses of parliament
   - **C.** The separate steps required to change the constitution
   - **D.** The legislative, executive and judicial functions of government
7. What was the purpose of the 1967 referendum relating to Aboriginal and Torres Strait Islander peoples?
   - **A.** Create Aboriginal and Torres Strait Islander peoples land rights
   - **B.** Include Aboriginal and Torres Strait Islander peoples in the census
   - **C.** Give Aboriginal and Torres Strait Islander peoples the right to vote
   - **D.** Remove discrimination against Aboriginal and Torres Strait Islander peoples
8. What did the 1999 republic referendum ask voters to consider?
   - **A.** Introducing an Australian president nominated by a vote of two-thirds of the members of parliament
   - **B.** Introducing an Australian president elected by popular vote of the people
   - **C.** Replacing the Queen with the Governor-General
   - **D.** Appointing the Governor-General with a vote of two-thirds of the members of parliament

Short answer

Australia's Constitution would never have been agreed to if it had not guaranteed a role for state governments. It was state politicians who met to develop the Constitution, believing that they would continue to have considerable powers. Over the last hundred years, many Australians have argued that we no longer need state governments. They argue that countries with much larger populations than Australia manage without two levels of parliament. They also argue that local councils could be enlarged to become elected regional authorities, so that we would have only two levels of government. Those who support retaining state governments argue that the federal parliament is too distant from ordinary people, and that state governments are best placed to deliver essential services. Removing state parliaments would require several changes to the Constitution. Consider the following questions, and give reasons for your responses.

9. Modern communications did not exist when the Constitution was drafted, so the federal government would have seemed very distant. State governments, however, were based in every capital city and so were closer to the people. Have changes in our forms of communication made state governments unnecessary?
10. Identify three changes that would have to happen for a referendum to abolish the states to be successful.
11. Can you think of some powers that are currently held by one level of government that could be transferred to a different level of government? For example, the state governments could transfer their responsibility for health and hospitals to the federal government.

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 3 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

3.1 Overview

Video eLesson
- The Australian Constitution (eles-2076)

3.2 Why we have a constitution

eWorkbook
- Why have a Constitution? (ewbk-4196)

Weblink
- Federation

3.3 Sharing the power

eWorkbooks
- Division of powers (ewbk-4197)
- Separation of powers (ewbk-4198)

Interactivity
- Time out Responsibilities (int-1207)

3.4 Changing the Constitution

eWorkbook
- Double majority (ewbk-4199)

Video eLesson
- Referendums (eles-2288)

3.5 Difficulties in changing the Constitution

eWorkbook
- Constitutional change in Australia (ewbk-4200)

Weblinks
- Australian Republican Movement
- Australians for Constitutional Monarchy

3.6 Thinking Big research project: An Australian republic?

Thinking Big research project
- An Australian republic? (pro-0240)

3.7 Review

eWorkbook
- Reflection (ewbk-4202)
- Crossword (ewbk-4201)
- Student learning matrix (ewbk-4195)

Interactivity
- The Australian Constitution crossword (int-5311)

To access these online resources, log on to **www.jacplus.com.au**.

4 The Australian government

4.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Parliament and government. How do they keep Australia running smoothly?

4.1.1 Democratic Australia

Parliament is the main law-making body in Australia. Parliaments are elected to create laws that represent the wishes and values of their citizens. We describe our system of government as a **democracy** because the people vote to decide who sits in the parliament to make our laws for us. State parliaments were mostly established in the six former colonies from the 1850s onwards, while the federal parliament came into being with federation in 1901.

Many features of our parliamentary democracy have been adapted from the British system of government, known as the **Westminster system**. As a group of former British colonies, we adopted many features of the Westminster system, including having two houses of parliament at both the federal level and in most of the states.

democracy a political system according to which citizens choose the way in which they are governed

Westminster system the parliamentary system of Great Britain, which has been copied and adapted by many other countries including Australia. It is called that because the British Parliament meets in a building called the Palace of Westminster.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4279)

Video eLesson What is parliament? (eles 2077)

FIGURE 1 Australian Parliament House in Canberra



4.2 Role and structure of the Commonwealth Parliament

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the different parts of the Commonwealth government and their roles.

4.2.1 The three parts of Parliament

Our Commonwealth Parliament consists of three parts:

- the lower house, known as the House of Representatives
- the upper house, known as the Senate
- the Queen, represented by the Governor-General.

Our Commonwealth Parliament is **bicameral**. The major role of this body is to make laws in those areas defined by the Constitution.

4.2.2 The House of Representatives

As the lower house in the federal parliament, the House of Representatives has the following features:

- It has 151 members, each elected for three years. Each member represents an electorate or 'seat' that covers a particular geographic area. All electorates have roughly the same number of electors, currently about 95 000 each, with a 10 per cent variation allowed from this figure. States with larger populations, such as New South Wales and Victoria, elect the largest number of members. States with smaller populations, such as Western Australia and South Australia, elect much smaller numbers.
- Meetings of the House of Representatives are chaired (or run) by the Speaker of the House. The Speaker is usually elected by all the members of the House. The Speaker has an important role in chairing the House, maintaining order in debates and ensuring all members observe the rules of the House, known as the 'standing orders'.
- Most legislation is introduced in the House of Representatives. For it to actually become a law of the land, a majority of the members of parliament have to vote in favour of it.
- Most members of the House of Representatives (MHRs) are members of political parties. A party is a group of people who have similar opinions and values, and who will usually all vote together for laws that reflect those views and values (see subtopic 5.4).

FIGURE 2 The House of Representatives Chamber in Parliament House



4.2.3 The Senate

The Senate is the upper house of the federal parliament, and has the following features:

- It acts as a house of review. This means that it can have a second look at all legislation that has passed through the House of Representatives. Senators also have to vote on any new proposals before they can become law. They can reject or change any legislation that they do not believe is appropriate.
- Apart from a brief period from 2005 to 2008, governments have not had a majority of members in the Senate since 1981. This has meant that the Senate has often sought to change or improve government legislation.

bicameral a parliament with two houses

- The Senate has 76 members. Each of the six states elects twelve senators, regardless of size or population, and the Northern Territory and ACT each elect two senators. In contrast, the members of the lower house are elected on the basis of population. Because so many representatives come from New South Wales and Victoria, they could out-vote all the other members combined. The Senate was therefore created with equal numbers from each state to act as a safeguard against this happening in the upper house.
- Meetings of the Senate are chaired by the President of the Senate. He or she has a similar role in relation to the Senate as the Speaker has in relation to the House of Representatives.

FIGURE 3 The Senate Chamber in Parliament House



4.2.4 The Governor-General

The third element in the Commonwealth Parliament is the British monarch (currently Queen Elizabeth II), represented in Australia by the Governor-General. He or she performs the following roles and functions in the parliamentary system:

- The Governor-General gives the **royal assent** to legislation that has been passed by both houses of parliament. This is the final stage that must occur before the law comes into force. Under Section 58 of the Constitution, the Governor-General also has the power to withhold the royal assent and return a Bill to parliament with recommended changes.
- The Governor-General also has a number of special powers known as 'reserve powers'. These include the power to summon parliament (calling for a new parliament to assemble after a federal election), open and dissolve parliament (ending parliament before a federal election takes place). These powers are usually exercised on the advice of the government of the day, although the Constitution gives the Governor-General the power to ignore that advice. In 1975, the Governor-General at the time dissolved parliament and called an election, effectively dismissing an elected government.

FIGURE 4 General David Hurley was sworn in as Australia's 27th Governor-General on 28 June 2019.



4.2.5 Executive government

Under s. 61 of the Constitution, executive power of the Commonwealth government is held by the Governor-General, on behalf of the British monarch. The Governor-General chairs a body called the Executive Council, which exists to advise him or her. In reality, executive power is exercised by the Prime Minister and Cabinet, and all ministers are automatically appointed members of the Executive Council. An Executive Council meeting can consist of the Governor-General and as few as two Cabinet ministers, and these meetings usually occur fortnightly. Such meetings are required to formally approve decisions already made by the Cabinet, so the Executive Council has no separate executive power. Much of executive government is based on 'conventions' that existed in the Westminster system before Australian federation, but were not specifically included in the Constitution.

royal assent the formal approval by the monarch's representative, and the final step necessary before a law comes into force

Examples include the following:

- The Governor-General is generally required to act on the advice of ministers, following accepted practice in the Westminster system as it operates in Britain.
- The Constitution makes no mention of the position of 'Prime Minister' or 'Cabinet'. Those drawing up the Constitution assumed that the Commonwealth Parliament would follow accepted Westminster tradition and create these roles.
- The Prime Minister and Cabinet, as the centre of executive power, actually do more than put laws into action. As the leaders of the majority party in the House of Representatives, they generally decide which Bills will be put before the Parliament, so can determine which laws will be created. The Cabinet also decides how government money will be spent, usually through the development of an annual budget.

4.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 5, 8	Questions 4, 7, 9, 10

Check your understanding

1. What is a bicameral parliament? Refer to **FIGURES 1** and **2**.
2. In the federal parliament, what is the name of the following?
   a. The upper house
   b. The lower house
3. What is the role of the Governor-General (see **FIGURE 3**) in passing legislation?
4. What is the difference between the way in which members of the House of Representatives are elected and the way in which senators are elected?
5. Outline the two main functions of the Senate.

Apply your understanding

6. Imagine that the Governor-General rejects a proposed law and sends it back to the parliament with recommended changes. What has to happen in both houses before the Bill returns to the Governor-General?
7. Identify two possible consequences if either or both houses of parliament refuse to accept the Governor-General's recommended changes.
8. What is the Executive Council, and what role does it have under the Constitution?
9. Identify and explain two conventions that relate to Commonwealth executive government but are not included in the Constitution.
10. The Senate was established to preserve the rights of the smaller states so all states have an equal number of Senators. Given that almost all Senators are now elected as representatives of political parties, does the Senate still perform its original purpose? Give reasons why you agree or disagree. For help with this question, see topic 1 HASS skills and concepts.

For sample responses to every question, go to www.jacplus.com.au.

4.3 State and territory parliaments

LEARNING INTENTION

By the end of this subtopic, you will be able to explain the role and responsibilities of state and territory parliaments.

4.3.1 Eight separate parliaments

Although considerable powers were handed over to the federal parliament at the time of federation, the newly established states retained the parliamentary structures that had been established during the colonial period. They still perform an important function in our system of government.

In addition to the federal parliament, Australia has eight state and territory parliaments. This includes the original six state parliaments created at federation, plus two parliaments that have been established to make laws for the two mainland territories — the Northern Territory and the Australian Capital Territory (ACT). The two territories were governed directly by the federal parliament for most of the twentieth century, with the Northern Territory gaining its own parliament in 1974 and the ACT in 1989. The federal parliament retains the power to change or overrule any laws passed in the territory parliaments. It does not have this power over the six state parliaments.

FIGURE 1 Which parliament house?



4.3.2 Features of the state and territory parliaments

State and territory parliaments have many similar features, although some have unique characteristics:

- All of the state parliaments were originally established as bicameral parliaments, with an upper and a lower house. In 1922, the Queensland Parliament abolished its upper house, so it is now a **unicameral** parliament.
- In each of the bicameral parliaments, the upper house is known as the Legislative Council. In Western Australia, New South Wales and Victoria, the lower house is called the Legislative Assembly. This is also the name given to the only house in Queensland. The lower house in South Australia and Tasmania is known as the House of Assembly.
- The territory parliaments are also unicameral, with the one house in each territory known as the Legislative Assembly.
- The leader of the government in each of the states is called the premier, while the leader of the government in the two territories is called the chief minister.
- Each of the states and territories mirrors the separation of powers that applies at the federal level: legislative, executive and judiciary. Each parliament has legislative powers, allowing it to pass laws that apply within the boundaries of the state or territory. Each has an executive arm, in the form of a group of ministers with particular responsibilities for different government functions. Each also has a judiciary to enforce laws and settle disputes. The highest court in each state and territory is known as the Supreme Court.
- Each of the states has a Governor, representing the British monarch. He or she has a similiar role within each state as the Governor-General has at the federal level.

4.3.3 Role of the state and territory governments

State and territory governments provide many of the essential services we rely on in everyday life.

Criminal law

State and territory governments have the power to make laws to prohibit most types of criminal activity. They also have the power to decide the appropriate punishments for people who break the law. Laws relating to crimes such as murder, assault and theft are all made at the state level. State governments also control the road laws, including speed limits, drivers licences, car registration and drink driving laws.

Transport

State and territory governments are responsible for building and maintaining most of the roads and freeways within their own borders. Sometimes they arrange for private companies to build these roads. Such companies are usually given the right to charge tolls on the roads they have built. Public transport is also a state government responsibility. In some states, the government owns and operates the public transport system. In others, all or part of the public transport system is operated by private operators. In either case, state and territory governments make the laws that govern how the system operates.

unicameral a parliament with only one house

FIGURE 2 State governments make laws to prohibit criminal activity.



FIGURE 3 Public transport is one of the responsibilities of state governments.



Police and emergency services

Each state and territory has its own police force, fire brigade, ambulance service and other emergency services. Police from one state generally cannot enter another state to arrest someone without special permission. However, the different police and emergency services from each state and territory usually cooperate with each other. We regularly see this when there is a major bushfire in one state and firefighters from other states come in to assist.

Health and hospitals

Public hospitals are built and operated by state and territory governments. These days, state governments rely on money from the federal government to help fund their health systems because hospitals are extremely expensive to run.

FIGURE 4 State governments are responsible for emergency services.



FIGURE 5 Public hospitals are built and managed by state governments.



Education

Each state and territory has its own primary and secondary education systems. The states often have different starting ages for school students, and each state has its own type of certificate for students completing Year 12; for example, the WACE in Western Australia. In recent years, the state and federal governments have jointly set up a national curriculum. The aim is to make sure that each education system covers the same subject matter at each year level. This means that students will do similar classwork wherever they live, even if they move from one state to another.

FIGURE 6 Each state and territory has its own primary and secondary education systems.



4.3 ACTIVITY

Use internet resources to answer the following:

a. Which states and territories commence secondary school at Year 7 and which ones do so at Year 8?
b. What is the minimum age at which you can get your provisional (P-plate) drivers licence in each of the states and territories?
c. What is the name of the Year 12 certificate in each state and territory?
d. Who is the current premier of Western Australia? How long has his or her government been in power?

HASS skills: Questioning and researching

4.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 3, 5, 6	Questions 1, 7, 8	Questions 2, 4, 9, 10

Check your understanding

1. What do we mean by a unicameral parliament?
2. Identify two unicameral parliaments in the Australian parliamentary system.
3. What is the title given to the Queen's representative in each of the states?
4. What is the title given to the leader of the government in each of the states?
5. How does the separation of powers apply in all of the states and territories?

Apply your understanding

6. Using an example, explain how emergency services from the different states can cooperate with each other.
7. Should all states have the same rules and ages for young people gaining a drivers licence, or should it be left to individual states to make different laws as is currently the case? Give reasons for your response.
8. What are the advantages of having all states following a national school curriculum, rather than each state going its own way?
9. In 1995, the Northern Territory passed a law allowing terminally ill people to voluntarily end their own lives. This law was overruled by the federal parliament in 1997. In 2017, the Victorian parliament passed a similar law, but the federal parliament has not overruled it. Explain why there has been a difference in these two cases.
10. Many people have argued recently that we no longer need state governments in Australia, and that all their powers could be handed over to the federal parliament. Come up with one argument in favour of retaining state governments and one argument in favour of abolishing state governments.

For sample responses to every question, go to www.jacplus.com.au.

4.4 Water management — an issue for all levels of government

LEARNING INTENTION

By the end of this subtopic subtopic, you will be able to describe how the state and federal governments work together to manage water.

4.4.1 Responsibility for water management

As you learnt in topic 3, s. 51 of the Australian Constitution listed specific powers of government that should be allocated to the Commonwealth parliament. All other powers were to remain with state parliaments and are known as residual powers. The Constitution did not include water management as one of the specific powers, so this responsibility remained with the states after federation. In addition, s. 100 of the Constitution limits the powers of the Commonwealth in relation to the management of water by the state governments:

> The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

The Indigenous inhabitants of Western Australia had traditionally gathered water from lakes and freshwater springs and, for the first years of white settlement, these sources of water were also sufficient for the settler population of Perth and Fremantle and surrounding areas. By the late 1800s, however, the gold rush had seen the population of Perth and Fremantle grow and wells were built. However, summer water shortages and pollution in wells led to a more permanent solution being needed. Perth's first water supply reservoir was completed in the Darling Range east of Perth, with the Victoria Reservoir opening in 1891. After almost 100 years of use, part of this reservoir was replaced by Victoria Dam a little way upstream. Further water supply works have been carried out since, including the Goldfields pipeline, the use of groundwater and building desalination plants. Other state governments have carried out similar works in their own states.

State governments also attempt to regulate the amount of pollution that can be released into the atmosphere.

Water quality

State and territory governments are responsible for maintaining water supplies in their regions. They ensure that:

- clean, safe drinking water is delivered to homes
- rivers and other waterways are kept free from pollution
- farms have access to water for crops and for stock to drink
- sewage and storm water are disposed of without contaminating the environment.

FIGURE 1 State government laws keep our water safe.



4.4.2 The Murray–Darling Basin: a shared responsibility

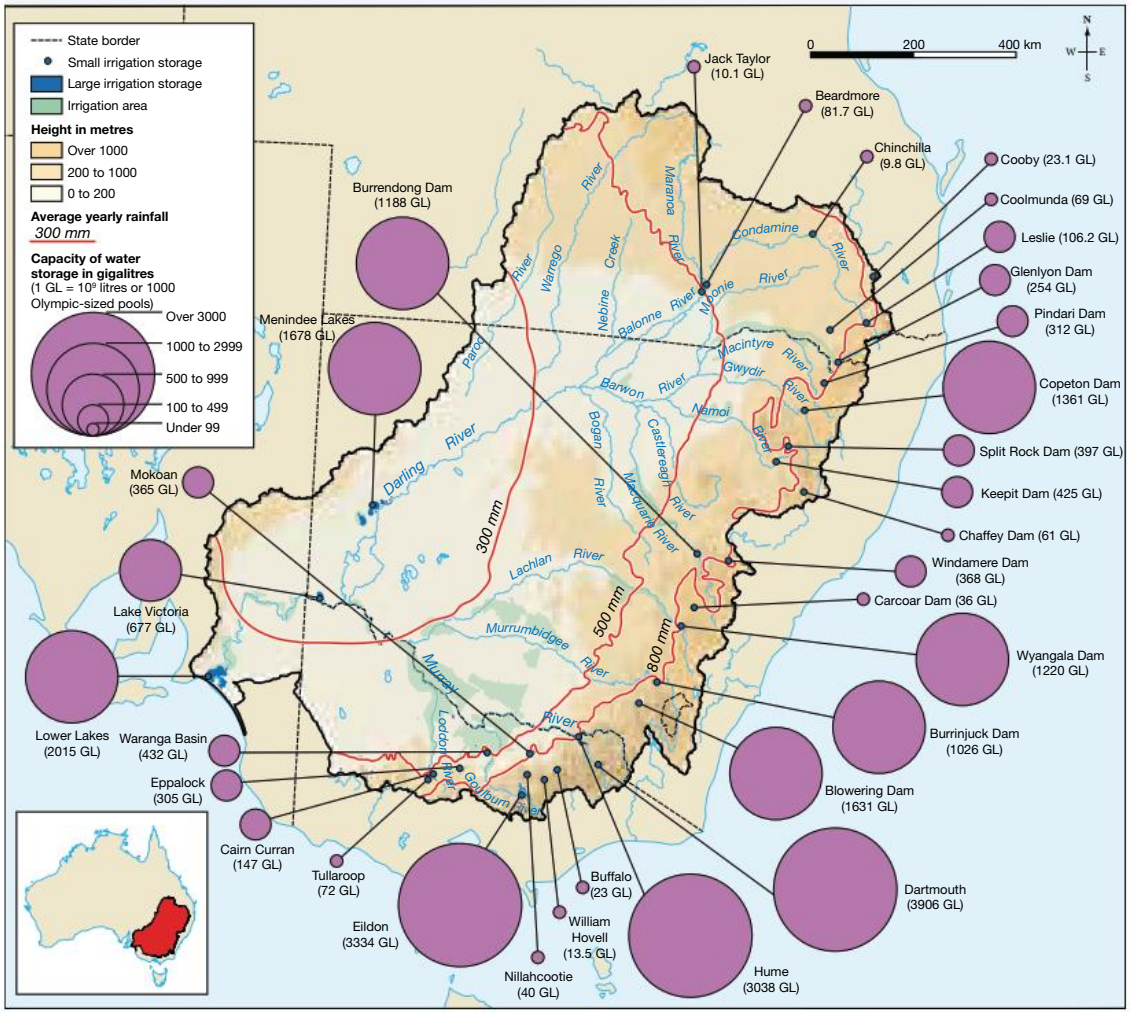
The largest river system in Australia is the Murray–Darling system. The area covered by this system is known as the Murray–Darling Basin. It includes areas of four states (Queensland, New South Wales, Victoria and South Australia) as well as the Australian Capital Territory. Since water management has been a state responsibility since federation, providing a consistent management plan for the entire basin that is fair to water users in all states has always been a problem.

The Murray–Darling Basin is a major farming area, so the water from its rivers has been used for irrigation since the nineteenth century. If each state has different rules for the use of water for irrigation, farmers in some states may take more than their fair share while others might get less than they need. The amount of water taken out of the system has also meant that parts of the river system have become environmentally degraded, reducing the quality of the water available. Most of the water in the basin is collected in Queensland, New South Wales and Victoria, but the system finally empties into the sea in South Australia. There have been times when so much water has been taken out of the system upstream that the mouth of the Murray in South Australia has been closed with sandbars.

In 2007, each of the state governments agreed to hand over some of their powers to the federal government as part of the process of setting up the Murray–Darling Basin Authority. This body has powers to ensure the water resources of the basin are managed in a sustainable manner. It has drawn up a plan that attempts to balance the amount of water used for irrigation with the amount needed to maintain sustainable flows of water throughout the system. The plan is an example of the federal and state governments attempting to work together.

The Murray–Darling Basin plan has been very controversial. Many farmers believe that too much water is being diverted from irrigation to maintain environmental river flows. Yet many environmental scientists believe the amount of water used for irrigation is still too high to maintain a healthy river system.

FIGURE 2 The Murray–Darling Basin



Source: Spatial Vision

Over the summer of 2018–19, the presence of high levels of blue-green algae in the Darling River led to huge numbers of dead fish floating in the river. This event brought the health of the Murray–Darling river system into the public eye once again. The tension between the water needs of farmers and inhabitants of towns in the basin, and the need to provide sufficient water flows to maintain a healthy river system, have raised questions about how well the Murray–Darling Basin plan is working. This is an ongoing problem for both the Commonwealth Government and the governments of the affected states. Governments often have to make decisions that attempt to balance the competing interests of different groups, but this is likely to be an continuing challenge.

FIGURE 3 The amount of water taken for irrigation has had an impact on the environment of the Murray–Darling Basin.



Resources

Weblink Murray–Darling Basin

4.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 3, 4, 6	Questions 1, 8, 9	Questions 2, 5, 7,10

Check your understanding

1. Outline the ways in which the Constitution allocated responsibility for water management to state governments.
2. What are the key responsibilities of state governments in relation to water management?
3. Identify two actions taken by the Western Australian government to meet their water management responsibilities.
4. How does the Murray–Darling Basain plan indirectly affect South Australia and Western Australia?
5. What events brought the health of the Murray–Darling Basin back into public focus in early 2019?

Apply your understanding

6. Targets for carbon pollution reduction have varied between state and federal governments, with some state governments setting more ambitious targets than the federal government. Do you think there should be a common target across Australia, or should each state be able to set its own? Justify your opinion.
7. In 1983, the federal government used its powers to protect World Heritage areas to prevent a dam being built by the Tasmanian government. Is it appropriate that the federal government should overrule state governments on environmental issues, or should state governments be able to make their own laws on these issues? Provide reasons for your answer.
8. Using **FIGURE 2**, explain why it was important for the federal government to become involved in the management of the Murray–Darling Basin.
9. What do you think might happen in South Australia if farmers in Queensland and New South Wales take increased amounts of water from the Murray–Darling Basin?
10. Governments often have to make decisions that attempt to balance the interests of groups of people in the community. In what ways is the Murray–Darling Basin plan an example of this?

For sample responses to every question, go to www.jacplus.com.au.

4.5 Thinking Big research project: Sharing the resource

Scenario

The Australian Constitution outlines the rules for how Australia is governed. It outlines how the Federal and State governments share the power to make law. This is known as the division of powers.



At Federation, the states handed over some areas to be managed by the Federal government, such as immigration and defence, which they believed would be best managed by a central authority. These powers are outlined in Section 51 of the Constitution, and are known as **specific powers**. However, the states chose to retain much of their power in areas such as health, education and public housing. These powers are not listed in the constitution and are known as **residual powers**. The Federal and state parliaments share some law-making power in some areas such as marriage and taxation. Powers which are shared are known as **concurrent powers**.

Each level of government is responsible for their resources and the provision of services to their people. Often they can govern independently, but in some circumstances they are required to collaborate with other governments where resources are shared.

One resource which is shared between governments is water. The Murray Darling Basin is Australia's largest river system. On average, the basin receives about 530,000 gigalitres of inflow per year. The Basin stretches across four states (Queensland, New South Wales, Victoria and South Australia) as well as the Australian Capital Territory. Each of these governments must work together to ensure a fair distribution of water and the river system can remain healthy into the future.

Task

Working in groups of 5, you will experience the division of powers at work through the creation of a plan for the allocation the Murray Darling Basin's water. Each group member will take on the role of water minister for their state/territory. Each member will be required to research the water needs of their state/territory and negotiate with the ministers to devise a water management plan. You are to present this plan, as well as any difficulties you had in reaching a solution to the class.

Follow the steps detailed in the Process section to complete this task.

Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in groups of five will enable you to share responsibility for the project. Save your settings and the project will be launched.
- In the **Media Centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Using examples, explain the term 'division of powers'.
- Allocate a role to each member of your group. Each member will take on the role of Water minister for one of the following states/territory.
  - New South Wales
  - Victoria
  - South Australia
  - Queensland
  - Australian Capital Territory
- Research the volume of water your state/territory requires from the Murray-Darling Basin. Determine what volume you deem essential and what would be ideal for the additional needs of your state. This will allow you to know which areas you can compromise on, if necessary. Consider the following in your research:
  - How much water originates in your state
  - Drinking water needed for towns in the Basin
  - Water for the health of the Basin's ecosystem
  - Water for irrigation for food production
  - Water for tourism, fishing and social activities
- Conduct a negotiation with the other Ministers over the water in the Murray Darling Basin. Aim to secure the water you need for your state, whilst also protecting the needs of the other states/territory and the rivers' ecosystem. Take notes detailing your discussions.
- Once you have come to an agreement, write up your plan for the Murray Darling Basin.
- Present your plan, in a PowerPoint presentation. Include the strengths and weaknesses of the division of power system based on your experience in this activity.
- Your PowerPoint presentation should have one idea per slide. It will usually represent a single sentence summary of a larger amount of information. In presenting information in a PowerPoint format, you should be prepared to provide extra information and explanation relating to each slide, not merely read from the slide.
- Once you have completed your presentation, submit it to you teacher for assessment and feedback, or present it to your class.

Note: If you are working in a group with fewer than 5 members, you may choose to omit the roles of the ACT and/or Queensland water ministers as they have a smaller role in the basin and water allocation than New South Wales, Victoria and South Australia.

on Resources

ProjectsPLUS Thinking Big research project: Sharing the resource (pro-0250)

4.6 Review

4.6.1 Key knowledge summary

4.2 Role and structure of the Commonwealth Parliament

- Parliament is the main law-making body in Australia.
- Parliaments are elected to create laws that represent the wishes and values of citizens. Our system of government is known as a democracy because the people vote to decide who sits in the parliament.
- State parliaments were mostly established in the six former colonies from the 1850s, while the federal parliament came into being with federation in 1901.
- Many features of our parliamentary democracy have been adapted from the British system of government, known as the Westminster system. As a group of former British colonies, we adopted many features of the Westminster system, such as having two houses of parliament at both the federal level and in most of the states.

4.3 State and territory parliaments

- Each of the six states and two territories has its own parliament to make laws for its citizens on those matters over which the state or territory has constitutional power.

4.4 Water management — an issue for all levels of government

- Water management is an issue that has involved all levels of government.
- Protection of the Murray–Darling Basin has required cooperation between the federal government and the governments of the four states concerned.

4.6.2 Key terms

bicameral a parliament with two houses
democracy a political system according to which citizens choose the way in which they are governed
royal assent the formal approval by the monarch's representative, and the final step necessary before a law comes into force
unicameral a parliament with only one house
Westminster system the parliamentary system of Great Britain, which has been copied and adapted by many other countries including Australia. It is called that because the British Parliament meets in a building called the Palace of Westminster.

4.6.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Parliament and government. How do they keep Australia running smoothly?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4279)
Reflection (ewbk-4210)
Crossword (ewbk-4209)
Student learning matrix (ewbk-4203)

Interactivity The Australian parliament and government crossword (int-5312)

4.6 Review exercise

Multiple choice

1. In the federal parliament, what is the name of the lower house?
   - **A.** The Senate
   - **B.** The House of Representatives
   - **C.** The Legislative Assembly
   - **D.** The Legislative Council
2. In those state parliaments with an upper house, what is that house known as?
   - **A.** The House of Assembly
   - **B.** The Legislative Assembly
   - **C.** The Legislative Council
   - **D.** The Senate
3. Senators are elected by which following method?
   - **A.** One senator is elected to represent each electorate.
   - **B.** Senators are nominated by state parliaments to represent the interests of the states.
   - **C.** Senators are elected by members of political parties.
   - **D.** Equal numbers of senators are elected from each state.
4. What is the Senate expected to do?
   - **A.** Review government legislation
   - **B.** Give the royal assent to legislation
   - **C.** Support the government's legislation without question
   - **D.** Only support legislation that is good for the states/territories the senators represent
5. What is an example of a unicameral parliament in Australia?
   - **A.** The Western Australian parliament
   - **B.** The New South Wales parliament
   - **C.** The Victorian parliament
   - **D.** The Queensland parliament
6. After a federal election, a new government is formed
   - **A.** from the party or coalition with the most seats in the Senate.
   - **B.** from the party or coalition with the most seats in the House of Representatives.
   - **C.** from the party or coalition that can gain the support of the Governor-General.
   - **D.** from the party or coalition that can provide the most capable prime minister.
7. Which of the following is not a state environmental responsibility?
   - **A.** Ensuring that clean water is available to households
   - **B.** Ensuring that sewage and storm water are removed safely
   - **C.** Ensuring that the water around the Great Barrier Reef is not polluted
   - **D.** Ensuring that rivers are free from pollution
8. What is the major environmental role of the federal government?
   - **A.** Maintaining air quality
   - **B.** Protecting national heritage sites
   - **C.** Preventing factories from polluting the waterways
   - **D.** Preventing excessive noise in residential streets

Short answer

1. People wishing to be elected to parliament often make promises and develop policies that they hope will appeal to the majority of voters. Give detailed reasons as to why you would vote for or against someone who proposed each of the following policies.
   - **a.** Lowering the voting age to 16
   - **b.** Raising the licensed driving age to 21
   - **c.** Introducing compulsory military service for all 18 year olds
   - **d.** Introducing tolls on all roads to help pay for improved public transport

RESOURCE SUMMARY

on Resources

Below is a full list of **rich resources** available online for this topic. These resources are designed to bring ideas to life, to promote deep and lasting learning and to support the different learning needs of each individual.

4.1 Overview

Video eLesson
- What is parliament? (eles 2077)

4.4 Water management — an issue for all levels of government

Weblink
- Murray–Darling Basin

4.5 Thinking Big research project: Sharing the resource

ProjectsPLUS
- Thinking Big research project: Sharing the resource (pro-0250)

4.6 Review

eWorkbook
- Reflection (doc-4210)
- Crossword (doc-4209)
- Student learning matrix (ewbk-4203)

Interactivity
- The Australian parliament and government crossword (int-5312)

To access these online resources, log on to **www.jacplus.com.au**.

5 The legal system and you

5.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

We are all subject to the law and equal before the law. What does that mean for everyday Australians?

5.1.1 Our legal system

Picture yourself standing in court, accused of a crime you did not commit, facing a trial and then being found guilty of the crime. **FIGURE 1** shows John Button at Fremantle Prison, where he served five years of his sentence. Why do you think he returned to the prison? How would you feel if you were found guilty of a crime that you did not commit and sent to prison?

Australia's **rule of law** and our **legal system** should protect you from this happening. But how much do you know about Australia's legal system? Would you know where to find a lawyer? Would you know what would make your trial fair? All Australian citizens should have the opportunity to access justice no matter who they are.

rule of law the legal principle that all citizens are subject to the law, and equal before the law, as it is upheld by independent courts

legal system a system for interpreting and enforcing the laws of a country

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-4281)
Video eLesson	The courtroom (eles-2078)

FIGURE 1 John Button was wrongfully convicted of the manslaughter of his girlfriend in 1963. He was acquitted 39 years later (found not guilty of committing the crime) after serving his sentence in prison.



5.2 How a court works

LEARNING INTENTION

By the end of this subtopic you will be able to explain what what courts do and how they work.

int-7803

FIGURE 1 Inside a serious criminal trial





A The judge's associate is a trained lawyer who manages much of the paperwork.

B Anyone whose name is on the electoral roll can be called as a juror. In a criminal case, the jury consists of 12 people. The jury must decide beyond reasonable doubt whether a person is guilty. For murder or manslaughter cases, all the jurors have to agree.

C The prosecutor has to convince the jury that the accused person is guilty. This is done by asking questions of witnesses to draw out relevant information.

D The judge is addressed as 'Your Honour'. He or she listens to arguments presented by the prosecutor and the counsel for the defence, and is not allowed to ask a witness questions (except to clarify a point). The judge has to make sure jury members understand the proceedings and evidence presented. If a jury announces a guilty verdict, the judge decides the sentence.

E The counsel for the defence represents the accused. If the accused pleads guilty, the counsel for the defence presents arguments to try to lessen the punishment. If the client pleads not guilty, defence counsel must convince the judge or jury that the client is innocent.

F The tipstaff helps the judge keep order in the court.

G Witness box, from which people give evidence

H Members of the public, who listen to and observe the court proceedings

I A prison officer from the prison where the accused has been held

J The accused

K Members of the media, who observe proceedings so they can report what happens

5.2.1 Guilty or not guilty?

Courts interpret laws and settle disputes. A person who has been charged with a criminal offence may have his or her case heard by a court. It is up to the court to decide if the accused is guilty or not guilty. Let us look at what happens when a criminal matter goes to **trial** before a court.

Courts can be tense places. The decisions made in court can have an enormous impact on people's lives. Courts and the officials who work in them deal with real-life dramas. The main courtroom officials include a **magistrate** or **judge**, **jurors**, a **prosecutor** and **counsel for the defence**. Western Australia has an independent system of courts, with different courts at different levels. Courts are often referred to as higher or lower courts.

FIGURE 2 Western Australia's District Court



5.2.2 Lower courts

Most people charged with a criminal offence will have their cases heard in the Magistrates Court. Lower courts such as the Magistrates Court are more informal than the higher courts. There is no **jury**, and magistrates do not wear a wig or a robe in court. However, people still need to address the magistrate as 'Your Honour', as they do in the higher courts.

After hearing the cases presented by both sides, the magistrate decides whether a person is guilty or not guilty. If a person is found guilty, the magistrate decides the consequence. This is known as the sentence. A magistrate will refer very serious criminal offences to a higher court.

5.2.3 Higher courts

Western Australia has a Supreme Court, which hears the most serious criminal cases. These very serious criminal cases include murder and treason. Below this court is the District Court. The District Court hears serious criminal matters, including armed robbery, drug trafficking and serious assault.

At the beginning of a criminal trial in a higher court, the accused is asked, 'How do you plead?' A jury of 12 people may be selected to hear the trial if the accused responds with 'Not guilty'. The jury's role is to listen to the evidence and decide whether the accused is guilty or not guilty. If the verdict is not guilty, the accused is free to leave the court. If the verdict is guilty, the judge decides the sentence.

trial the court process to determine whether someone committed a criminal act

magistrate a court official who hears cases in a magistrates court

judge a court official who hears cases in the higher courts, such as the District or County Court, or the Supreme Court

juror a person selected to hear and assess the evidence in a court case

prosecutor the party bringing a criminal action against the accused

counsel for the defence a lawyer who represents the accused person

jury a group of ordinary people randomly selected to hear and assess the evidence in a court case

5.2 ACTIVITIES

1. Ask your teacher to organise a class excursion to a local court. While you are there, draw a floor plan of the court and label where all the officials are located in the room. Note their role in the court. Write down some of the facts you hear for each case.
   HASS skills: Questioning and researching
   Civics and Citizenship concepts: Justice, Participation
2. Find a news article that reports on a criminal case in a Western Australian court. Summarise the key facts of the case, taking note of who the judge or magistrate was, what the charge was, any decision made and any other court officials mentioned.
   HASS skills: Questioning and researching
3. In groups of three or four, develop a 30-second TV advertisement for a law firm that defends people charged with serious crimes such as murder.
   HASS skills: Communicating and reflecting
   General capability: Critical and creative thinking

5.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 6	Questions 5, 7, 8	Questions 3, 9, 10

Check your understanding

1. List the main courtroom officials in a serious criminal trial, referring to **FIGURE 1** if required.
2. Using **FIGURE 1**, explain the role of each of the following courtroom officials.
   - Magistrate
   - Judge
   - Juror
   - Prosecutor
   - Counsel for the defence
3. How are magistrates and judges addressed in court?
4. How many jurors are there for a criminal case?
5. What is the jury's responsibility in a criminal trial?

Apply your understanding

6. The system of courts is referred to as a hierarchy (like a ladder). Construct a diagram showing the hierarchy of courts for Western Australia. Put the highest court at the top and the lowest court at the bottom of your diagram.
7. In Western Australia, a person can be found guilty by a jury only if 10 of the 12 jurors (a majority verdict) or all 12 jurors (a unanimous verdict) conclude that the accused is guilty (except for murder or manslaughter, which requires an unanimous verdict). Why might this be hard to achieve?
8. A judge is not allowed to ask a witness questions, except to clarify a point. Explain why you think this is the case in our legal system.
9. Why do you think courts are necessary in our legal system?
10. Explain why you think our legal system has higher courts and lower courts.

For sample responses to every question, go to www.jacplus.com.au.

5.3 The presumption of innocence

LEARNING INTENTION

By the end of this subtopic you will be able to explain what presumption of innocence is and why it is important.

5.3.1 Innocent until proven guilty

If you were in trouble at school for something you hadn't done, you would hope that your teacher or principal would believe your claim that you had done nothing wrong. You would expect that you deemed innocent unless it was proved you had done the wrong thing. In the same way, most Australians expect that when they go to court, they will be presumed to be innocent until proven guilty. But does this actually happen?

The **presumption of innocence** is a belief that we have inherited from English law. It means that all accused people who appear before a court in Western Australia are presumed to be innocent until the prosecution proves that they are guilty. Not only are they presumed to be innocent, but they can also only be found guilty if the court is reasonably certain that the accused person committed the crime. This means that the magistrate, judge or jury must believe that the accused is guilty **beyond reasonable doubt**. The prosecution has the **burden of proof** in a criminal trial.

5.3.2 Presumption of innocence around the world

The presumption of innocence is contained in article 11 of the Universal Declaration of Human Rights, and in article 14 of the International Covenant on Civil and Political Rights (ICCPR). This means that it is seen as very important across the world. Many nations — including the United States of America, France, Italy and New Zealand — recognise this principle.

5.3.3 Presumption of innocence and bail

Observing the presumption of innocence means that if a person is charged with a criminal offence, they may be granted **bail** by a magistrate or judge. Bail is the promise that an accused person makes to appear in court at a later date. It allows the accused to go home to wait for the trial, rather than stay in custody until he or she must go to court. Sometimes bail will have conditions attached, including the payment of money, surrendering a passport, remaining at the same address or reporting to police. Bail usually applies only to serious cases.

FIGURE 1 Unlike in this image, the presumption of innocence suggests the accused should not be handcuffed when appearing in court unless he or she presents a risk to other people.



presumption of innocence the principle that all accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty

beyond reasonable doubt the standard of proof required in a criminal trial where the prosecution must prove that the accused is guilty to such a high degree that a reasonable person would have little doubt that the accused committed the crime

burden of proof the legal principle describing who has to prove a case in court. In a criminal trial, this burden is on the prosecution.

bail the promise that an accused person makes to appear in court at a later date

In some cases the court may suspect that an accused person who is charged with a serious crime might not turn up to court, or might be at risk of causing danger to the public. In this case, bail is refused and the accused is detained (held in custody) until the trial.

FIGURE 2 Arguments for the presumption of innocence

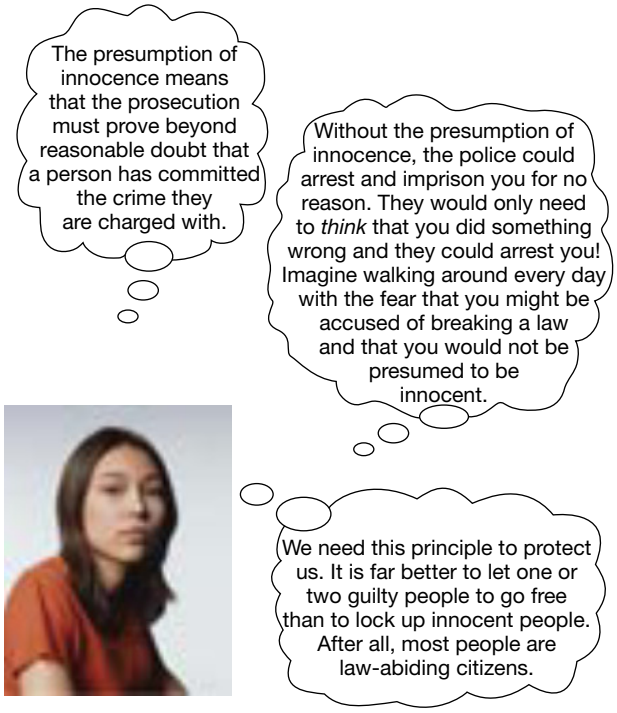
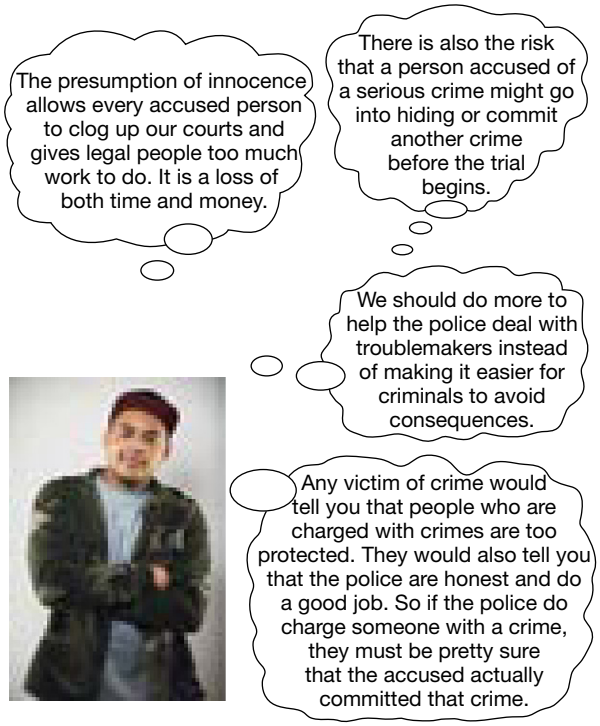


FIGURE 3 Arguments against the presumption of innocence



CASE STUDY

Presumption of innocence — on your bike

Queensland introduced new laws in 2013 to target the illegal activities of gangs, including criminal motorcycle (bikie) gangs. The laws are commonly referred to as 'bikie laws'. The government prepared a list of declared criminal organisations and created new offences for them. These included bans on members of a criminal gang gathering in groups of three or more, visiting locations like clubhouses or a gang events, and recruiting for their organisations. The laws have been criticised for going against the principle of the presumption of innocence.

FIGURE 4 Joshua Carew and other men were arrested due to alleged association with the Rebels motorcycle club in Queensland. They were held in custody for an extended period without trial.



Steven Smith, Scott Conley, Joshua Carew, Paul Lansdowne and Dan Whale were arrested and detained in custody in December 2013, following a meeting at the Yandina Hotel. They were alleged by police to have links to the Rebels motorcycle club. Joshua's wife, Tracy Carew, said her husband had been locked up for delivering a pizza to the other men. 'These boys aren't guilty of this crime, they haven't been proven guilty. They haven't been put in front of a jury and deemed guilty yet,' she said. Mrs Carew told the media that the men were placed in solitary confinement awaiting their court hearings. Joshua Carew, and some of the other men, were released from custody under bail conditions in mid-January 2014.

DISCUSS

Discuss the idea that everyone is presumed to be innocent, regardless of the seriousness of the crime of which they are accused.

Do you think that a person charged with mass murder, for example, should have the right to presumption of innocence, or should he or she lose access to this right? Be prepared to justify your opinion.

General capability: Ethical understanding

5.3 ACTIVITY

The media is expected to avoid news coverage that undermines the presumption of innocence. However, there are many cases where the media has ignored this principle. Charges made against Martin Bryant in 1996 are one example. Find out more about what the media did before the Bryant case went to court.

HASS skills: Questioning and researching
Civics and Citizenship concepts: Justice, Rights and responsibilities

5.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 4, 7, 8	Questions 5, 9, 10

Check your understanding

1. List some countries that believe in the presumption of innocence.
2. Define the term ‘beyond reasonable doubt’.
3. What is bail and when can it be granted?
4. Under what circumstance would bail be refused?
5. What is burden of proof and who has it in a criminal trial?

Apply your understanding

6. Examine **FIGURE 1**. In what way does this image undermine the principle of the presumption of innocence?
7. Read the case study in this subtopic, ‘Presumption of innocence — on your bike’, and consider **FIGURE 4**. Joshua Carew was held in solitary confinement for approximately six weeks before a bail hearing in the Supreme Court. Briefly outline what this suggests about the attitude of the Queensland Government towards the presumption of innocence principle.
8. What might happen if an accused person went to court and was put on trial without the presumption that they were innocent? In your answer, refer to **FIGURE 1** (showing John Button), in subtopic 5.1.
9. Using **FIGURES 2** and **3**, discuss the advantages and disadvantages of the principle of presumption of innocence.
10. Explain what you think is the relationship between presumption of innocence and burden of proof.

For sample responses to every question, go to www.jacplus.com.au.

5.4 A fair trial

LEARNING INTENTION

By the end of this subtopic you will be able to describe the elements necessary for a fair trial.

5.4.1 Equal treatment for all

In Western Australia, we believe that our legal processes protect the right of every accused person to receive a fair trial — a trial held before a competent, independent and unbiased court recognised by the law. If you were accused of a crime, you would expect that you would be provided with the opportunity to contest any charges made against you. You would presume that your side of the story would be listened to. You would think that the person listening to both sides would not favour either of those sides.

5.4.2 Main elements of a fair trial

The main elements of a fair trial are summarised in **FIGURE 1**. Let us now look at each element in more detail.

Preliminary examination of evidence

When a person is charged with a criminal offence, he or she will be told to attend a Magistrates court. The Magistrates court hear minor offences and some serious cases. This court also examines very serious cases to decide whether the accused person should be put on trial in a higher court. This is called a **committal hearing**. If the magistrate decides that there is enough evidence and the case is serious enough, the case will be heard in the District Court, or in the Supreme Court.

Committal hearings guarantee a fair trial because they allow an accused person to know the case against him or her. They also provide the opportunity for the accused person to gather evidence and to test the evidence of the prosecution.

Right to legal representation

In a fair trial, everyone has the right to **legal representation**. In certain cases, legal aid can be provided for people who cannot afford the cost of hiring a lawyer (see subtopic 5.5).

committal hearing in very serious cases, the procedure held in a lower court to determine if enough evidence exists for the case to move to a higher court

legal representation services performed by a qualified legal practitioner, such as a lawyer, who deals with legal matters on behalf of the person who has hired them

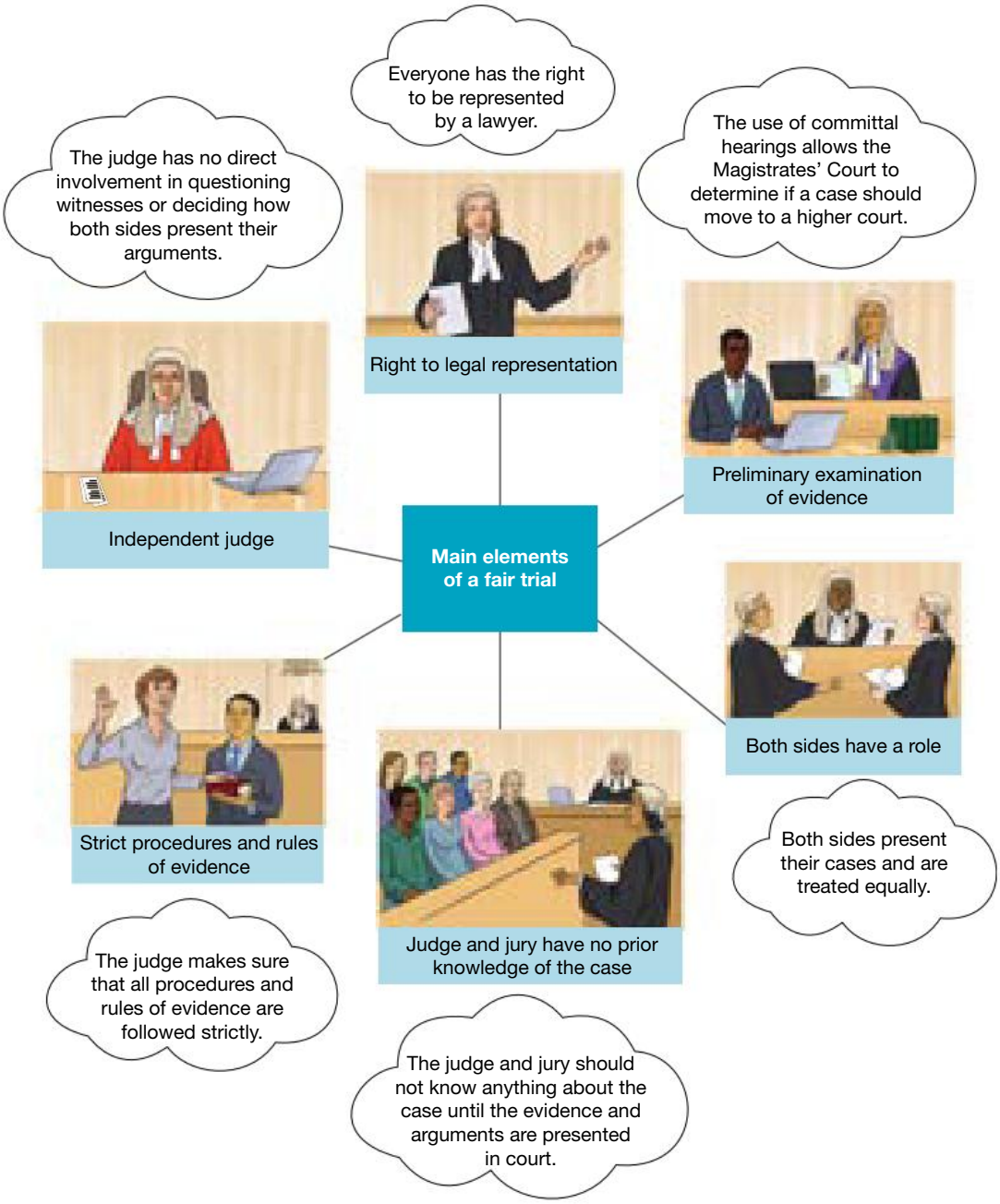
Both sides have a role

The right to a fair trial means everyone is entitled to be treated equally by the court. Both sides have the right to present their case. The two opposing sides will gather evidence and present their case to an independent judge or magistrate. The side with the strongest argument is likely to win the trial.

Independent judge

The judge is very much like the umpire in a game of football. His or her job is to make sure that both sides follow the rules. Judges are independent, which means that they have no direct involvement in questioning witnesses or deciding how either side will present its arguments. The judge makes sure that all the rules of evidence and procedure are followed and that both sides are treated equally.

FIGURE 1 Main elements of a fair trial



Judge and jury have no prior knowledge of the case

Neither judge nor jury should know anything about the case until the evidence and arguments are presented in court. Jurors must listen very carefully to the evidence given in a trial and make a decision based only on that evidence and the law. They are not allowed to discuss the case with anyone else, even after the trial has finished.

FIGURE 2 Any citizen who is listed on the electoral roll can be randomly summoned for jury service.



Strict procedures and rules of evidence

A fair trial will follow strict procedures. These procedures are designed to ensure that each side has an equal opportunity to present its own case as well as challenge the evidence introduced by the other side. A fair trial will also observe strict rules for the type of evidence that can be looked at in court. The procedure for a trial in a higher court with a jury is shown in **FIGURE 3**.

Witnesses can be asked to give evidence at a criminal trial if they are the victim of the crime, if they have direct information about the crime or if they are an expert providing specialist opinion. Expert witnesses might give evidence on topics such as whether a written document matches the handwriting of the accused, or whether the accused person's actions might have been influenced by things such as mental illness or prescription drugs. Each witness must promise to tell the truth.

FIGURE 3 Procedure for a trial in a higher court with a jury

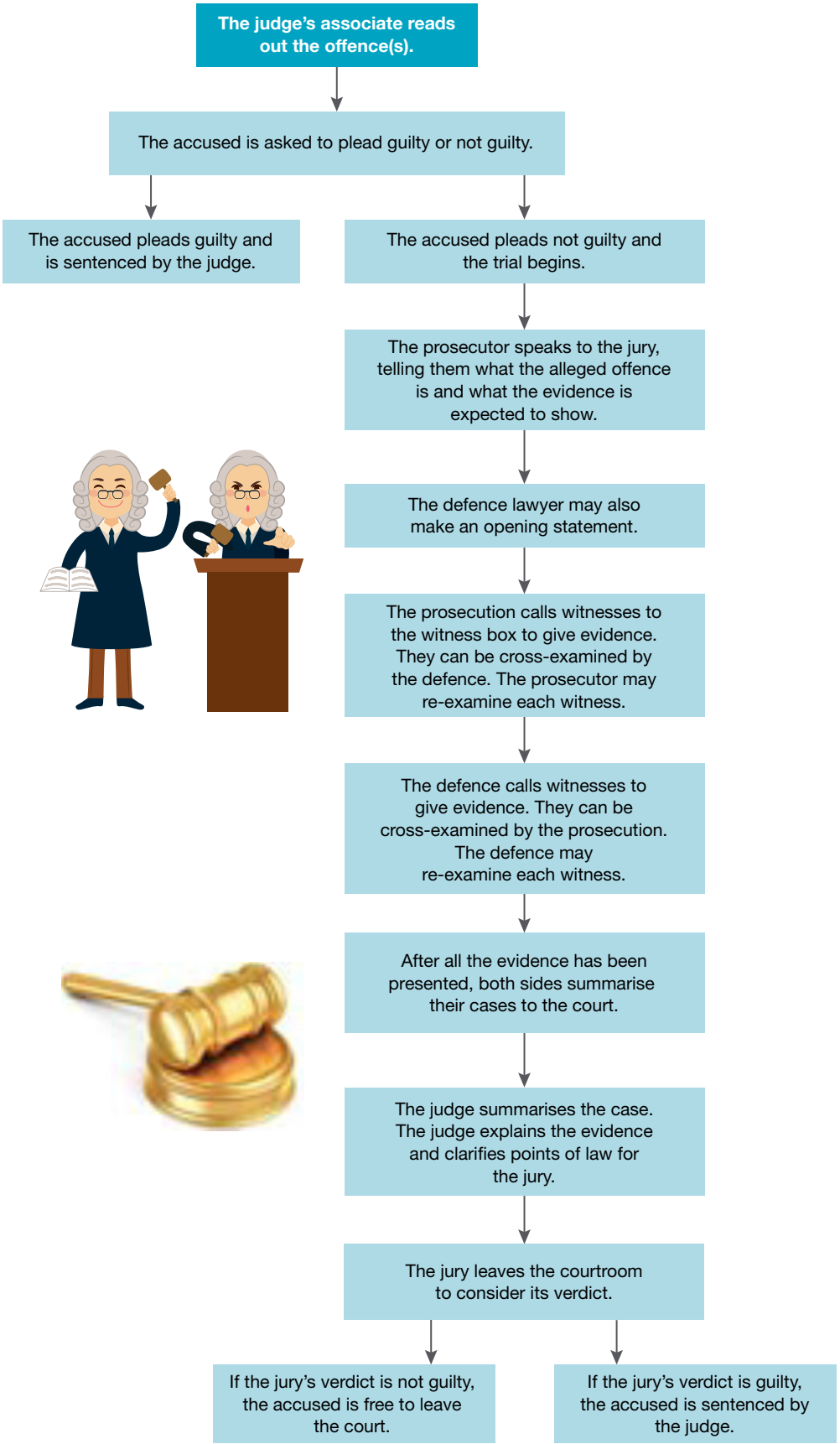
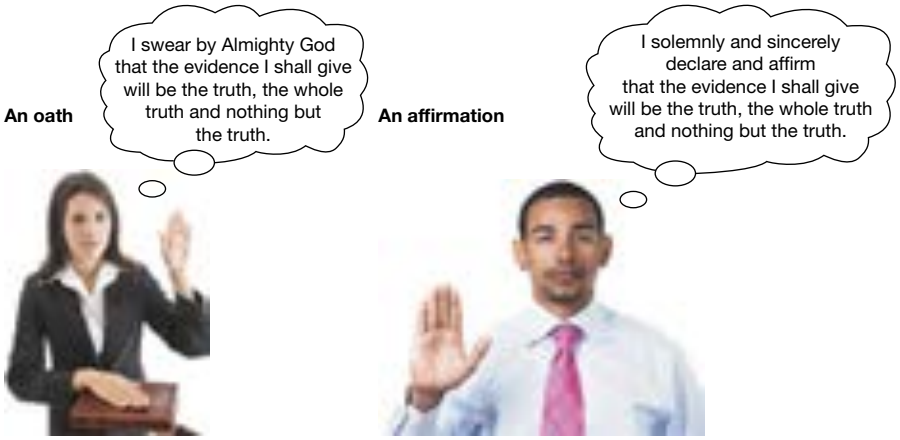


FIGURE 4 Before witnesses in court can give their testimony, they have to take either an oath or an affirmation promising to tell the truth.



on Resources

Interactivities The courtroom (int-1206)
Criminal trials (int-5313)

5.4 ACTIVITIES

1. Role play a mock trial of a person who has been charged with robbing a bank. (Refer to the process described in **FIGURE 3** to help you.) Divide up the courtroom roles — a list of roles necessary is shown in the following list. Allow people sufficient time to prepare their case. An example has been provided for you in the case study. Set the classroom up like a courtroom and see if the accused receives a fair trial. See the weblink **Law Society of WA** for further information.

Roles in a mock trial

- Judge
- Judge's associate
- Tipstaff
- Jurors (12)
- Prosecutor
- Counsel for the defence
- Accused
- Witnesses
- Members of the public
- Members of the media
- Police officer

Sample case for a mock trial

Andrew Accused has been charged by the police with armed robbery. The police allege that on the morning of Friday, 18 February, Andrew entered the Bank Easy branch in Bunbury. He approached the teller, Thuong Teller, and said to her, 'This is a stick-up. Fill this bag with money or you will get shot!' At the time, Thuong was serving Colin Customer. Bao Bankworker, another teller, and Maria Manager, the branch manager, were also in the bank at the time. Andrew was arrested by police officer Purujit as he tripped in the doorway. Andrew claims that he was not carrying a gun and that he was only joking around with Thuong.

HASS skills: Communicating and reflecting
Civics and Citizenship concepts: Justice, Participation

2. Examine **FIGURE 4**. Discuss the difference between an oath and an affirmation. Does a link exist between having this choice in court and the freedoms guaranteed in the Australian Constitution?

HASS skills: Evaluating
Civics and Citizenship concepts: Justice, Rights and responsibilities

Resources

Weblink Law Society of WA

5.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 6	Questions 3, 7, 8	Questions 4, 9, 10

Check your understanding

1. What is a committal hearing?
2. What is legal representation?
3. Using **FIGURE 1**, briefly outline the following elements of a fair trial:
   a. preliminary examination of evidence
   b. right to legal representation
   c. both sides have a role
   d. independent judge
   e. judge and jury have no prior knowledge of the case
   f. strict procedures and rules of evidence.
4. Explain the role of a juror and a witness in a fair trial.
5. When can a judge question a witness?

Apply your understanding

6. How does a person come to be selected to serve on a jury?
7. Draw your own diagram showing the steps involved in a trial with a jury. Use an appropriate illustration for each step to show that you understand it.
8. Select two elements that contribute to a fair trial. Explain how each element might contribute to a fair trial.
9. Examine **FIGURE 3**. What would happen to the 'fair trial' if a step in the procedure was removed?
10. Examine **FIGURE 1**. Identify what you consider to be the most important element contributing to a fair trial. Justify your response. For help with the skills of analysing and evaluating, see topic 1 HASS concepts and skills.

For sample responses to every question, go to www.jacplus.com.au.

5.5 Access to justice and legal representation

LEARNING INTENTION

By the end of this subtopic you will be able to explain how Australians can access justice and legal representation.

5.5.1 Difficulties in gaining access to the legal system

All Australians must have the opportunity to access **justice**. We all have the right to legal representation but, for various reasons, not all Australians can gain access to the law.

People may not be able to access the legal system for various reasons. Some people may have little to no understanding of the law. People with limited English may find it difficult to communicate their problem. Some people may feel intimidated by lawyers or may be unable to pay for legal representation.

Our legal system has devised ways of providing access to justice and legal representation for everyone.

5.5.2 Legal aid

In Australia, we believe that **legal aid** is important in providing access to justice. Without legal aid, some people would not have legal representation. They would lose their right to be treated equally by the law and therefore to receive a fair trial.

Legal aid is provided for people who cannot afford to hire a lawyer. It is offered by several organisations, including legal aid commissions, community legal centres, and Aboriginal and Torres Strait Islander legal services.

FIGURE 1 Everyone has the right to legal representation under our legal system, but not everyone can afford it.



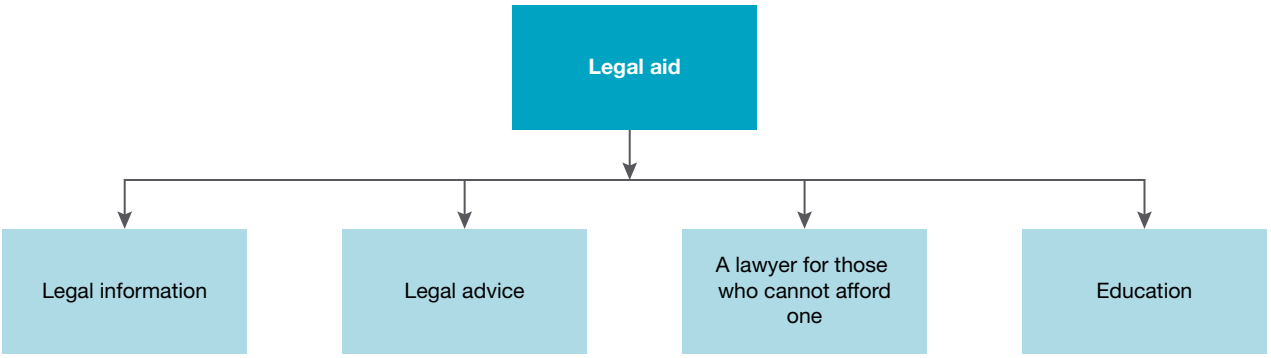
Legal aid commissions

Each state and territory has its own legal aid commission. Legal aid commissions are funded by the state and federal governments. Legal Aid Western Australia provides legal assistance, legal information and advice, lawyers to represent people attending court, and grants of money to help people to obtain legal representation in Western Australia. Its services are free, unless the legal assistance required is ongoing. In this case, a small financial contribution may be required.

justice the use of laws to treat people fairly and in a way that is morally right

legal aid the provision of legal assistance to those involved in a dispute or criminal matter who are unable to pay for legal representation

FIGURE 2 What legal aid provides



Community legal centres

Community legal centres provide free legal advice and assistance as well as related services to the public. They focus on the disadvantaged and people with special needs. The centres may receive funds from the state and federal governments and from donations, but some centres receive no or very little money and are largely or entirely staffed by volunteers. These volunteers can be lawyers or non-lawyers.

Aboriginal and Torres Strait Islander legal services

Each state and territory has an Aboriginal and Torres Strait Islander legal service, funded by the federal government. They provide legal assistance to Aboriginal and Torres Strait Islander people as well as community education in law and law reform. In Western Australia, the Aboriginal Legal Service of Western Australia relies on federal grants and donations from the public. It was established to provide free legal advice, information, and representation to Aboriginal and Torres Strait Islander people in Western Australia.

FIGURE 3 Community legal centres are funded by state and federal governments and by donations from the public. These centres provide legal advice and assistance and focus on helping the disadvantaged and people with special needs.



5.5.3 Legal awareness

The law touches the lives of everyone, so people need to be aware of their legal rights and responsibilities. Awareness of the law can be improved through education, information and the media. Schools teach civics and citizenship so that students have some awareness of the law. Reliable information can be found on websites such as the Law Society of WA and Legal Aid WA. The website of the Attorney-General's department provides information on access to justice. Advertising is used to promote understanding of new laws so that people are aware of them.

DISCUSS

Imagine that you have been charged with a crime that you did not commit but you cannot afford legal advice. How will you access justice?

Discuss what justice means to you. Using examples of how our legal system has devised ways of providing access to justice, explain how different people in our society value justice.

General capability: Intercultural understanding

5.5 ACTIVITY

Work in groups of three or four. Identify the 'laws' and 'rules' which affect your everyday life. An example includes compulsory school attendance. Make a list of all you come up with.

HASS skills: Communicating and reflecting
Civics and Citizenship concepts: Justice, Rights and responsibilities

5.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 5, 7, 8	Questions 4, 9, 10

Check your understanding

1. What is meant by the term 'justice'?
2. Examine **FIGURE 2**, and explain what legal aid is.
3. Describe the legal assistance offered by the following:
   a. legal aid commissions
   b. community legal centres
   c. Aboriginal and Torres Strait Islander legal services.
4. How can legal awareness improve access to justice and legal representation?
5. Explain what is meant by the term 'legal representation'.

Apply your understanding

6. Recommend where the following people could get legal advice. Explain why you chose each option.
   a. John is an elderly pensioner who has been charged with growing cannabis for commercial use.
   b. Tahni is an Aboriginal and Torres Strait Islander who has been charged with assault.
   c. Yousif has recently arrived in Australia from Africa and has been charged with driving without a licence.
7. List the consequences of not providing options for everyone to access the law.
8. Explain why you think our legal system provides the means for allowing everyone to receive access to justice and legal representation.
9. Megan is interested in finding out more about how Australians can receive access to justice and legal representation. Provide Megan with informative advice.
10. Identify what you believe is the most appropriate means for providing access to justice and legal representation for everyone. Explain your response.

For sample responses to every question, go to www.jacplus.com.au.

5.6 Thinking Big research project: Create your own 'Justice' video

Scenario

Australia's legal system is based on the rule of law and the principle of justice. The rule of law is the idea that all members of society are subject to the law, and are equal before the law. However, justice is not such an easy term to define. In general, it refers to moral rightness or lawfulness. Perhaps the closest we can get to defining justice is to say that it is about encouraging what is right in a given set of circumstances. Justice in our legal system, therefore, means that people should be treated fairly and equally before the law and have access to the legal system. The rule of law, presumption of innocence, burden of proof, right to a fair trial and right to legal representation are essential elements of this principle. Without the principle of justice, individuals in our society would not be able to trust the legal system to promote or protect the welfare of the community or their rights.

FIGURE 1 Western Australia's District Court



Task

For this task, you are required to use research skills and your creativity to produce an engaging video that depicts one important aspect of justice. In order to do this, you will need to develop a good understanding of what the term justice means and research an element of justice, including the rule of law, presumption of innocence, burden of proof, right to a fair trial and right to legal representation. You will need to be able to turn your research in groups into a video presentation that will be understandable and entertaining for people of your own age.

FIGURE 2 What does justice mean to you?



Process

Follow these steps to complete this task:

- Open the projectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Work in small groups, which will enable you to share the responsibility for the project.
- In your group, start by discussing what you believe the word 'justice' means. It might be helpful to take some notes.
- Share your responses with the class and record answers on the board. As a class, develop a definition for justice.
- Discuss justice in more detail in your groups. Make a list of words related to justice. These words might include fairness, discrimination, rights, responsibilities, freedom.
- Consider how the principle of justice applies to *you*. What is your role and responsibility as Australians to bring about justice?
- Now it is time to begin your research. In your groups, research one of the following elements and present information related to the element in a group video. The video must demonstrate a clear definition of each term and explanation of how the element provides justice in Australia's legal system.
  Topics include:
  - rule of law
  - presumption of innocence
  - burden of proof
  - right to a fair trial
  - right to legal representation.
- Now it's time to plan the video itself. What kind of format do you think would work the best? Perhaps you could simply play images and record a voiceover to accompany the images. Try using a storyboard to order your information.
- Write a script and create a storyboard for your video. Avoid making up your voiceover on the spot. Instead, carefully plan what you want to say.
- You should also consider how you can make the video as entertaining or engaging as possible.
- Before you start filming, make sure you have all the materials that you need for your video.
- Work in your group to record and edit your video.
- Submit your video to your teacher for assessment and feedback.
- Present your video to the class.

FIGURE 3 Use strong images in your video.



on Resources

ProjectsPLUS Thinking Big research project: Create your own 'Justice' video (pro-0241)

5.7 Review

5.7.1 Key knowledge summary

5.2 How a court works

- Every individual has the right to access justice in Australia. Our legal system exists to make sure that any person accused of a crime receives a fair trial.
- The accused is presumed to be innocent by a court until the prosecution proves that he or she is guilty.
- Both the prosecution and defence will have the opportunity to present evidence and question witnesses before a judge who is competent, independent and unbiased.
- Everyone has the right to be represented by a lawyer in court, regardless of whether or not they can afford it or even understand the law.

5.3 The presumption of innocence

- Presumption of innocence means that any accused person who appears before a court is presumed to be innocent until the prosecution proves that he or she is guilty beyond reasonable doubt.

5.4 A fair trial

- A fair trial occurs when evidence is examined at a committal hearing before proceeding to a trial, when both sides present their case, when the judge is independent, and when strict procedures and rules of evidence are followed.
- Ordinary citizens can play a part in a fair trial in their roles as witnesses (providing evidence to the court) and jurors (making decisions about the guilt of the accused based on the law and the evidence presented to the court).

5.5 Access to justice and legal representation

- Legal aid can be provided to people involved in a dispute or criminal matter who would otherwise be unable to afford legal representation or access to the law.
- People can be made aware of the law through education, information and the media.

5.7.2 Key terms

bail the promise that an accused person makes to appear in court at a later date

beyond reasonable doubt the standard of proof required in a criminal trial where the prosecution must prove that the accused is guilty to such a high degree that a reasonable person would have little doubt that the accused committed the crime

burden of proof the legal principle describing who has to prove a case in court. In a criminal trial, this burden is on the prosecution.

committal hearing in very serious cases, the procedure held in a lower court to determine if enough evidence exists for the case to move to a higher court

counsel for the defence a lawyer who represents the accused person

judge a court official who hears cases in the higher courts, such as the District or County Court, or the Supreme Court

juror a person selected to hear and assess the evidence in a court case

jury a group of ordinary people randomly selected to hear and assess the evidence in a court case

justice the use of laws to treat people fairly and in a way that is morally right

legal aid the provision of legal assistance to those involved in a dispute or criminal matter who are unable to pay for legal representation

legal representation services performed by a qualified legal practitioner, such as a lawyer, who deals with legal matters on behalf of the person who has hired them

legal system a system for interpreting and enforcing the laws of a country

magistrate a court official who hears cases in a magistrates court

presumption of innocence the principle that all accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty

prosecutor the party bringing a criminal action against the accused

rule of law the legal principle that all citizens are subject to the law, and equal before the law, as it is upheld by independent courts

trial the court process to determine whether someone committed a criminal act

5.7.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

We are all subject to the law and equal before the law. What does that mean for everyday Australians?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

Resources

eWorkbooks
- Customisable worksheets for this topic (ewbk-4281)
- Reflection (ewbk-4219)
- Crossword clues (ewbk-4217)
- Crossword (ewbk-4218)
- Student learning matrix (ewbk-4211)

Interactivity
- The legal system and you crossword (int-5314)

5.7 Review exercise

Multiple choice

1. What is a legal system?
   - A. A way of breaking the law of a country
   - B. A system for interpreting and enforcing the laws of a country
   - C. A system for making the jails of a country
   - D. A way of going through law school
2. What is the main role of courts?
   - A. To deal with people who have done bad things
   - B. To only hear serious crimes, such as murder
   - C. To interpret law and settle disputes
   - D. To decide if accused people will go to jail or not
3. Where will most criminal cases be heard?
   - A. The District Court
   - B. The Supreme Court
   - C. The High Court
   - D. The Magistrates Court
4. What does presumption of innocence mean?
   - A. All accused people who appear before a court are presumed to be guilty until the courts find them innocent.
   - B. All accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty.
   - C. All accused people who appear before a court must prove their innocence.
   - D. All accused people who appear before a court are presumed to be innocent until they are found guilty on the balance of probabilities.

5. Why is a committal hearing held?
   - **A.** To commit to both sides being available to present their cases
   - **B.** To guarantee that evidence will be presented using court procedures
   - **C.** To ensure that the judge is independent
   - **D.** To determine if enough evidence exists for a case to move to a higher court

6. When we say that a judge is independent, what do we mean?
   - **A.** They sit by themselves in court.
   - **B.** They have no direct involvement in how either side will present its case.
   - **C.** They can enter and leave the court when they please.
   - **D.** They always decide if an accused is guilty or not guilty.

7. Why might an expert witness be called?
   - **A.** To give evidence on whether or not the accused acted because of mental illness
   - **B.** To tell the court what someone told them they saw the accused do
   - **C.** To give instructions to the jury
   - **D.** To present their version of events to the court

8. What is a jury?
   - **A.** A group of people who present evidence in court
   - **B.** The party bringing a criminal action against the accused
   - **C.** A group of ordinary people randomly selected to hear and assess the evidence in a court case
   - **D.** The person who represents the accused

9. Why are strict procedures and rules of evidence followed?
   - **A.** To make sure that a case can move on to a higher court
   - **B.** To interpret and enforce the laws of the country
   - **C.** To guarantee that a verdict is reached by the jury
   - **D.** To ensure that each side has an equal opportunity to present its own case

10. Who is legal aid provided for?
    - **A.** People who would otherwise be unable to afford a lawyer
    - **B.** People who wish to change the law
    - **C.** People who have been selected to be on a jury
    - **D.** People who need to learn about the law

Short answer question

11. Work in groups of three or four or individually if preferred. Identify one factor that can improve access to justice and legal representation (for example, legal aid). Create a storyboard or summary table that explains this factor and outlines how it can improve access to justice and legal representation. Produce a PowerPoint or video presentation that will engage viewers. Show the video or presentation to your class.



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 5 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

5.1 Overview

Video eLesson
- The courtroom (eles-2078)

5.2 How a court works

eWorkbooks
- Caught and court (ewbk-4212)
- Who's who in court – criminal court (ewbk-4213)

5.3 The presumption of innocence

eWorkbooks
- Join the police force (ewbk-4214)
- Lawbreakers (ewbk-4215)

5.4 A fair trial

eWorkbook
- Five Ws (and one H) (ewbk-4216)

Interactivities
- The courtroom (int-1206)
- Criminal trials (int-5313)

5.6 Thinking Big research project: Create your own 'Justice' video

ProjectsPLUS
- Create your own 'Justice' video (pro-0241)

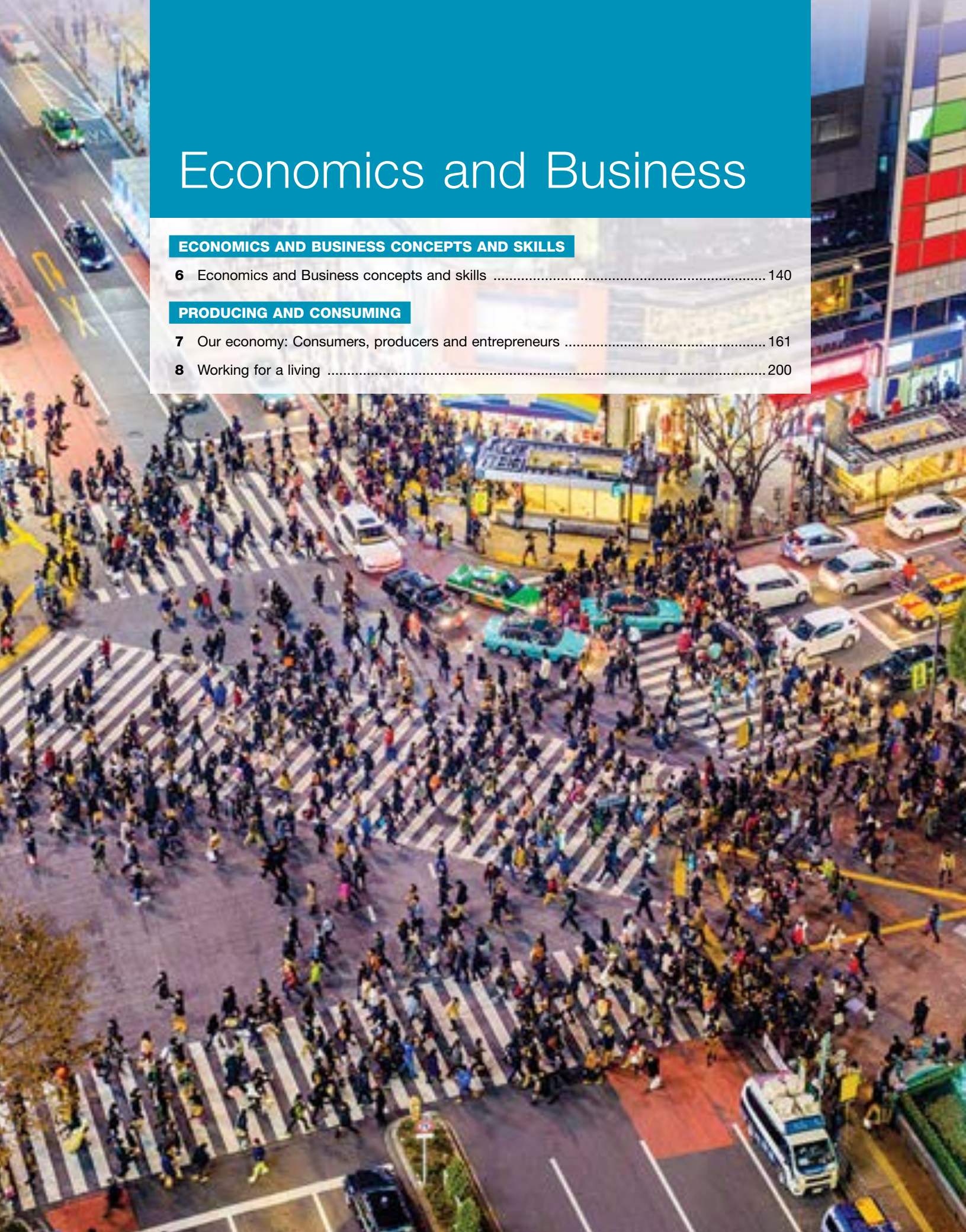
5.7 Review

eWorkbook
- Reflection (ewbk-4219)
- Crossword clues (ewbk-4217)
- Crossword (ewbk-4218)
- Student learning matrix (ewbk-4211)

Interactivity
- The legal system and you crossword (int-5314)

To access these online resources, log on to **www.jacplus.com.au**.

Economics and Business



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6 Economics and business concepts and skills

6.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

6.1.1 Introduction to the world of economics and business

Have you purchased food today? Have you used electricity, caught public transport or been driven in a car? Do you have a bank account, or have you sent a text to a friend? If you answered yes to just one of these questions, you have been involved in the world of economics and business. When we buy goods and services, deposit money in a bank account or obtain a casual job, we are all contributing to the economy.

This topic looks at economics and business concepts, including scarcity and the choices we must make as a consequence of this economic problem, allocation of resources and markets, specialisation and trade, the interdependent nature of our economy, and economic performance and living standards. Studying economics and business provides you with valuable knowledge for making decisions in everyday life. You will develop skills including questioning and researching, analysing, evaluating, communicating and reflecting.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4282)

FIGURE 1 The world of economics and business affects many everyday decisions we make.



6.2 Concepts in Economics and Business

LEARNING INTENTION

By the end of this subtopic, you will be able to explain the six Economics and Business key concepts: *scarcity*, *making choices*, *allocation and markets*, *specialisation and trade*, *interdependence*, and *economic performance and living standards.*

6.2.1 The world of economics and business

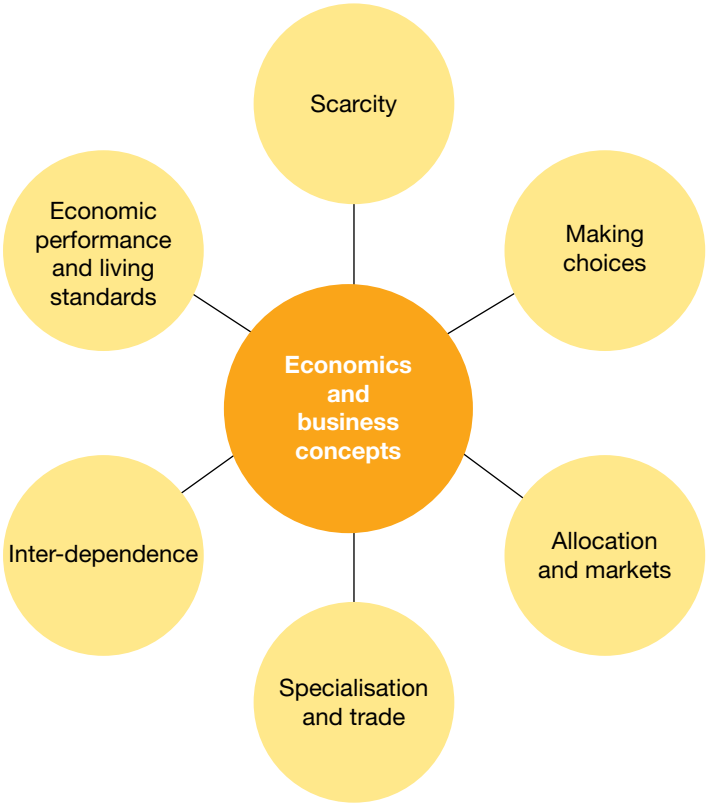
Economics studies people and choices. It looks at how limited resources are used to satisfy our unlimited needs and wants. Basically, economists investigate choices and how to make people better off in terms of their living standards. The world of economics is everywhere: occurring right now all around you, happening day and night, going on today and continuing tomorrow. The economic environment is always changing. This means it is an exciting world, full of surprises and opportunities

economics a social science (study of human behaviour) that analyses the decisions made by individuals, businesses and governments about how limited resources are used to satisfy society's unlimited needs and wants

business any activity conducted by an individual or individuals to produce and sell goods and services to make a profit

The world of **business** is something that you already know something about. You probably know someone who owns a business or works for a business. You will have bought something from a business. Perhaps you have even operated your own 'business' – mowing neighbours' lawns, baby sitting, washing windows or setting up a stall at a local market. A business is any activity conducted by people to produce and sell goods and services, with the main objective of making a profit. As well as making profit for owners, businesses make important contributions to the economy.

FIGURE 1 The six key economics and business concepts



The Economics and Business concepts can help us to make sense of the world. By using these concepts, you can identify questions, guide your investigations or assist decision making about the world you live in, and you can use them to try to imagine a different world. The six key concepts are: *scarcity*, *making choices*, *allocation and markets*, *specialisation and trade*, *interdependence*, and *economic performance and living standards.*

6.2.2 Scarcity

In economics, **scarcity** is the 'basic economic problem'. Scarcity is the concept of people having unlimited **needs** and **wants**, but only having limited **resources** available to satisfy them. It's the concept of having to make choices as to which wants we satisfy first. We call this the basic economic problem because it always exists, and it exists in all economies.

Needs are goods or services people must have in order to survive. Wants are a wish or desire for something that will make life more enjoyable for a person. Wants are not necessary for survival. Sometimes, the difference between a need and a want is not clear. For example, you need to eat food but you might want to eat cake. In this situation, food can be both a need and a want. Generally, most of us would say that needs include clothing, food and shelter. You might say that a car, computer, internet and mobile phone are wants. However, many people in today's society would suggest that these are needs.

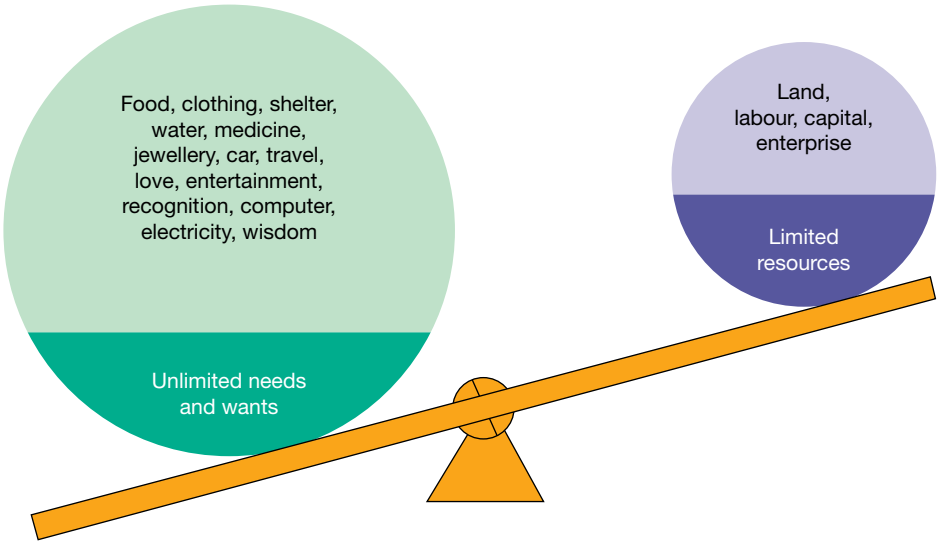
scarcity the economic problem of having unlimited needs and wants, but limited resources to satisfy them

needs goods or services that consumers consider necessary to maintain their standard of living

wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community

resource items of value that we use to produce goods and services to satisfy needs and wants, which include land, labour, capital and enterprise

FIGURE 2 The basic economic problem is scarcity: where we have unlimited needs and wants, but limited resources to satisfy them. This creates an unbalance between wants and resources.



To satisfy our needs and wants, businesses use resources to produce goods and services. The four main types of economic resources are land, labour, capital and enterprise. These types of resources can be seen in **FIGURE 4**.

Producing goods and services will usually need resources to be combined. Unfortunately, as we have seen, the resources available to us are limited. We can only produce a finite amount of goods and services from these resources. We are not able to fully satisfy the unlimited needs and wants of society. Because of scarcity, we must choose some things but give up others.

FIGURE 3 Unlimited wants combined with limited resources creates scarcity.

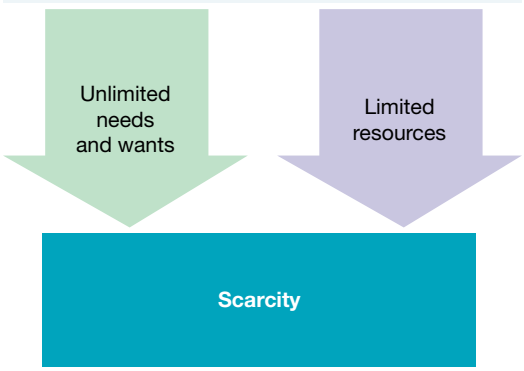


FIGURE 4 The four main types of economic resources are land, labour, capital and enterprise.

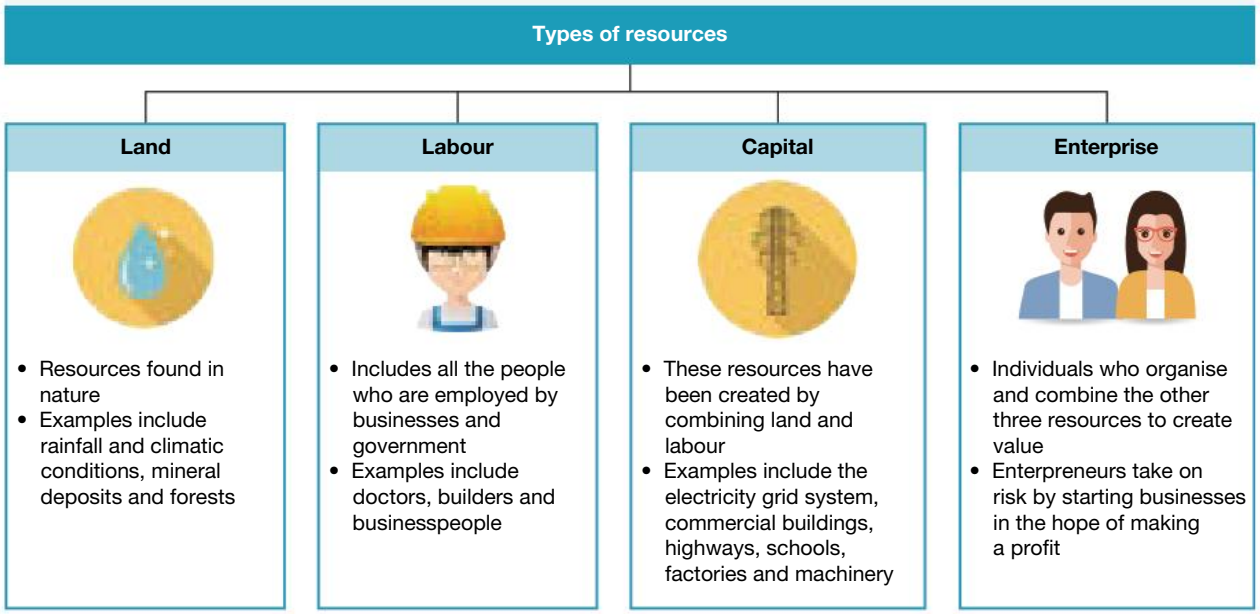


FIGURE 5 Businesses use economic resources (land, labour, capital and enterprise) to produce the goods and services that society wants and needs.



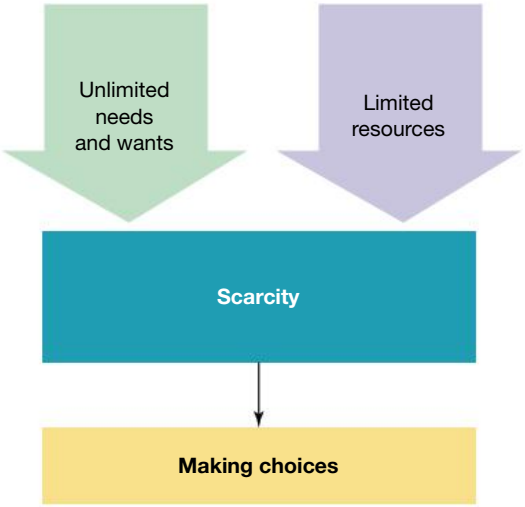
6.2.2 Making choices

Scarcity means that we need to make choices. We cannot produce an infinite amount of goods and services because we do not have an infinite amount of resources. We need to make choices about how scarce resources are used. Making choices about alternatives is an important part of economics.

Every choice we make involves an **opportunity cost**. This is the alternative that is given up when making a choice. It is the sacrifice you make when you choose something over another thing.

For example, say Bridie finds herself with enough money to buy either a new video game or a pair of shoes. She does not have the money for both. After much thought, she decides to put the money towards the shoes. The opportunity cost of doing this was the video game that she did not buy. Another example is Jack, who has a casual job helping at a local cafe. With his first pay cheque of a $100, he had to decide whether to purchase a new video game or to put the money towards buying a car when he left school. Thinking it through, he decided to put the money towards a car. His opportunity cost of doing this was the purchase of the video game.

FIGURE 6 We need to make choices about how scarce resources are used.



Note that there can only be one opportunity cost. Opportunity cost is the alternative given up. Consumers, business and the government all need to consider opportunity cost when they make choices. Consumers constantly have to make choices when they purchase goods and services. They must also make choices about how they will use their time and how they will earn a living. Businesses need to make choices about what goods to produce and how. Governments must make choices about how to intervene in the economy.

FIGURE 7 Economists know that the cost of purchasing a video game is not just the price paid. The opportunity cost of this decision is the alternative given up—the trade-offs in decision making.



6.2.3 Allocation and markets

All economies must decide how they will use their scarce resources to satisfy their unlimited needs and wants. Making decisions about how we will use resources is known as **resource allocation**. Our society has developed an **economic system** to make choices that will solve the basic economic problem. Remember: that basic economic problem is scarcity.

An economic system is simply the way we organise the production and distribution of our goods and services. All economic systems must answer

opportunity cost the next best alternative given up whenever a choice is made

resource allocation relates to decisions about how scarce resources are distributed among producers, and which types of goods and services will be produced to satisfy wants and needs

economic system a way of organising the production and distribution of the nation's goods, services and incomes

three basic economic questions: what to produce? how to produce? for whom to produce? These questions are summarised in **FIGURE 9.**

FIGURE 8 All economic systems must answer three basic economic questions.

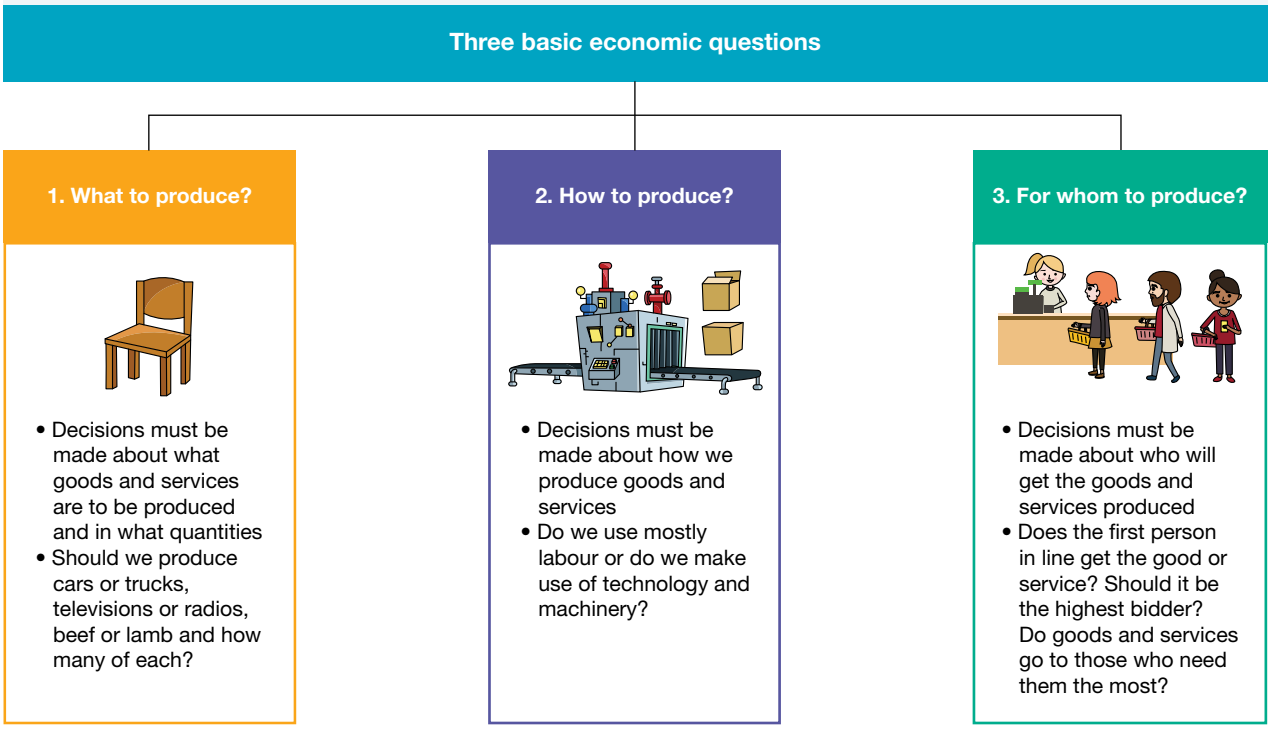
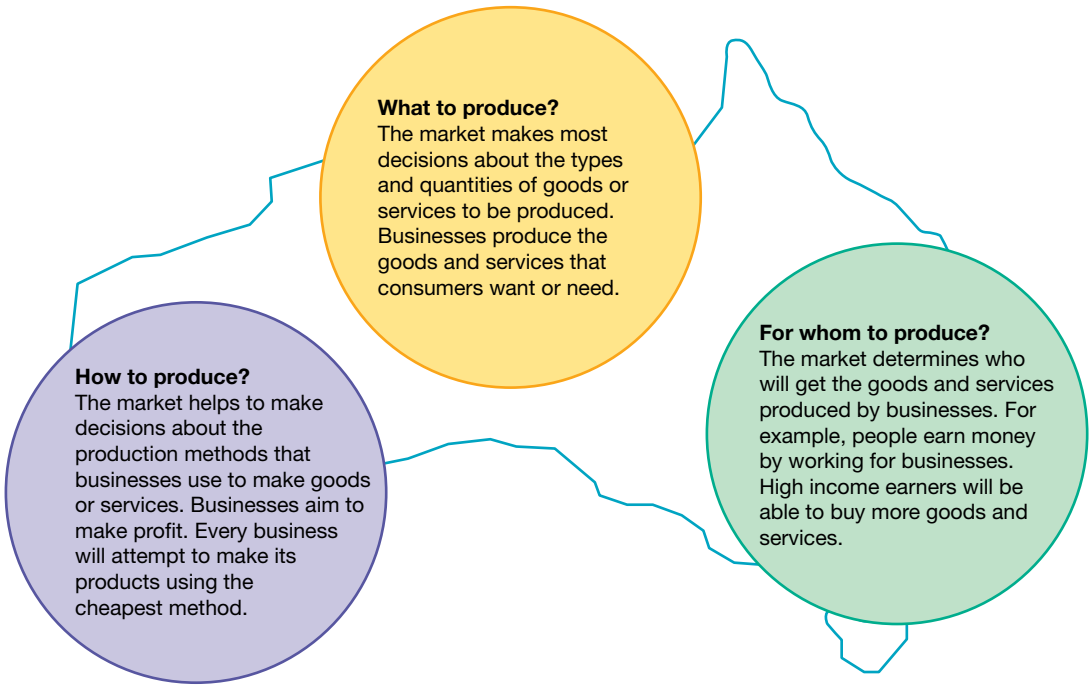


FIGURE 9 Australia's economic system answers the three economic questions through the market.



Australia's economic system is called a **market capitalist economy**. This means that the **market** answers most of the economic questions. A market is where buyers and sellers negotiate prices for goods and services. Markets aren't always in physical places. Lots of different types of markets are possible. For example, the Fremantle Markets is in a physical place. eBay and Amazon are both virtual markets. Other examples of markets include the labour market, property markets, the grocery market and stock markets.

Sometimes the market can allocate resources inefficiently. For example, lower income earners may miss out on goods or services that they need. As a result, sometimes governments need to intervene in the economy to reduce these problems.

FIGURE 10 In traditional market places, like the Fremantle Markets, buyers and sellers negotiate prices for goods.



6.2.4 Specialisation and trade

Specialisation occurs when workers, businesses or nations focus on one task or on making one product. This means that the workers, businesses or nations are using resources efficiently. You can see specialisation occurring if you imagine an assembly line.

For example, when a car is made, each worker will complete one distinct task. Each machine on the assembly line will also complete one distinct task. This is specialisation. It means that the business making the cars will be able to make lots of cars. If one person was responsible for making a car, it would take a long time for the business to produce a car. One person might not be able to make a car in one day. However, specialisation means that a business can make many cars in one day.

Countries also make use of specialisation. Sometimes one country will be better at producing a certain product than other countries are. It will choose to specialise in

market capitalist economy an economic system that relies on the market to allocate resources based on the actions of consumers and producers, and where resources are generally owned by private individuals and businesses

market the place where goods, services or resources are exchanged between buyers and sellers

specialisation a method of production where a worker, business or nation focuses on the production of a limited range of goods or services in order to increase production and make the most efficient use of resources

this product. Another country may be better at producing a different product. It may choose to specialise in this different product. In this case, it makes sense for the two countries to **trade**. Countries trade when they buy and sell products from each other. For example, Australia exports iron ore, coal, gold, natural gas and wheat. We import many products from other countries, such as processed fuels, cars and electrical equipment. We trade with other countries because they are better at producing these products than we are. Businesses and consumers also trade goods and services. For example, you trade when you go into a shop and buy a product.

FIGURE 11 Specialisation can be seen on an assembly line. Production is organised to maximise efficiency. Employees will work on different sections completing specific tasks.



FIGURE 12 Individuals, businesses and nations trade with other individuals, businesses or nations to get something they could not provide or produce for themselves.



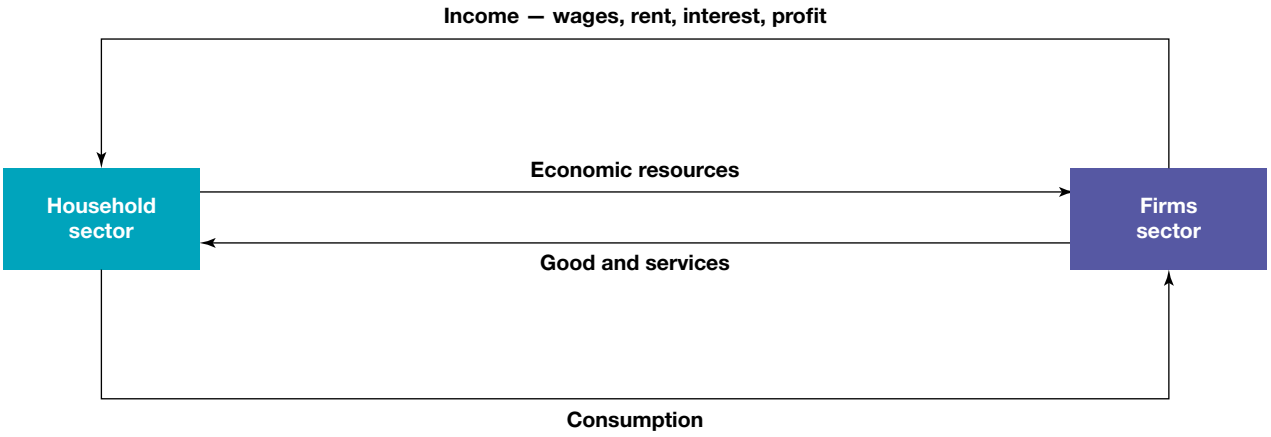
6.2.5 Interdependence

Interdependence means two or more people or things affecting or depending on each other. In economics, it is used to describe the way that all parts of an economy have an impact on each other. Consumers, workers, businesses and governments affect each other. They are also dependent on each other. For example, a shop will not be able to make money without customers. To buy things from a shop, a customer needs to earn money. People earn money by working for businesses. The shop will stock the things that customers need and want by buying goods from other businesses.

trade the activity of buying, selling or exchanging goods and services between producers and consumers and/or countries

interdependence the mutual dependence between participants in an economy; that is, the reliance of consumers, workers, businesses and governments on each other

FIGURE 13 A simple two-sector circular flow model of income, demonstrating the interdependence between consumers and businesses



6.2.6 Economic performance and living standards

The main objective of an economy is to satisfy the needs and wants of its citizens. It will do this by efficiently producing as many goods and services as possible. This is accomplished by addressing the three key economic questions (refer to section 6.2.3). In Australia, the government is responsible for managing the performance of the economy. Our government pursues low inflation, economic growth and full employment.

economic performance the measure of how well an economy is performing, based on whether it is achieving its economic objectives

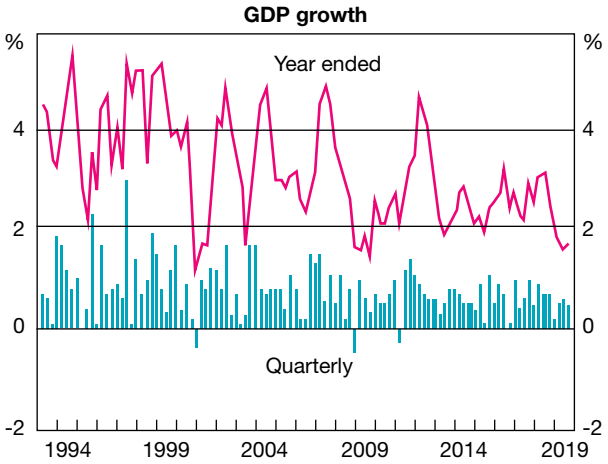
standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)

Economies measure their **economic performance**. We do this to determine how well the economy is providing for our citizens. The performance of our economy can be measured using economic indicators. Some key economic indicators include:

- gross domestic product (GDP) — this measures economic growth (the increase in the value of goods and services produced by our economy)
- the unemployment rate — this tells us about how many workers are without a job
- the inflation rate — this measures the change in the prices of goods and services.

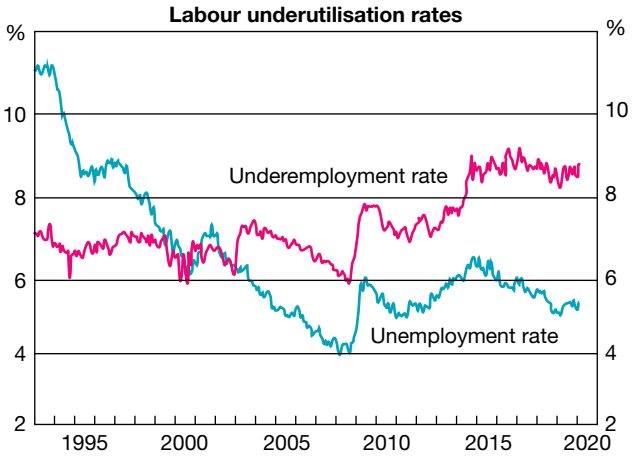
The information gained from measuring economic performance influences the decisions that governments make. Australia's government tries hard to improve economic growth. Economic growth is believed to improve the **standard of living**. This refers to how well-off individuals or countries are overall.

FIGURE 14 Trends in Australia's GDP growth over 25 years



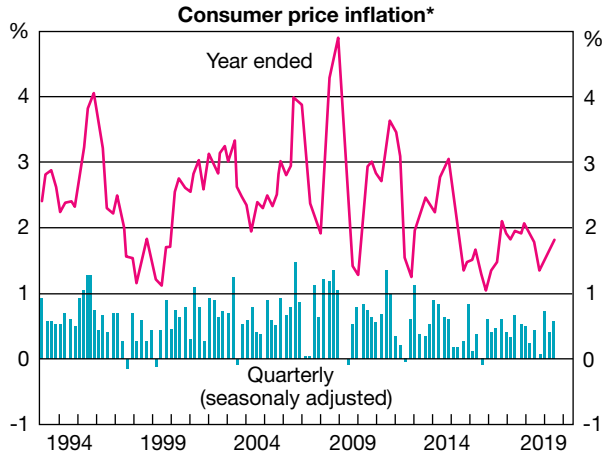
© Reserve Bank of Australia. Sourced from Australian Bureau of Statistics. Retrieved from https://www.rba.gov.au/chart-pack [Online Resources].

FIGURE 15 Unemployment rates in Australia over 25 years



© Reserve Bank of Australia. Sourced from Australian Bureau of Statistics. Retrieved from https://www.rba.gov.au/chart-pack [Online Resources].

FIGURE 16 Trends in inflation in Australia over 25 years



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6.3 Skills in Economics and Business

LEARNING INTENTION

By the end of this subtopic you will be able to explain each of the four categories of skills in the Humanities and Social Sciences, and how to apply these skills.

6.3.1 What skills will you build this year?

This year, you will continue to build your ability to use the four broad categories of skills in the Humanities and Social Sciences. The following summaries are to remind you of these four key skills.

1. *Questioning and researching* involves locating relevant and detailed information and/or data from a range of appropriate sources. In Year 7 Economics and Business, this includes conducting research about why people work and what makes a business sustainable.
2. *Analysing* involves interpreting information to identify the main features or ideas, and then examining the information closely to determine how the parts relate to the whole. In Year 7 Economics and Business, this includes analysing the job statistics to better understand trends in the labour market.
3. *Evaluating* means examining you interpretations of information to draw evidence-based conclusions. It requires taking into account ambiguities and multiple perspectives in a source and proposing potential responses to contemporary challenges or issues. In Year 7 Economics and Business, this includes evaluating the behaviours and skills of an entrepreneur.
4. *Communicating* your ideas means presenting information in a range of formats to suit the intended audience and purpose. This includes essays, oral presentations, debates, tables and cartoons. Reflecting on your skills is also an important part of the process. In Year 7 Economics and Business, this includes creating and communicating an original business idea.

6.3.2 SkillBuilders in the topic

In addition to these broad HASS skills, you will learn a range of essential practical skills as you study Economics and Business. The SkillBuilder subtopics in this topic tell you about the skill, show you how to apply the skill and let you practise the skill with tasks related to the topics covered in this subject.

The SkillBuilders you will use in Year 7 are as follows.

- Conducting research
- Interpreting and explaining graphs
- Evaluating a business plan
- Writing a business case study

FIGURE 1 In year 7 Economics and Business you will learn about work. Is playing tennis for a living work?



6.4 Skillbuilder: Conducting research

LEARNING INTENTION

This SkillBuilder shows you how to approach a research task. Conducting research is an integral part of the questioning and researching HASS skill.

6.4.1 Tell me

While studying economics and business, you will develop the skill of asking questions. Asking questions will help you to complete research (through discovering or verifying knowledge about something). Questioning relates to posing statements that require answers. You usually ask questions about what is known and what is not known in order to improve your knowledge. Research is important because it allows us to find out what is unknown and contributes to filling in gaps in our knowledge.

The following steps provide a useful guide to the process of writing questions and carrying out research:

- Identify and understand the general task you are attempting to complete.
- Develop a series of specific questions that will help guide your research in the appropriate direction, and help you determine the information you need.
- Locate appropriate sources of that information.
- Record relevant information from a range of sources.
- Present the information in an appropriate form.

6.4.2 Show me

Imagine you have been asked to research the details of a specific product by reading a manufacturer label.

Your first step is to clearly identify the key task. This could be expressed as follows:

Prepare a report on how reading a food label provides information for consumers about products.

It is now necessary to break this down into a series of more specific questions. These could include:

1. Do food labels need to meet certain standards or regulations?
2. What words or phrases are used on food packaging to suggest that the food is healthy?
3. What sort of information is included on food labels?
4. What is the 'health star rating system'?
5. How can food labels be improved?
6. What are some relevant examples?

FIGURE 1 Food labels can contain a lot of information and can be difficult to understand if you don't know what the information means or how to use it.



The next step is to locate your sources. The Australian government's business.gov.au website has information for businesses on labelling products, so this is a good starting point. By entering the term 'food label' in a search engine, you will be presented with a number of sources. Searching for Australian sources is a good idea.

Keep your questions beside you as you navigate through the sites and sources, and note the location of material that provides answers. You can select and save some text, and then highlight those sentences or paragraphs

that provide answers to your questions. Sometimes a complete answer to a question may be found in several places in a piece of text. Be sure to highlight all relevant text, and indicate with a number which question the information answers.

When you are satisfied you have found the answers to all the questions, you need to write the answers in order, making sure you use your own words as much as possible. You can then use the answers to present your information in the required form. For example, this may be an oral report to the rest of the class, an essay to be marked by your teacher, a PowerPoint presentation, or any other format that is appropriate.

6.4.3 Let me do it

Complete the following activity to practise this skill.

6.4 ACTIVITY

Using the process outlined in section 6.4.2 as a model, devise a series of questions and carry out research to produce a report on the following key question:

Using a specific product, such as fruit juice or yoghurt, prepare a report on how reading a food label provides information for consumers about that product.

6.5 Skillbuilder: Interpreting and explaining graphs

LEARNING INTENTION

This SkillBuilder shows you how to interpret and explain a graph. Interpreting and explaining graphs is part of the analysing HASS skill.

6.5.1 Tell me

Analysing is another skill that you will develop while studying Economics and Business. This skill involves interpreting information to identify the main features or ideas. You then examine the information closely to determine how the parts relate to the whole. One way in which you might analyse in economics and business is by interpreting information in a graph. Subtopic 6.2 includes different graphs displaying information about various aspects of economic performance in Australia. Starting with line graphs, we will now examine graphs in greater detail.

6.5.2 Show me

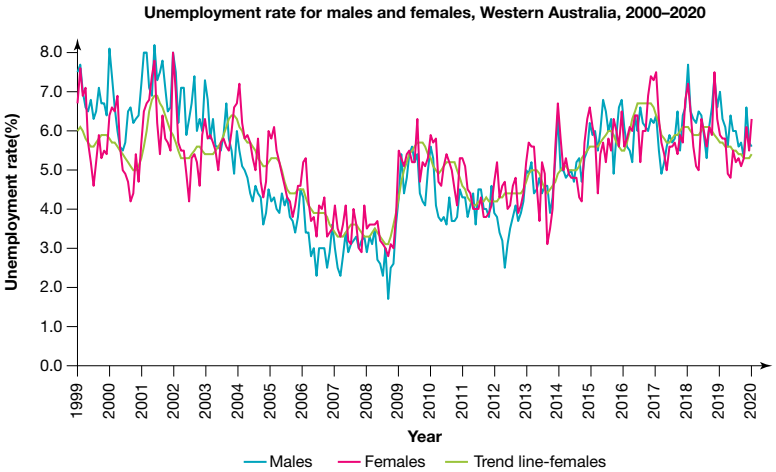
Line graphs are very useful for showing trends (patterns of change over time) and comparing data. When analysing a line graph, first examine the heading — what does it tell you about the data contained in the graph? Next, examine the key, which identifies what each of the lines on the graph represents. Then look closely at the vertical and horizontal axes, which show you the variables as numbers, percentages, years and so on.

When reading line graphs, find points on the graph where two variables meet to obtain specific information. For example, in **FIGURE 1** the variables being measured are the unemployment rates for males and females. We can see that the two curves cross at various points, indicating that the unemployment rate for males and females was the same at those points in time. We can see from the horizontal axis that the most recent time this occurred was in 2019 and the vertical axis shows that the unemployment rate was about 6 per cent, so we know

that the unemployment rate for both sexes in 2019 was about 6 per cent.

The trend lines on a line graph show an overall picture of what is happening; that is, whether a particular variable has increased, decreased or remained steady over time. Examine these lines closely — what changes do you see? If change has occurred over time, has it been steady and gradual, or perhaps sudden and erratic? When examining a line graph, note down any patterns that you identify. You will then be ready to complete your interpretation, which involves writing a paragraph or two to summarise the information you have found in your analysis of the data.

FIGURE 1 Western Australia's unemployment rate by gender, 2000–2020



Source: Graph based on data compiled from Australian Bureau of Statistics, *Labour force, Australia,* March 2020 (cat. no. 6202.0.).

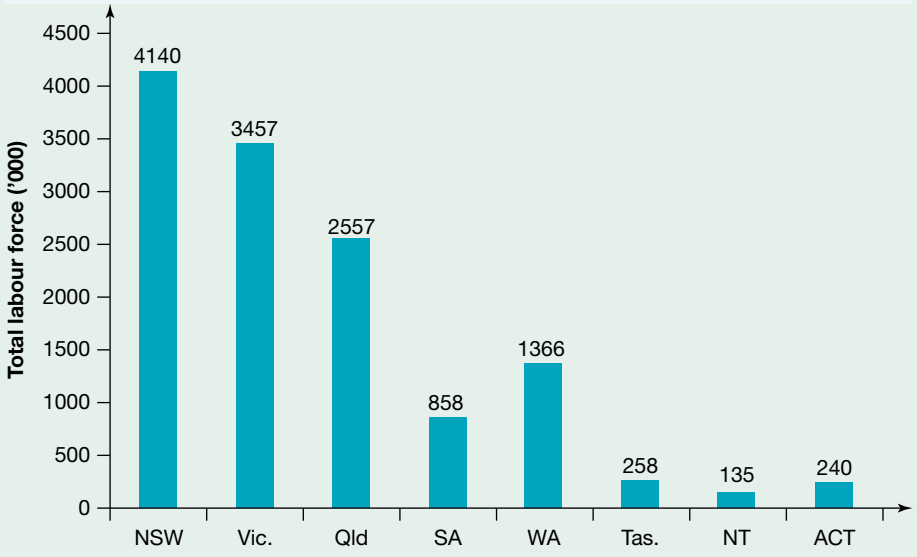
6.5.3 Let me do it

Complete the following activity to practise this skill.

6.5 ACTIVITY

Analyse and interpret the following graph. Use what you have learned about the line graph (vertical axis and horizontal axis and variables) to analyse what the graph tells you. Write a paragraph describing the trends shown.

FIGURE 2 Total labour force by state, 2019–20



Source: Graph based on data compiled from Australian Bureau of Statistics, Labour force Australia, March 2020 (cat. no. 6202.0).

6.6 Skillbuilder: Evaluating a business plan

LEARNING INTENTION

This SkillBuilder shows you how to accurately and appropriately evaluate a business plan. Evaluating a business plan is part of the evaluating HASS skill.

6.6.1 Tell me

Evaluating means to propose explanations for events or issues and to make overall judgements based on the evidence. This is a skill that you might develop in economics and business by looking at the benefits or advantages of something and then examining the costs or disadvantages of something.

6.6.2 Show me

For example, consider the following business plan that Gemma has presented for her new café.

Element	Application
Executive summary	The name of the business is The Bookshop Café. This will be a sole trader business located in Northbridge and owned by Gemma Potter. The business will start trading on 15 October 2021. The Bookshop Café will sell a range of products including offering a brunch menu (fruit toast, eggs on toast, soup, burgers, fries and salads), cakes, scones, juices, hot and cold chocolate drinks, as well as various types of teas and coffees. A gluten-free menu will also be offered. The Bookshop Café will also offer a range of books for sale. The Bookshop Café's vision is to be the coffee shop with the most relaxing environment in Perth and its mission is to provide a great experience while enjoying high-quality refreshments, making use of ingredients from local and sustainable suppliers.
Operations plan	The production process will involve waitstaff greeting customers and showing them to a table. Customers will then order their food and/or beverages from the counter, paying at the same time. Food and beverages will be served within 20 minutes of ordering. A waiter or waitress will serve meals to the table. While waiting for their order, or while they eat and drink, customers can browse through a range of books on sale. Customers can purchase these books once they have finished their meal. Food supplies will be sourced from local suppliers. The equipment required includes a coffee machine, espresso maker, food display cabinet, refrigerator, cooking equipment, dishwasher, cash register, computers and book shelves.The business currently has no stock. Opening hours will be from 8.00 am to 5.30 pm weekdays and 10.00 am to 4.00 pm on weekends. Payment methods will be cash and credit (EFTPOS will be made available).To maintain quality, customers will be asked to complete an optional survey.The business will employ 11 people, including three chefs (two will work weekdays, and the other will work weekends), three baristas (two will work weekdays, and the other will work weekends) and five waitstaff (three will work weekdays, and two will work weekends). Employees will receive training as necessary.
Financial plan	The Bookshop Café's balance sheet shows a healthy financial position, with funds available for capital purchases and for purchasing new stock once the business commences. The Bookshop Café has a high level of liquidity, with $70 000 in cash available. As well as the owner's own equity, the main source of finance is a business loan from National Australia Bank. It is expected that average sales will be 500 cups of coffee every day. Together with other food and beverages and book sales, the estimated annual revenue will be $800 000 or more each year. Expenses are estimated to be $550 000 annually. Therefore, The Bookshop Café's estimated profit is $250 000 annually. This is expected to increase over the next five years. The cash flow forecast shows that cash flow is anticipated to be positive over the following five years.

Element	Application
Marketing plan	Residents ofNorthbridge are predominantly aged between 18 and 64. Of these, 46 per cent is made up people aged 25 to 34. The vast majority of people living within the suburb are professional couples without children. Several competitors are in Northbridge, many of which offer similar menus such as breakfast and coffee. One of The Bookshop Café's main points of difference will be the books available to read or purchase. Prices will be determined by completing research on what competitors are charging. Pricing will also take into account costs (of each item on the menu as well as fixed and variable costs). The Bookshop Café will rely on word-of-mouth advertising and will provide free wi-fi and powerpoints at tables for laptops. A loyalty program will be introduced as well as the offer of a free item in return for completing online surveys. Advertising will occasionally occur in local newspapers and magazines. Social media will be kept updated regularly.

Gemma's business plan is a good one. However, it is not perfect. Gemma still needs to consider some aspects. Her business plan needs to be evaluated.

FIGURE 1 Will Gemma's business idea succeed?



6.6.3 Let me do it

Complete the following activities to practise this skill.

6.6 ACTIVITY

Write down the benefits or strengths you can see for Gemma and her new business in her business plan. For example, Gemma is planning to operate as a sole trader — this type of business is very suitable if she wants to maintain full control of her business and wants to keep all the profit.

Next, write down costs or limitations that you can see in the business plan. For example, operating as a sole trader means that the business is very reliant on Gemma being able to operate the business every day.

Finally, what do you think? Should Gemma go ahead with her business? Write down an evidence-based conclusion.

6.7 Skillbuilder: Writing a business case study

LEARNING INTENTION

This SkillBuilder shows you how to prepare, research, structure and write a business case study. Writing a business case study is part of the communicating and reflecting HASS skill.

6.7.1 Tell me

When you use the skill of communicating and reflecting in economics and business, you will be presenting your findings or representing information using an appropriate format to suit a particular audience. You will also need to use terminology that is used by economists and people in the world of business. For example, when writing a case study on a business, you would be expected to use business terminology and write as if your audience were people who are interested in studying businesses.

A business case study is a description of a real-life business, requiring you to explore the main issues affecting the business and how the business owner has responded. These issues and responses need to be analysed and related to your economic and business knowledge. Conclusions can then be drawn about why the issue occurred and how to best respond to it, based on what the business owner did.

Writing a business case study is a way to apply the theoretical knowledge that you have learned about economics and business to a real-life business. It can also develop research skills. Consider the following case study of Boost Juice.

CASE STUDY: Boost Juice

Who is Boost Juice?

Boost Juice Bars is a global chain of retail stores selling fruit juice and smoothies. Boost Juice also sells snacks, including banana bread, wraps and yoghurt. Janine Allis and her husband, Jeff, started the business in 2000 when they opened an outlet in South Australia.

Reason for Boost Juice's success

Janine and Jeff Allis chose the perfect time to launch a great product.

Janine was inspired by a trip to the United States, where juices and smoothies were common. Back in Australia, Janine found, 'In shopping centres, there was nowhere to get something healthy.' Using her trip to the United States as research, Janine explains, 'I studied the concept of smoothies and juice and took what I liked to develop a new concept in Australia called Boost.' The business started small with just one shop in Adelaide, giving them the chance to trial and test their products.

Janine was very hands-on in setting up the business — developing the structures, business plan and ethics that were needed to grow the business. But in the early days, this meant getting involved in every aspect: 'I flew to Adelaide to open the first store; I ran it, scrubbed the floors and really learned the business.'

This modest start gave Janine the chance to test the market, using a popular radio station to reach Boost's target market. To reach their goal of expanding their brand, Janine focused on franshising, developing strong branding as a way to lure the best franchisees and to win customers. 'I never had the intention of opening just one store, but you have to open the first one to work out the cost of goods, your wages, expenses and income and work out if you have a viable business.'

Running her own business was a risk, but it gave Janine a way to try to balance her work and home life and the opportunity to work from home in the early days when her children were young. 'When the time came to expand with a building program on 15 to 18 sites, we sold the house and put the money into the business. We're a company where you don't necessarily have to wear a suit or have a degree to be promoted and you can bring your children in when you have them. It's the sort of company where you can have both.'

Other information about Boost Juice

- 2000: Opened first Boost Juice (Adelaide)
- 2002: $1 million annual turnover
- 2008: 213 stores and on track for $100 million annual turnover
- 2014: 300 stores in 10 countries and annual turnover of more than $135 million
- 2020: More than 550 stores in 15 countries
- Highest grossing company stores: Sydney and Melbourne airports
- Highest grossing company franchisees: Chadstone and Pacific Fair Shopping Centres
- Ethical and social responsibility: Boost uses paper cups that are renewable, sustainable and biodegradable, and which are printed using non-toxic, food-safe inks and are not harmful to the environment. Boost Juice has a tree planting and school fundraising program.

FIGURE 1 Janine Allis and her husband Jeff



6.7.2 Show me

Elements of a good business case study

You might note that a good case study has the following features:

- includes a profile of the business (the trading name and the products it sells)
- explains some of the history of the business
- gives reasons the business has been successful
- covers any other issues or questions as required
- includes extra information about the business
- is of reasonable length (approximately 300 words)
- is easy to read
- is well presented.

To complete a good business case study you should complete the following.

- Gather information about the business. The best way to do this is to interview the owner or someone who works at the business. If you cannot speak to someone who knows about the business, you will need to complete research on the internet or use magazines and newspapers.
- Work out the interview questions you will need to ask the business owner, manager or employee.
- Visit the business and interview the owner, the manager or an employee. Be polite. Do not try to interview them if they are busy. You might need to ask them if you can come back at a more convenient time. Explain why you are doing the interview and what will happen to their responses. Remember to thank the person for their time.
- Complete any further research that may be needed to address all the items listed in the preceding list in this section. You could complete your research on the internet or using magazines and newspapers.
- Write your case study using proper sentences and headings. Present it so that it is easy to read.

6.7.3 Let me do it

Complete the following activity to practise this skill.

6.7 ACTIVITY

Have a go at writing your own business case study. Use the following questions to guide you:

- What is the name of the business and what products does it sell?
- When and why did the owner start the business?
- Does the owner consider himself or herself to be an entrepreneur?
- What are the reasons for the success of the business?
- Do any other issues or information need to be covered? These might include:
  - where the business is located and why it is located there
  - how it develops or developed a high-quality product
  - how it maintains quality service
  - the promotion or advertising it uses
  - the number of staff it employs
  - who gave the business support and advice when the business was getting started
  - whether the business has a business plan (or ever had one)
  - who manages the finances of the business and how they are managed
  - in what ways the business is ethically and/or socially responsible.



6.8 Review

6.8.1 Summary

Concepts in Economics and Business

- Scarcity is the 'basic economic problem', and this involves society having limited resources available to satisfy unlimited needs and wants.
- The four main types of economic resources are land, labour, capital and enterprise.
- Every choice made involves an opportunity cost, which is the next best alternative given up whenever a choice is made.
- All economies must make decisions about how resources will be allocated among producers and what types of goods and services will be produced. This means economies must answer the three economic questions: what to produce?, how to produce? and for whom to produce?
- Australia is a market capitalist economy, which means that most answers to the three economic questions are made by the market (where buyers and sellers negotiate prices for goods and services).
- Governments may need to intervene in the economy to reduce inefficiencies.
- Modern economies have developed a method of production called specialisation (where a worker, business or nation focuses on the production of a limited range of goods or services) to increase production and provide a surplus that can be used to trade.
- Participants in an economy are mutually dependent (or interdependent); that is, consumers, workers, businesses and governments are reliant on each other.
- Our economy and our government have a number of economic objectives, including satisfying the needs and wants of citizens by efficiently producing as many goods and services as possible, and achieving low inflation, economic growth and full employment.
- Economic performance can be measure through key economic indicators, including gross domestic product, the unemployment rate and the inflation rate.
- Standard of living refers to the quality of life of individuals or countries, and this is influenced by the level of economic activity.

Skills in Economics and Business

- Questioning involves posing statements that require answers, particularly in regard to what is known and what is not known in order to improve your knowledge.
- Research is important because it allows us to find out what is unknown and contributes to filling in gaps in our knowledge.
- Analysing involves interpreting information to identify the main features or ideas, and then examining the information closely to determine how the parts relate to the whole.
- Evaluating involves proposing explanations for events or issues and making overall judgements based on the evidence.
- Communicating and reflecting involves presenting findings or representing information using an appropriate format to suit a particular audience. The appropriate use of economics terminology and business terminology is very important in this.

6.8.2 Key terms

business any activity conducted by an individual or individuals to produce and sell goods and services to make a profit

economics a social science (study of human behaviour) that analyses the decisions made by individuals, businesses and governments about how limited resources are used to satisfy society's unlimited needs and wants

economic performance the measure of how well an economy is performing, based on whether it is achieving its economic objectives

economic system a way of organising the production and distribution of the nation's goods, services and incomes

interdependence the mutual dependence between participants in an economy; that is, the reliance of consumers, workers, businesses and governments on each other

market the place where goods, services or resources are exchanged between buyers and sellers

market capitalist economy an economic system that relies on the market to allocate resources based on the actions of consumers and producers, and where resources are generally owned by private individuals and businesses

needs goods or services that consumers consider necessary to maintain their standard of living

resource allocation relates to decisions about how scarce resources are distributed among producers, and which types of goods and services will be produced to satisfy wants and needs

resource items of value that we use to produce goods and services to satisfy needs and wants, which include land, labour, capital and enterprise

scarcity the economic problem of having unlimited needs and wants, but limited resources to satisfy them

specialisation a method of production where a worker, business or nation focuses on the production of a limited range of goods or services in order to increase production and make the most efficient use of resources

standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)

opportunity cost the next best alternative given up whenever a choice is made

trade the activity of buying, selling or exchanging goods and services between producers and consumers and/or countries

wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4282)
Reflection (ewbk-4221)
Student learning matrix (ewbk-4220)



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 6 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

6.4 SkillBuilder: Conducting research

eWorkbook
- SkillBuilder: Conducting research (ewbk-4173)

6.5 Skillbuilder: Interpreting and explaining graphs

eWorkbook
- SkillBuilder: Interpreting and explaining graphs (ewbk-4174)

6.6 Skillbuilder: Evaluating a business plan

eWorkbook
- SkillBuilder: Evaluating a business plan (ewbk-4176)

6.7 Skillbuilder: Writing a business case study

eWorkbook
- SkillBuilder: Writing a business case study (ewbk-4177)

6.8 Review

eWorkbook
- Reflection (ewbk-4221)
- Student learning matrix (ewbk-4220)

To access these online resources, log on to **www.jacplus.com.au**.

7 Our economy — consumers, producers and entrepreneurs

7.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

In what way do you think the personal choices that you make, or the decisions that businesses make, can affect the Australian economy as a whole?

7.1.1 Introduction

Can you imagine what life would be like if you couldn't buy new clothes, the latest phone, laptop or computer game? Having access to these things is only possible if you (or your parents) work to earn an income to pay for them.

You are an important part of the economy because you contribute money whenever you buy goods and services to satisfy your needs and wants. The money spent has come from the **income** earned from working. By choosing to spend some of your money, you send a signal to producers to keep making the products you buy and to continue employing people to make the products or provide the services you buy. Businesses rely on consumers like you and your parents to buy their goods and services.

income money earned through employment or investment

on Resources

- **eWorkbook** Customisable worksheets for this topic (ewbk-4283)
- **Video eLesson** What is economics? (eles-0253)

FIGURE 1 The choices we, and others, make every day affect the economy.



7.2 The importance of businesses as producers

LEARNING INTENTION

By the end of this subtopic you will be able to:

- explain who is a consumer and who is a producer
- identify what is a need and what is a want
- describe how we use an economic system to fulfil our needs and wants through the supply of goods and services
- describe the interaction between producers and consumers.

7.2.1 Producers and consumers

It is sometimes said that 'money makes the world go around'. Of course, this is not physically true, but it does sum up the way the economy works. In simple terms, the economy consists of **producers**, who make and sell goods and services, and **consumers**, who buy the goods and services. Producers pay their **employees** with money, and also hope to make money themselves out of what they sell. This money is used to buy goods and services from other producers. Producers rely on consumers to buy from them, and consumers rely on producers to provide the goods and services they want. Money allows this relationship to work.

producer an individual or business involved in the production of goods and services

consumer a person or group who is the final user of goods and services produced within an economy

employees people who work for a wage or salary

FIGURE 1 At a farmers' market, consumers purchase goods from producers.



DISCUSS

Do you believe that money makes the world go around? Is too much or too little importance placed on money in our society?

General capability: Critical and creative thinking

7.2.2 Needs and wants

Imagine you have survived an aeroplane crash and find yourself alone on a desert island. To survive, you will have to find the essentials — food, clothing and shelter. These are the basic **needs** that we must all have whether we are on a desert island or in the comfort of our home.

As well as these needs, there are additional things we might like to have on the desert island to make life more comfortable. These could include a bed, a torch, a fishing rod, a comb or a toothbrush, and a table and chair. These things are called **wants**. Although we would like to have these possessions, we could survive without them.

FIGURE 2 Even on a desert island, you have basic needs that must be satisfied if you are to survive. Can you identify some basic needs?



TABLE 1 Needs versus wants

	Definition	Examples	Properties
Needs	Goods or services that are essential for life	Water, food, shelter, air, clothing, medication	*Finite list:* • They must be satisfied if life is to continue. • They remain throughout life. • They temporarily wane when satisfied.
Wants	Non-essential goods and services	Torch, bed, fishing rod, armchair, toothbrush, mobile phone, laptop	*Unlimited list:* • Life can continue without them. • Wants change throughout life. • New wants arise once others are satisfied.

7.2.3 Goods and services

In order to satisfy our needs and wants, we purchase goods and services. **Goods** are classified as the physical items that satisfy our needs and wants, and that we can see and touch. They include food, TV sets, cars, refrigerators, bottles of soft drink and clothing. **Services** are classified as the actions done for you by others, which are designed to satisfy needs and wants. They include the services provided by doctors, dentists, banks, mechanics and teachers. If you are stranded alone on a desert island, you will have to find or make all the things you need and want. In effect, you would be a one-person economy because you would be responsible for both producing and consuming all the goods and services. In a modern economy, we generally rely on businesses to provide us with goods and services.

needs goods or services that consumers consider necessary to maintain their standard of living

wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community

goods physical items that satisfy needs and wants

services actions done for you by others to satisfy your needs and wants

FIGURE 3 As consumers, we can purchase either goods or services. Are you able to list some of the goods and services that you have purchased in the past week?



7.2.4 The relationship between businesses and consumers

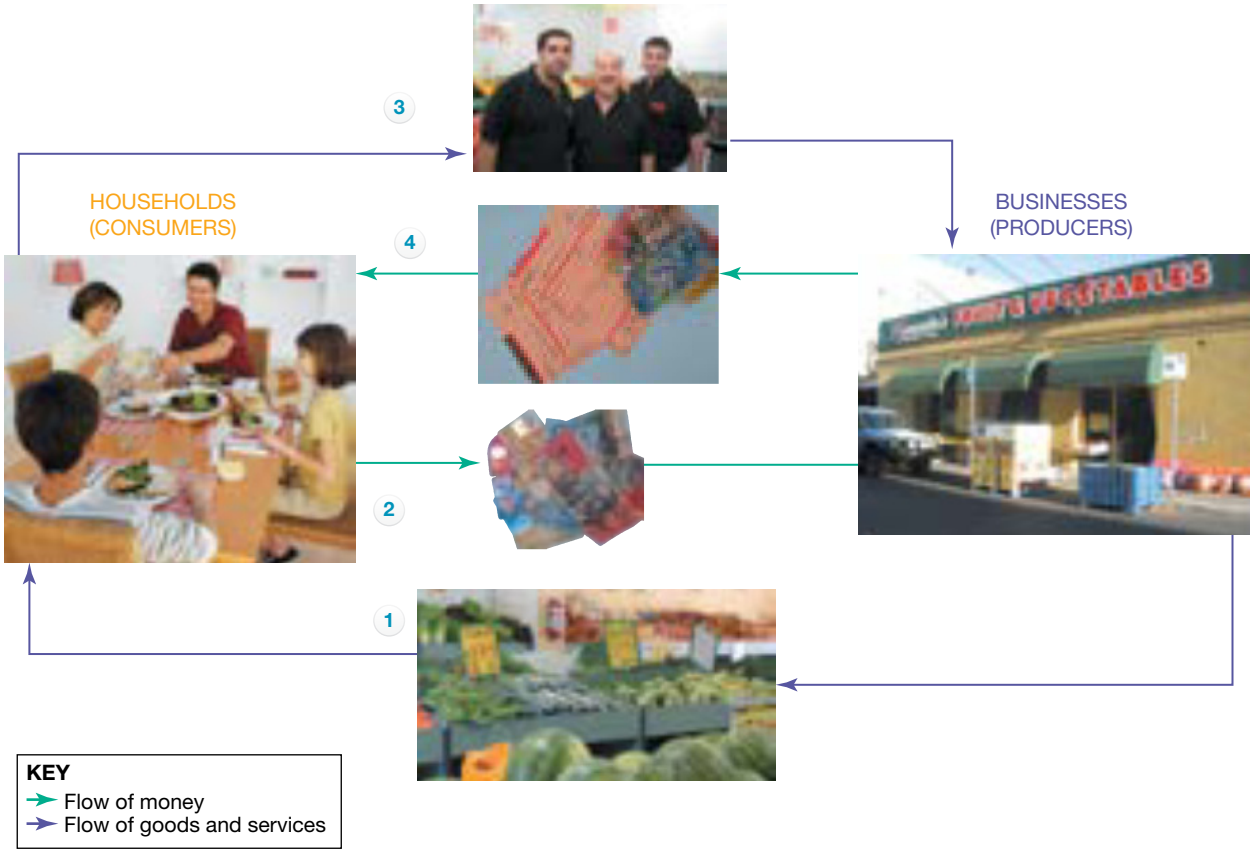
In the Australian economy, we satisfy our needs and wants by working to earn money and then buying goods and services from businesses that produce them. When we are working, we are providing our **labour** to contribute to the process of producing goods or services for other consumers to buy. When we are spending our money, we are consumers, purchasing goods and services that others have produced in order to satisfy our needs and wants.

To satisfy needs and wants, consumers like you make economic decisions every day. For example, you may decide to buy milk from a supermarket rather than from a dairy, catch a bus to school rather than walk, use a loose-leaf folder rather than a bound notebook, buy a can of Australian tinned food rather than one from overseas. Your decisions influence what businesses produce and therefore affect the economy.

We can examine the relationship between businesses and consumers by looking at the model in **FIGURE 4**. It demonstrates how labour is exchanged for money, and how that money is used to purchase goods and services.

labour the human skills and effort required to produce goods and services

FIGURE 4 The interrelationship between consumers and business



1. Businesses are producers that make or supply goods and services that are distributed to households.
2. Consumers use money, cards and cheques to purchase goods and services.
3. Consumers are usually also employees, who provide businesses with their labour in the production of goods and services.
4. Employees receive money in the form of wages for their labour.

7.2 ACTIVITY

1. List five goods and five services that you or members of your family have purchased in the last week.
   a. Identify one good from your list, and name the business that most benefited from that purchase.
   b. Examine the components that make up that particular good. Identify any other businesses that might have benefited indirectly from the purchase of that good.
   c. Identify a service from your list, and name the business that most benefited from that purchase.
   d. What equipment did the supplier of that service use? Identify any other businesses that might have benefited indirectly from the purchase of that service.

HASS skills: Analysing, Evaluating
Economics and Business concept: Allocation and markets

7.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4, 6	Questions 2, 7, 8	Questions 5, 9, 10

Check your understanding

1. What is the difference between needs and wants?
2. What do we mean by the term 'labour'?
3. Name three types of business that provide goods.
4. Name three types of business that provide services.
5. Explain why wants are considered to be unlimited.

Apply your understanding

6. Explain the role of a producer in the economy.
7. Explain the role of a consumer in the economy.
8. In what ways can an individual be both a producer and a consumer in an economy?
9. In what ways are producers and consumers dependent on each other?
10. Could the relationship between producers and consumers succeed without money? What do you think might have to happen if there was no such thing as money?

For sample responses to every question, go to www.jacplus.com.au.

7.3 Responding to consumer demand

LEARNING INTENTION

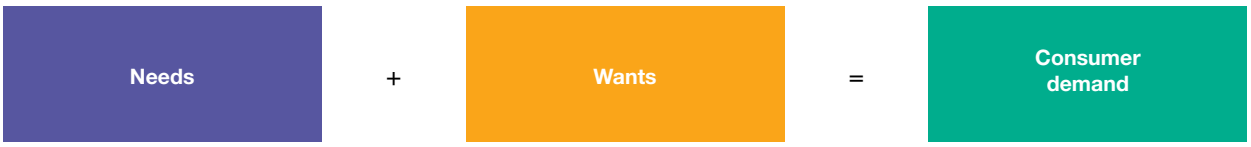
By the end of this subtopic you will be able to:

- describe the role of producers
- outline the relationship between consumers and producers
- explain how consumer demand influences producers.

7.3.1 What consumers want

Any producer wishing to be successful in business must supply goods or services that correspond with the needs and wants of consumers. It is no use trying to sell something that nobody wants to buy. The ability to understand and act on consumer preferences is an important skill for anyone wishing to go into business.

FIGURE 1 Consumer demand is based on needs and wants.



7.3.2 The marketplace

A market is any organised exchange of goods and services for money. This can occur in a physical marketplace such as a shopping centre, but it can also occur without any actual physical location. When we purchase goods or services online or over the telephone, we are still participating in a market.

FIGURE 2 The internet is an important tool that allows consumers to find out about goods and services available to them, and purchase them.



FIGURE 3 Hairdressers compete with each other in a market for hairdressing services.



A market has to provide a means for consumers to find out about the goods and services available. This can occur when consumers physically walk into a shop and examine the goods on display; when consumers visit a website; or when they look up different businesses in a telephone or online directory.

A market also has to provide a means for consumers to pay for the goods or services they are purchasing, and a means for them to receive those goods or services. In a physical shop, this is fairly simple: we visit the premises, receive the good or service and then pay (by handing over cash or using a card or smartphone) as we leave. An online market usually requires some means of online payment and a postal or other delivery service to bring the goods to the consumer.

We usually think of a market in relation to the particular goods and services being sold. For example, there is a market for groceries, where different businesses compete with each other to provide consumers with different products. There is a market for takeaway food, with different restaurants offering a variety of choices for consumers. If one shopping centre has two or more hairdressers, this constitutes a market for hairdressing services.

7.3.3 Responding to consumer demand

How does a business owner find out what consumers want?

- *Analyse the business's sales*. There is no point in stocking products that no-one wants to buy, so business owners constantly monitor their sales to identify what is most popular and ensure that they can supply it.
- *Carry out market research*. This includes surveys of consumers to identify possible future consumer preferences.
- *Examine social trends*. This requires finding out what sorts of issues people are concerned about and then responding to those concerns. Examples include the desire for a healthy lifestyle, environmentally friendly products and organic food.

Healthy lifestyle

We regularly see and hear stories in the media suggesting that much of our modern lifestyle is harming our health. Obesity is a growing problem, and eating unhealthy foods and not exercising are seen as a danger to

wellbeing. As consumers become more aware of possible health issues, they are likely to look for healthy options when buying goods and services. Producers respond to these concerns by trying to make their products appear as healthy as possible.

FIGURE 4 Gyms and personal trainers have increased in number as consumers become more health conscious.



We see this most commonly in food packaging. Phrases such as 'low in cholesterol', '98 per cent fat-free' and 'no added sugar' are all designed to appeal to the health-conscious consumer. Packaging laws in Australia require that all ingredients are listed on food packets, so we have a way of checking some of these claims and comparing different products. While not all health claims on food packaging are necessarily honest or accurate, competition between similar products in the marketplace allows consumers to make the healthiest choices if they wish to do so.

Concerns about health also lead to new goods and services being introduced into the economy. Next time you visit a supermarket or pharmacy, take note of the huge number of vitamins and other dietary supplements on sale. This has been an area of enormous growth, with millions spent on TV advertising to promote the latest products. In addition, gyms and personal trainers have increased in number as consumers try to adopt healthier lifestyles. All of this growth in the businesses providing such goods and services is an example of the way markets can respond to consumer preferences.

wellbeing an overall measure of quality of life

Environmentally friendly products

Through education, we have become more aware of our impact on the environment and the need to reduce pollution. Businesses that can demonstrate that they use environmentally friendly methods to produce the goods and services they provide might be more appealing to consumers. You may have seen cans of tuna with the claim 'pole and line caught' on the packaging. Historically, tuna fishers have used methods that accidentally caught many other types of fish, some of them endangered species. Pole and line fishing allows only tuna to be caught, and so is more environmentally friendly. Consumers have shown a preference for this type of product.

FIGURE 5 Consumers have shown a preference for environmentally friendly methods of catching tuna.



DISCUSS

The population of bluefin tuna in the ocean has dramatically decreased because of consumer demand for it, with some estimates saying that the current population is now only 4 per cent of what it once was. Is buying pole and line caught tuna enough, or should we be doing more to protect the ocean environment?

General capability: Ethical understanding

Other examples of environmentally friendly products include cosmetics produced by The Body Shop, which endorses environmentally sustainable production methods and has always promoted the fact that none of its products are tested on animals. Washing detergents will often advertise that they are biodegradable and so will not harm the environment. Electrical goods are often sold with a sticker indicating their level of energy efficiency. All of these are examples of producers responding to consumer concern for the environment. Perhaps a more recent change is the decision by supermarket giants Coles and Woolworths to no longer provide single-use plastic bags. These bags were not bio-degradable and often ended up in landfill or waterways once discarded.

Organic food

Combining both environmental concerns and a desire for healthy food options is the growth in demand for organic food. It is generally understood that food labelled as 'organic' has been grown without the use of pesticides and other chemicals, and so is a healthier choice. In addition, if the grower has not used these chemicals, there is less risk of them causing damage to other plants or animals, or harming the environment in other ways. As well as fresh fruit and vegetables, many packaged foods now carry the word 'organic' on their packaging to appeal to consumers. Successful businesses will always make sure they are aware of consumer preferences, and will attempt to adapt their goods and services to meet these preferences.

FIGURE 6 Organic fruit and vegetables are seen to be both healthier and more environmentally friendly.



on Resources

Interactivity Responding to consumer demand (int-5685)

7.3 ACTIVITIES

1. Visit your local supermarket and identify four food products that claim to be healthy options.
   a. Explain what particular claim is made for each product.
   b. How does the labelling for each product attempt to get across a healthy message?

HASS skills: Analysing
Economics and Business concept: Making choices

2. Use internet resources to find:
   a. how pole and line fishing is more environmentally friendly than other methods
   b. the name of three brands of canned tuna that use fish caught by pole and line.

HASS skills: Questioning and researching, Analysing
Economics and Business concept: Making choices

7.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 7	Questions 3, 6, 8, 9	Questions 5, 10, 11

Check your understanding

1. What is a market?
2. Outline two ways in which a business owner can find out what consumers want to buy.
3. Identify and explain two conditions that are required for a market to work.
4. Explain what is meant by market research.
5. Virtual or online markets have become increasingly popular. Analyse why this is the case.
6. Identify two benefits that online markets have over physical markets.

Apply your understanding

7. Explain one way in which producers have responded to consumers' desire for a healthy lifestyle.
8. Why does the demand for organic food demonstrate both a desire for healthy food options and an awareness of environmental issues?
9. Explain why Coles and Woolworths no longer provide single-use plastic bags.
10. The types of businesses that operate in the hairdressing market include hairdressing salons; manufacturers of shampoo, conditioners and hair dyes; manufacturers of scissors and combs; suppliers of electrical goods such as hairdryers and electrical trimmers; towel suppliers; and furniture businesses.
    Identify as many businesses as you can that operate in the following markets:
    a. takeaway food market
    b. bicycle sales and repairs market
    c. gymnasium and fitness market.
11. Markets for different products can affect each other. Explain how conditions in the market for apples may affect the conditions in the market for apple juice.

For sample responses to every question, go to www.jacplus.com.au.

7.4 Determining prices

LEARNING INTENTION

By the end of this subtopic you will able to explain the ways businesses set the price for their goods and services.

7.4.1 Deciding on price

One of the most important decisions that any business owner has to make is how much to charge for their goods and services. This will have a major impact on the success of the business, as prices set too high may drive away potential customers, while prices set too low may make it difficult to achieve a **profit**.

Businesses can determine their prices by using the recommended retail price, following price leaders, using percentage mark-ups, pricing according to what the market will bear, or offering quotes to customers.

FIGURE 1 Electrical goods often have a recommended retail price.



7.4.2 Recommended retail price

Sometimes the manufacturer of a product may provide a recommended price that can be used by **retail** businesses selling that product to consumers. Manufacturers of electrical goods often do this. This price is known as the recommended retail price (RRP). Such a price can only be a recommendation, as it is illegal in Australia for any manufacturer to dictate the selling price. Nevertheless, the RRP can provide a useful guide to the retail business owner, particularly when starting a new business.

FIGURE 2 Large supermarkets are often price leaders in the grocery market.



7.4.3 Price leaders

Some businesses are more influential in a particular market than others. These businesses are often price leaders — they tend to set the prices rather than follow the prices set by others in the market. In the food and grocery market, the two big supermarket chains (Coles and Woolworths) tend to be price leaders. To survive, smaller supermarkets must compete with at least some of the prices of those larger stores, so their owners will carefully monitor the price leaders. All businesses need to adjust their prices from time to time to ensure they can compete with the prices charged by other suppliers in the same market. They will often look to price leaders as a guide to what is a reasonable price. For example, when Coles and Woolworths lowered milk prices to $1 a litre in 2011, other suppliers had to follow suit. This practice still operates today.

7.4.4 Percentage mark-ups

Using a **percentage mark-up** is a common way of determining prices. If it costs a certain amount for the retail business to buy the product, a percentage can be added to that cost to ensure the retailer makes a profit. Assume a

profit what remains after all business expenses have been deducted from the money that has been collected from selling goods or services

retail describes a business that sells goods and services to consumers

percentage mark-up a way of determining selling price by adding a fixed percentage to the cost of the product

clothing store has a percentage mark-up of 25 per cent. The store will buy a pair of jeans for $100. With a 25 per cent mark-up, the jeans will have a selling price of $125. This $25 is used to cover the other costs of the business, such as wages and electricity bills, and to contribute to the business' profits. The business owner has to calculate an appropriate percentage mark-up to allow this to happen.

FIGURE 3 The percentage mark-up on products is used to cover business expenses and provide a profit to the business owner.



7.4.5 What the market will bear

When setting prices according to what the market will bear, the seller attempts to get as high a price as possible while ensuring that the price is not too high for consumers to pay. The best example of this type of price setting can be seen at an auction. Many houses and other properties are sold via auction. People who want a property determine the price by bidding against each other until one of two things happens: either one bidder outbids all other buyers and becomes the successful buyer, or the property does not sell because no-one is prepared to pay the price the seller wants. In the latter case, the seller and the highest bidder can come together after the auction to negotiate a price that is acceptable to both of them.

FIGURE 4 House auctions are a good example of prices being determined by what the market will bear.



FIGURE 5 Listening to customers can help a business owner to determine what level of prices the market will bear.



Of course, not all businesses can sell their goods or services through an auction process, so determining prices based on what the market will bear often comes down to the experience of the business owner. An ability to understand consumer preferences is an important skill for a business owner. Listening to customers, following what is happening to the products throughout the market and monitoring the prices charged by competitors are all important activities for a business owner.

FIGURE 6 Tradespeople such as plumbers often use quotes to determine the prices they charge.



7.4.6 Quotes

Many service businesses will set a price by offering a quote to a consumer to perform certain work. A business such as a plumber or electrician might find that the amount of labour and the cost of materials used can vary from job to job. Preparing a quote for

each new job may be a better way to determine the price. A quote is an estimate of the costs involved in an individual job, plus a certain amount so the business makes a profit. Consumers will sometimes seek out quotes from a number of competing businesses before choosing one.

7.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 6	Questions 3, 7, 8	Questions 5, 9, 10

Check your understanding

1. What is a recommended retail price?
2. What makes a business a price leader? Give one example of a price leader.
3. How would a tradesperson calculate a quote for a customer?
4. Why can't a manufacturing business force the retailers that sell its products to sell at the recommended retail price?
5. What factors does a business owner have to take into account when calculating a percentage mark-up to apply to goods for sale?

Apply your understanding

6. Explain why setting the 'right' price is important to a business owner.
7. Explain how a price leader can affect other businesses in a market.
8. Explain why an auction is a good example of a price being determined by what the market will bear.
9. A business selling lawnmowers pays suppliers $400 for each mower it buys for resale. It sells 10 mowers per week. Each week the owner pays $1000 in wages to an assistant, $800 in rent on the shop, and has gas, electricity and water bills of $200. For each of the following percentage mark-ups, calculate how much profit the owner would make in a week:
   a. 50 per cent mark-up
   b. 75 per cent mark-up
   c. 100 per cent mark-up.
10. In 2011, Coles and Woolworths both lowered the price of a litre of milk to $1. Discuss why they might have done this.

For sample responses to every question, go to www.jacplus.com.au.

7.5 Influencing overseas producers

LEARNING INTENTION

By the end of this subtopic you will be able to:
- identify an export and an import
- describe the importance of exports to Australia
- identify the advantages and disadvantages of imports.

7.5.1 Exports and imports

Australia is a major trading nation. Australian businesses import (buy goods and services from other countries) and export (sell goods and services to other countries) in order to meet the needs and wants of Australian and overseas consumers. Producers all over the world will not only try to satisfy the demands of consumers within

their own country, but will also look for every opportunity to sell goods and services to consumers in other countries as a means of increasing profits.

7.5.2 Exports and Australia

From the beginning of European settlement, Australia has been involved in trade. From the 1820s we exported wool to many other countries, particularly Great Britain. In the 1850s, the discovery of large deposits of gold meant that we became one of the world's largest exporters of this precious metal. As might be expected from a country that has a lot of land and is rich with natural resources, Australia is known for its exports of raw materials, minerals and crops.

FIGURE 1 Australia was a major exporter of wool for more than 100 years. Now, Australia's major export is iron ore.





Why are exports important?

According to recent government statistics:

- More than 53 300 different businesses in Australia exported goods and services in 2018–19.
- Exports brought in $470.2 billion in 2018–19.
- Almost 21 per cent of Australia's total income comes from exports.

Much of our national wealth is created through exports. In addition, money that we earn from exports can be used to pay to import the goods and services we need.

The following table shows Australia's top 10 export commodities.

TABLE 1 Australia's top 10 exports 2018–19

Rank	Commodity	$ million	% share
1	Iron ores and concentrates	77189	16.4
2	Coal	69592	14.8
3	Natural gas	49731	10.6
4	Education-related travel services	37556	8.0
5	Personal travel (excl. education) services	22450	4.8
6	Gold	18867	4.0
7	Aluminium ores and concentrates (incl. alumina)	11358	2.4
8	Beef	9476	2.0
9	Crude petroleum	8491	1.8
10	Copper ores and concentrates	5936	1.3

7.5.3 Imports and Australian consumers

We have also always imported many of the goods we want. With a comparatively small population, it has always been expensive to set up factories in Australia to make the goods we need, so it has often been cheaper to import goods from other countries. There are many reasons why Australia imports a wide range of products, but the lower cost of imported goods is usually a major factor. Australian manufacturers may not be able to make a product as cheaply as it can be made overseas, so they simply import the product. Most of the electrical goods that we buy, for example, are manufactured in various Asian countries. Everything from flat-screen TVs to washing machines and air conditioners are manufactured in countries such as Japan, South Korea and China. It is difficult to find an Australian-made product in these categories. In 2017, the last Australian car factory was closed. Therefore, any new car that is now sold in Australia has to be imported.

FIGURE 2 Australia is a major trading nation, exporting and importing many goods and services.



TABLE 2 Australia's main imports

Rank	Commodity	Percentage %
1	Personal travel	11.0
2	Refined petroleum	6.0
3	Passenger motor vehicles	5.1
4	Telecom equipment and parts	3.5
5	Crude petroleum	3.2
6	Goods vehicles	2.5
7	Freight transport services	2.4
8	Computers	2.3
9	Professional services	1.8
10	Passenger transport services	1.8

Many imports are brought into the country as cheaper alternatives to the Australian-manufactured products. You can see this on the supermarket shelves, where the cheaper home-brand version of a particular type of food is often an imported alternative to the Australian-made product. Imported ingredients or components are often used in products that are assembled in Australia. For example, Australian juice companies that use fruit from local suppliers may still import juice concentrate from overseas and mix it with the local product.

FIGURE 3 China produces high quality electronic products more cheaply then we can in Australia.



FIGURE 4 Motor vehicles and petroleum are among the many imported products sold in Australia.



Australian consumers influence overseas businesses

Most imported goods coming into Australia are purchased by Australian retail businesses expecting to sell them on to local consumers. Although consumers in Australia increasingly buy goods from overseas themselves through online purchases, it is mostly retail businesses that import large container loads of electrical goods, footwear, clothing, toys, sporting equipment and other goods from producers in other countries.

Just as Australian manufacturers are influenced by Australian consumer preferences to produce particular types of goods and services to match those preferences, businesses that import goods must also be aware of those preferences. This means they will only order goods from overseas producers that they know Australian consumers will buy. Those overseas producers may have to be aware of consumer preferences in a variety of different countries (not just Australia) if they are to be successful.

FIGURE 5 Workers in a textile factory in Laos manufacture clothes to sell in Australian shops.



Advantages and disadvantages of importing goods from overseas

Importing goods and services can have both positive and negative effects on the Australian economy. This is illustrated in **TABLE 3**.

TABLE 3 Advantages and disadvantages of imports

Advantages	Disadvantages
• There is a much larger range of goods and services for consumers to buy. • It forces Australian producers to make goods and services more efficiently, as they have to compete against cheaper imported products. • Importing goods from other countries can encourage people in those countries to buy products from us. • Australian workers have the opportunity to live and work overseas and learn other languages and cultures. • Trade between countries encourages peaceful relationships between those countries.	• Australian jobs may be lost to countries with lower wages, particularly in manufacturing. • Australian industries have found it difficult to compete with the lower production costs of some overseas countries. This has led to a closure of industries, such as motor vehicle manufacture. • Money leaves the country, adding to the wealth of overseas producers instead of remaining in Australia. • We may become too dependent on imported goods and lose the skills to produce these ourselves. • Harmful animal species as well as diseases, such as bird flu, may inadvertently be brought into the country on ships bringing in imported goods.

Resources

Weblink Australian Government Department of Foreign Affairs and Trade

7.5 ACTIVITY

Using the information in **TABLE 3**, design a poster to encourage Australians to buy Australian-made products rather than imported products.

HASS skills: Communicating and reflecting
Economics and Business concept: Making choices

7.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Questions
1, 3, 7	2, 4, 6, 8	5, 9, 10

Check your understanding

1. What is the difference between imports and exports?
2. Explain why it is important for Australia to import goods and services.
3. Give two examples of goods that Australia imports.
4. Give two reasons why exports are important for the Australian economy.
5. How would an overseas manufacturer know what products to sell to Australian consumers?

Apply your understanding

6. Identify two positive and two negative effects that importing goods and services has on the Australian economy.
7. Use the information in this subtopic to identify whether the following statements are true or false.
   a. Australia was a major importer of wool for more than 100 years.
   b. Most of the electrical goods that we buy are manufactured in Asian countries.
   c. Almost 51 per cent of Australia's total income comes from exports.
   d. Exports brought in $470.2 billion in 2018–19.
8. Australia is an exporter of raw materials and minerals and an importer of finished goods. Explain why this can be detrimental to our economy.
9. Explain one non-economic benefit of Australia exporting products overseas.
10. Explain how online markets affect the value of our imports.

For sample responses to every question, go to www.jacplus.com.au.

7.6 Being an entrepreneur

LEARNING INTENTION

By the end of this subtopic you will be able to describe the qualities of an entrepreneur and identify some examples.

7.6.1 Turning ideas into a business

Not everyone knows how to turn their ideas into a **business**. A person who is willing to take a risk and has the qualities required to turn an idea into a successful business is called an **entrepreneur**. An entrepreneur's methods are sometimes regarded as groundbreaking and innovative. For these people, the opportunity to explore untapped markets with no guarantee of success can be motivation itself. However, for those whose ideas translate into a successful business venture, the profits are often huge.

FIGURE 1 Could you be an entrepreneur? If you have most of these attributes and skills, your chances of entrepreneurial success look good.



7.6.2 What is an entrepreneur?

An entrepreneur is someone who could be just like you.

Entrepreneurs:

- have great ideas and do something about them
- hunt for opportunities to promote their ideas
- thrive on the challenge of creating their own successful business
- make money out of solving problems and selling their ideas
- usually start up their own businesses.

How old do you have to be?

Any age! If you have a great idea and the determination to make it happen, you could join this list of young entrepreneurs who enjoy some huge success stories:

- HiSmile was started in 2014 by 20-year-old and 18-year-old friends Alex Tomic and Nik Mirkovic. Their teeth whitening service took off after Kylie Jenner promoted their services.
- Founded in 2015 when he was just 17, Blake Garrett's school administration software startup School Bytes was developed after the founder overheard members of his school's office staff complaining about the clunky current system they were using.
- Subway sandwiches were the brainchild of 17-year-old US-based Fred DeLuca.
- Rip Curl, an Australian company, was started up in the Australian backyard of surfers Brian Singer and Doug Warbrick.
- Dell Computers was set up when 18-year-old Michael Dell realised it was a lot cheaper to build computers than to buy them ready made.
- Poppy King founded Poppy Industries Pty Ltd at age 18 after recognising there was a gap in the market for matte lipstick.
- Molly Whiticker-Ferrie was aged 14 when she started her Melbourne-based business, Fairy Friends Forever, which specialises in birthday parties for girls.

business an organisation that provides goods and/or services to consumers in order to make a profit

entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise

7.6.3 Who are some successful entrepreneurs?

There are many examples of youthful entrepreneurs who have gone on to be successful business owners. A famous one is Sir Richard Branson, chief executive officer of the Virgin Group. He started his first business, a student magazine, when he was aged 16 and still at school. Another example is Bill Gates, co-founder of Microsoft. His interest in computers and computer software began when he was 13 years old.

RICHARD BRANSON

Richard Branson is the founder of the Virgin group, which comprises hundreds of companies including an airline, a train company and a mobile phone network. He started his first business at the age of 16. You may have seen Richard Branson in the media because he is famous for his publicity stunts whenever Virgin launches a new business or project. One of Richard Branson's current big ideas is commercial space travel.

If you have heard Richard Branson speaking, you will know that he is passionate and enthusiastic. He listens to staff and customers, carrying a notebook with him wherever he goes so that he can write down what he sees and hears. He then follows up on the ideas. He shares Virgin's future plans with his staff, and his vision inspires people to perform at their best.

FIGURE 2 Richard Branson with his daughter, Holly



MARK ZUCKERBERG

Mark Zuckerberg is a famous American entrepreneur. He is one of the founders of the successful social media site Facebook. Mark Zuckerberg is a computer programmer who began creating websites while he was at university. In 2004, he launched Facebook and it has grown in popularity ever since. As of November 2018 according tohootsuite.com, there were over 1.47 billion daily users of Facebook. His business has been successful because he has specialised skills and was willing to take a risk to develop a unique business idea.

Mark Zuckerberg believes in the open and free flow of information between people. Facebook has allowed this to occur, but it has also created controversy throughout its years of operation. As a result of Facebook's success, Mark Zuckerberg has been able to donate significant amounts of money to charitable causes.

FIGURE 3 Mark Zuckerberg



ANGEL CHEN AND JEFFREY EFFENDI

Angel Chen, 26, and Jeffrey Effendi, 27, co-founders of marketing firm DrawHistory, have been named by the prestigious *Forbes* magazine in a list of the top 30 young business people in the media industry in the Asia-Pacific region. DrawHistory is a marketing firm with a difference. It focuses on promoting charity groups and social ventures, with the aim of reducing inequality. Since 2016 they have worked with more than 100 non-government organisations, social enterprises and local initiatives.

'You can be a business which makes profit and still do good,' Ms Chen said. 'Purpose and profit is something we advocate.'

Millennials can have an impact on business, the pair argue, by rewarding corporations who give back to their communities with their business and consumer spend.

Mr Effendi said his motivation to help combat inequality came from his childhood experiences. As an ethnic Chinese child in Indonesia, his family was forced to leave because of increasing racial tensions. An example of one of their successful programs is a campaign with The Humanitarian Group in Victoria Park. Through crowd funding, 80 people seeking asylum were helped with $92 000 raised for legal assistance.

Source: Adapted from Macdonald K. 2018, Young Perth entrepreneurs Angel Chen and Jeffrey Effendi named among world's best, *The West Australian*, 6 April 2018, and Warriner J. 2018, Subiaco entrepreneurs make Forbes 30 under 30 list, *Western Suburbs Weekly*, 13 April 2018.

LORNA JANE CLARKSON

Lorna Jane Clarkson is the founder of workout fashion business Lorna Jane. She began making leotards while she worked as a dental therapist and realised that there was a demand for fashionable activewear. Lorna Jane Clarkson and her husband, Bill, opened their first store in 1993. There are now more than 150 Lorna Jane stores worldwide.

Together with her husband, Lorna Jane Clarkson has never been afraid to take a risk. While other businesses believed that the market for fitness garments was too small to make a profit, the Clarksons decided to focus on that **niche market** anyway. The success of their business can be traced back to their vision and good management. Lorna Jane is renowned for innovative designs and for listening to customers, particularly through social networking.

FIGURE 5 Lorna Jane Clarkson



niche market a market in which a limited and clearly defined range of products is sold to a specific group

on Resources

Weblink Small business entrepreneur

7.6 ACTIVITIES

1. In small groups, come up with an original business idea. Through discussion, develop a strategy for launching your new product. You will need to consider how it will be promoted (e.g. advertising and publicity), distributed (e.g. online or shopfront) and priced (e.g. interest-free loans or 'cheaper than all competitors' promises).
   Present your concept to the class using a PowerPoint or Keynote display. Negotiate the tasks that each group member will perform.

   HASS skills: Communicating and reflecting
   Economics and business concept: Specialisation and trade
2. Choose an entrepreneur — from this subtopic or one that you know — and investigate the behaviours and skills that they bring to their business. Use the questions below to help you.
   a. What business did this entrepreneur start, and at what age?
   b. Why did this person become an entrepreneur?
   c. What behaviours does this person display that make them an entrepreneur?
   d. What skills does this entrepreneur have?

   HASS skills: Analysing, Evalulating
   Economics and business concept: Specialisation and trade

7.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 4, 7, 8	Questions 5, 9, 10

Check your understanding

1. In your own words, what is an entrepreneur?
2. At what age can you be an entrepreneur?
3. Outline the sort of personality and qualities that a successful entrepreneur is likely to have. Suggest why these might be needed.
4. In this subtopic you learnt about Mark Zuckerburg.
   a. Why is Mark Zuckerburg an entrepreneur? Has he been successful so far? Explain.
   b. How did Mark Zuckerburg put his business idea in place?
   c. If you were the entrepreneur's business adviser, what three tips would you give Mark Zuckerburg for continued business success?
5. What is a niche market?

Apply your understanding

6. What do you think would happen to Australia's economy if we had no entrepreneurs?
7. Do you think you have 'got what it takes' to be an entrepreneur? Explain, drawing attention to what you see as your strengths and weaknesses for such a career.
8. Make a list of five innovative products that you use. (*Note:* you can't refer to products identified in the topic.)
9. A television show such as *Shark Tank* allows budding entrepreneurs to sell their ideas to a panel of successful entrepreneurs. Explain why this show is needed and why traditional lenders of money often don't lend money to budding entrepreneurs.
10. Not all entrepreneurs are successful the first time. What lessons can entrepreneurs learn from failing?

For sample responses to every question, go to www.jacplus.com.au.

7.7 Business owner or entrepreneur?

LEARNING INTENTION

By the end of this subtopic you will be able to identify the difference between an entrepreneur and a business owner and describe the skills and behaviours of an entrepreneur.

7.7.1 Are they different?

We have looked at some examples of well-known entrepreneurs. But what is the difference between a business owner and an entrepreneur? Unfortunately, this question has no easy answer. Both business owners and entrepreneurs run businesses. The difference is best seen in the behaviours and skills that entrepreneurs bring to a business that people who simply run businesses do not have.

7.7.2 Business owners and entrepreneurs

Business owners play an important role in the economy, just as entrepreneurs do. A business owner might start their own businesses, just as entrepreneurs might. Business owners might purchase an existing business and run that, just as entrepreneurs also run businesses.

However, business owners tend to be content with simply running a business on a day-to-day basis so that it makes a profit. They prefer to minimise risks and make calculated decisions where the outcome is reasonably clear. However, entrepreneurs do much more than that. As we know, entrepreneurs seize opportunities and take risks. Entrepreneurs also establish a shared vision and demonstrate initiative, innovation and enterprise. A business owner might have an idea for solving a problem and meeting that need in order to satisfy a **target market**, whereas an entrepreneur's vision might be to make a big change or have an impact on the world. Entrepreneurs often do not know if their ideas are achievable or not.

target market a market at which a product is deliberately aimed

vision a statement expressing where a business is going or what it will be like

The typical questions that need to be considered by both business owners and entrepreneurs when starting a new business are illustrated in the interactivity.

FIGURE 1 Typical questions considered by entrepreneurs and business owners in making a business idea happen



Let us have a closer look at some of the behaviours and skills that entrepreneurs bring to a business.

7.7.3 A shared vision

When an entrepreneur has a **vision**, it means they have an understanding or hope of what the business will be like in the future. This gives the business a clear direction. Having a shared vision means that everyone in the business works together, as a team, to develop and then accomplish a goal. When this happens, it is much more likely that staff will enthusiastically contribute to making sure the vision is achieved.

FIGURE 2 A shared vision is much more likely to be achieved because people who are involved in developing a vision will be more inspired to work towards the goal of achieving it.



7.7.4 Initiative

When an entrepreneur demonstrates **initiative**, it means they are taking the first step in a series of actions or in a process. They frequently do this without someone prompting or telling them to take this step; an entrepreneur will usually make this decision independently. However, they might seek the help or advice of other people before they do so.

Jo Horgan was the 2018 Australian EY Entrepreneur of the Year. EY refers to the global **organisation**, Ernst & Young Global Limited. Mecca, the business Horgan founded in 1997, has grown into one of Australia's leading cosmetics and beauty businesses.

FIGURE 3 Jo Horgan, founder of Mecca



7.7.5 Innovation and enterprise

Innovation is either adding a new product (whether a good or a service) to an existing product line, or significantly improving an existing product or process. This is different from inventing, where a completely new product or process is developed. Innovation could simply involve changing the way a business works so that it delivers better products. **Enterprise** is the effort made by someone to creatively or boldly achieve something new. Entrepreneurs exhibit enterprise by taking risks to determine if the market is interested in their new ideas.

FIGURE 4 Holographic communication is widely predicted to be an innovation that will change the way we work and talk to each other over the next few years.



initiative the first step or opening move in a series of actions

organisation an entity formed for a specific purpose, usually related to the production or provision of a good or service

innovation either adding a new product to an existing product line, or significantly improving an existing product or process

enterprise the creative or bold efforts made by someone to achieve something new

7.7 ACTIVITY

Working in a group of three or four, use the information in this subtopic to plan a video presentation that promotes the need for entrepreneurs. Make it interesting and catchy.

Cover all the behaviours and skills that are typical of an entrepreneur. Use video editing programs and internet research as part of your planning.

HASS skills: Communicating and reflecting
Economics and Business concept: Specialisation and trade

7.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 5, 6	Questions 1, 7, 8	Questions 3, 9, 10

Check your understanding

1. List some of the important questions that need to be considered by a business owner or an entrepreneur in making a business idea happen.
2. What is the difference between a business owner and an entrepreneur?
3. Outline what is meant by the following entrepreneurial behaviours:
   a. establishing a shared vision
   b. initiative
   c. innovation
   d. enterprise.
4. Explain what is meant by a target market.
5. Explain why a shared vision is important for a business, particularly at the commencement of a business.

Apply your understanding

6. Describe what might happen to an entrepreneur or a business owner if their business fails.
7. Why is being an entrepreneur so important to the success of a business?
8. Explain why business owners often manage their business.
9. Distinguish between innovation and enterprise.
10. Entrepreneurs and business owners take risks. Describe two risks they may take and why it is important that they take these risks.

For sample responses to every question, go to www.jacplus.com.au.

7.8 Business success: high-quality product and location

LEARNING INTENTION

By the end of this subtopic you will be able to explain the importance to a business of a high-quality product and a good location.

7.8.1 Important choices

How does a small business owner make sure their product is of high quality, and how can they choose the best location to gain exposure for their business? These are important choices that will contribute to the success of the business.

7.8.2 A high-quality product

A business owner should aim to produce a high-quality product — one that meets the expectations of the customer. This means that the product will be reliable, safe and easy to use, durable, well designed and delivered to customers on time. A business owner will need to ensure that quality materials are used in the production of their good or service, and that there are no faults before it is sold to customers.

How to make a high-quality product

Just how do you produce a high-quality product? Attributes that a business owner might attempt to include in their new product before taking it to the marketplace include:

- *premium features* — producing a product that is perceived to be superior to the products of competitors. A business owner can achieve this by making sure that the product will be considered luxurious; for example, by being more accommodating, providing greater comfort, or by tasting better than the competitors' products. For example, companies such as Sony and LG often add premium features to their consumer electronics products.

FIGURE 1 A clothing retailer can add a premium feature to its product, thus creating a high-quality product, by providing a tailor to adjust customers' purchases.



- *durability and reliability* — creating high-quality products that provide the customer with high value by lasting as long as possible. We live in a society that does not seem to value products that last for a long time, but some businesses distinguish their products from those of their competitors on this very basis. Boral, for example, is renowned for supplying durable building products and construction materials.
- *high performance* — making sure that the product performs better than the products of competitors. A business owner can achieve this by making a product that is faster, more efficient or more powerful; or by making a product that completes a task in a better way than competing products. Samsung and Apple, for example, advertise that their mobile phones offer top performance.

DISCUSS

Many people update their mobile phones each year in a desire to have the newest and most powerful model. Do you think that this trend will continue in the future? What are the different motivations for the consumer and the manufacturer to continue this trend? Are there any downsides to this behaviour?

General capability: Ethical understanding

zoning regulations the decisions made by local council outlining the purpose for which a building or land can be used. Zones are usually based on land uses such as residential, commercial or industrial in the future.

premises the land and buildings occupied by a business

passing trade the sales a business makes as a result of customers walking or driving past the store

7.8.3 Location

Many factors must be considered when a business owner chooses a location. These include personal convenience, **zoning regulations**, the suitability of the **premises** for the business and the potential for expanding those premises. Other important factors discussed in detail below are:

- visibility
- accessibility
- competitor location
- cost
- area reputation.

FIGURE 2 Many people today run businesses online from home so there is no physical location for their business.



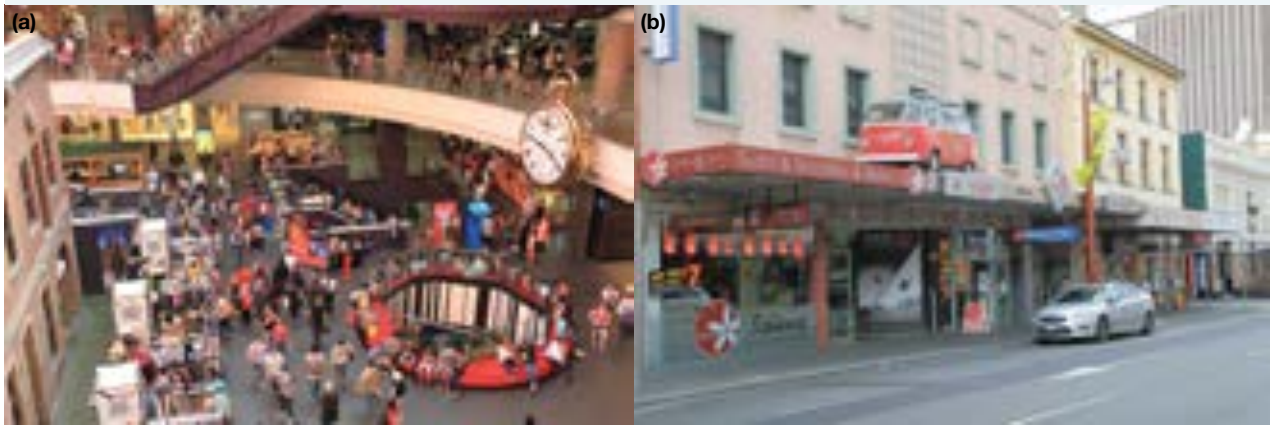
Visibility

Exposing the product and the business to potential customers is essential for a retail business or one providing a service to the public. Businesses such as department stores and hairdressers rely heavily on **passing trade** for sales. That is why these types of businesses typically locate in shopping centres or on shopping strips.

Accessibility

A business generally needs to locate as close as possible to its customers or suppliers. The importance of each of these considerations depends on the nature of the business. A retail business needs to be close to customers, with convenient parking or access to public transport nearby. For this reason, a clothing store might decide to locate in a shopping centre or a shopping strip. For a business that manufactures goods, being close to suppliers might be more important. A car parts manufacturer would need to be close to transport networks, such as freeways or railway lines, so that it can easily receive raw materials from suppliers and then distribute the finished goods.

FIGURE 3 An example of a shopping centre and a shopping strip: Melbourne Central shopping centre (a) and Liverpool Street in Hobart (b)



Competitor location

For a retail business or service provider, it does not usually make sense to locate close to competitors. If an antique furniture shop is already established in a shopping centre, it might be a bad idea to set up another one there unless there is a huge demand for antique furniture. It would make more sense to locate near other businesses that sell different products, and feed off the customers that are drawn in by the variety of choices or by the attraction of a large brand name. This is why many businesses choose to locate in a large shopping centre with well-known businesses such as Coles, Woolworths, Target and Big W nearby.

FIGURE 4 Many businesses choose to locate in large shopping centres because they can then feed off the large number of customers who are drawn in by the wide variety of products and competitive prices offered in one location.



However, some businesses choose to locate in an area where there are other businesses selling the same product. They will do this because customers are attracted by the competition and choices offered by the collection of businesses. Examples of this include furniture stores or car yards located together along a busy highway.

Cost

When considering the cost of a location, the business owner must decide whether to rent or purchase the premises. In general, the cost of the location will be affected by the location's size, quality, visibility, accessibility and the amount of passing trade. For example, locating in a shopping centre is usually more

expensive than locating on a shopping strip. For the business owner, an ideal location would be one where costs are kept to a minimum, taking into account all of the other location factors. A restaurant relying heavily on passing traffic might find that locating in a low-cost site with low visibility is ultimately not a successful strategy.

Area reputation

A location with a low cost might initially seem attractive, but it could be relatively cheap because of its poor reputation. An area with a poor reputation might have a high crime rate and be perceived as an unsafe place. Potential customers may not be prepared to visit a business located in such an area.

Online businesses

Online businesses can be located in any location; they do not even need to be located in the same country as the market that they operate in! Rent may be higher for online businesses in inner-city areas; however, in these areas they may be able to attract higher-skilled workers to work for them. Consideration should be given to the location of the warehouse where goods are shipped from. Increasing numbers of online businesses are also moving to set up in a physical location after establishing their reputations online.

7.8 ACTIVITY

Select a site in your local area that has shops (businesses), houses and perhaps industrial areas and complete the following:

a. Draw the site plan, detailing traffic flows and the location of shops and houses.
b. Explain the reasons for the location of each business.
c. If you were to open a new business here, such as a café, where would you locate your business? Give reasons for your answer.

HASS skills: Communicating and reflecting
Economics and Business concept: Allocation and markets

7.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 6	Questions 3, 7, 8	Questions 5, 9, 10

Check your understanding

1. Briefly outline the attributes a business owner might consider when developing a high-quality product.
2. What is passing trade?
3. Explain the following factors in a high-quality product:
   a. premium features
   b. durability and reliability
   c. high performance.
4. What might happen to a business that does not sell a high-quality product?
5. Explain what is meant by visibility in terms of a business location.

Apply your understanding

6. What do you think would happen to a business that chose an unsuitable location? List five possible consequences of choosing the wrong location.
7. List the factors that need to be considered when deciding the location of the following businesses:
   a. a car manufacturer
   b. a restaurant
   c. a supermarket
   d. a health food store
   e. an online T-shirt supplier
   f. an importer of exotic plants.
8. Why are location and a high-quality product so important to a business's success?
9. Distinguish between reliability and durability.
10. Explain one advantage and one disadvantage of locating your business close to a competitor.

For sample responses to every question, go to www.jacplus.com.au.

7.9 Business success: quality service and sound management practices

LEARNING INTENTION

By the end of this subtopic you will be able to describe quality service and its importance and explain the features of sound management practices.

7.9.1 Meeting customer expectations

Providing quality service and using sound management practices allow a small business to meet customer expectations.

word-of-mouth the passing of information about a business from a satisfied customer to prospective customers

customer survey the polling of customers to identify their level of satisfaction with the business's products and quality of service

7.9.2 Quality service

Quality service leads to customers being satisfied with the product of the business. Highly satisfied customers obviously generate profit, but by returning to the business they can also bring other customers with them. This is referred to as **word-of-mouth** business.

A business can make sure that it provides quality customer service by seeking feedback from customers. One way to collect feedback is through a **customer survey**. Many businesses use customer loyalty programs, which allow them to build a database on their customers and stay in contact with them. Discounts and giveaways can be used to reward customers. Another way that businesses can provide quality service is by training staff.

FIGURE 1 Quality customer service will make sure that customers keep returning to buy the business's products.



7.9.3 Sound management practices

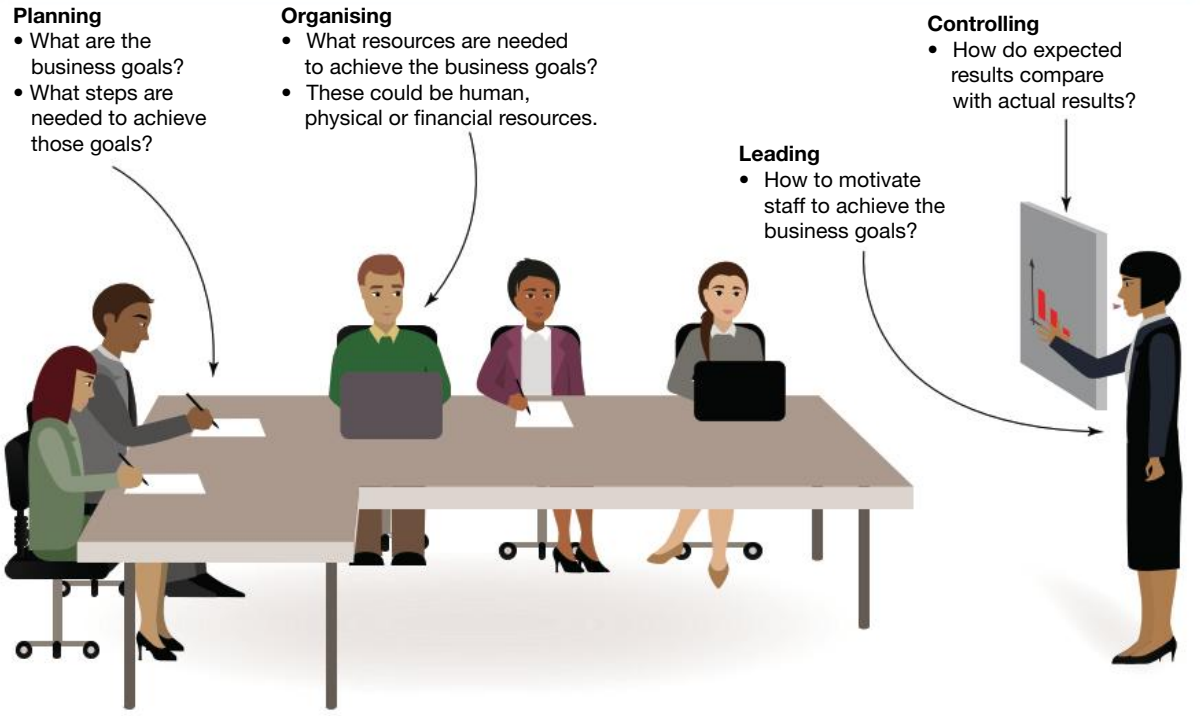
Sound management practices require that business owners exercise four crucial management roles, manage the finances of the business, and manage the business in an ethical and socially responsible manner.

Management roles

Four crucial management roles must be fulfilled if a business is to be effectively and efficiently managed:

1. *planning* — This is the process of identifying goals for the business as well as the steps to follow to achieve those goals. For example, a manager might set a goal that the business will introduce a new product over the next 12 months.
2. *organising* — This is the process of working out what resources are necessary to complete the tasks that need to be performed so that the goals of the business are achieved. These might be human, physical or financial resources. For example, a manager might assign a particular task or responsibility to a worker in the business.
3. *leading* — This is the process of motivating or inspiring staff in the business to achieve the goals of the business. For example, a manager might explain to staff what the goals of the business are and why it is important to achieve those goals. This might influence staff to work hard to achieve those goals.
4. *controlling* — This is the process of comparing what was expected to be achieved with what was actually achieved. For example, a manager would look at sales figures for the new product to see how the business was progressing towards achieving its goal of introducing a new product over the next 12 months.

FIGURE 2 The four crucial management roles



Financial management

It is vital that the business owner manages the finances of the business. **Cash flow** needs to be maintained. Cash is one of the most important resources for a business. Without cash, the business would not survive. Only by tightly controlling and monitoring the business's cash position will the business succeed.

cash flow the amount of money moving in and out of the business at any given time

The business owner also needs to make sure that the business is making a profit. Regular profit reports should show that a business is earning more revenue than expenses. If the business is not making a profit, or if cash flow is poor, the business owner needs to review what is happening in the business and make changes.

DISCUSS

Some of the largest companies in the world use profit-shifting techniques, where the profit in the different countries they operate in is moved about in order to reduce their overall tax burden. Do you think it is ethical for companies to be able to do this? What impact does it have on the people in the countries where this is happening?

General capability: Ethical understanding

Ethical and socially responsible management

A modern business cannot just consider its financial position. Today, people expect that businesses will do the right thing when making decisions and show concern for society in their actions. **Ethical management** occurs when a business applies moral standards to decisions made; for example, by being honest in the way they deal with other businesses. **Socially responsible management** occurs when a business shows concern for the social welfare of the community, including customers, staff and the environment. Society expects that a business will treat employees fairly, show respect to customers and look after the environment.

ethical management the decisions made by the business owner abiding by moral standards

socially responsible management the decisions made by the business owner reflecting the business's obligations to the wellbeing of society

7.9 ACTIVITY

Role play the situation described below in which a customer is receiving poor service. At the very least, you will need someone to play the part of an unhappy, irate or angry customer and someone will need to play the part of an employee or a business owner. However, choose characters to suit your situation. Set the classroom up like a business and see if the business owner or employee can keep the customer satisfied!

'Chris walks in to a clothing store with some friends and starts to browse. The group is laughing while they look through the racks of clothes. A sales assistant, believing that they are making fun of the clothes, asks them to leave while telling them, "You don't belong in a store as expensive as this one!"'

HASS skills: Communicating and reflecting
Economics and Business concept: Allocation and markets



7.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 6	Questions 3, 7, 8	Questions 4, 9, 10

Check your understanding

1. What is word-of-mouth business?
2. List the four roles of management.
3. Describe how a business can develop quality service.
4. Explain the difference between financial management and ethical and socially responsible management.
5. Explain what is meant by meeting customer expectations.

Apply your understanding

6. Complete the following table to explain how each sound management practice contributes to a successful business.

Sound management practice	How it contributes to a successful business
Planning	
Organising	
Leading	
Controlling	
Financial management	
Ethical and socially responsible management	

7. Describe a scenario where a business provides poor customer service and predict the possible outcomes of that poor service.
8. What will happen to a business that does not make use of sound management practices?
9. Distinguish between planning and organising.
10. Distinguish between being ethical and socially responsible.

For sample responses to every question, go to www.jacplus.com.au.

7.10 Thinking Big research project: Shopping habits

Scenario

How often do you go shopping with your parents? Do your parents say ‘we are going shopping’ or do they say ‘we are going to Woolworths’?

Does your family shop at Coles or Aldi, Kmart or Big W, EB Games or JB Hi-Fi?

Most people develop shopping habits over time — we all develop favourite products, favourite brands, even favourite shopping centres. Why do you think this occurs? Have you developed favourite shopping venues?



Task

Your task is to investigate the shopping venue choices of a group of people for a specific retail area.

At the end of the investigation you should be able to prepare an oral report and a PowerPoint presentation for your class, presenting your findings.

Follow the steps detailed in the **Process** section to complete this task.

Process

- Open the ProjectsPLUS application for this topic. Click on the **Start new project** button to enter the project due date and set up your project. Working by yourself, save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find ideas loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. In the **Media centre** you will find weblinks and an assessment rubric to guide your research.

- Select two businesses that sell similar product ranges — stores such as Myer and David Jones or McDonalds and Hungry Jacks.
- Each student must select a different pair of businesses from other students — your teacher will keep a record of which student is investigating which pair of businesses.
- Select a group of approximately 25 people you would like to survey regarding which of the two options they use for their purchases in that particular area.
  - Your survey should contain at least 10 questions.
  - You questions should relate to the types of businesses you are comparing.
  - Your choice of survey recipients should be appropriate for the businesses you selected. Some suggestions include:
    - Another Year 7 Humanities class
    - A class at another Year level at your school
    - Friends from any sporting club you are associated with
    - Ask a business if you can survey customers at their shop (ask your parents as well)
    - Family members.
  - Show your survey questions to your teacher for approval prior to conducting the survey.
- Prepare a speech to give to survey recipients prior to them completing the survey.
- Don't forget to thank people for completing the survey.
- Use the information gathered from your survey to prepare an oral presentation and PowerPoint presentation on shopping preferences by your selected group of people.
- Present your findings to the class.



on Resources

ProjectsPLUS Shopping habits (pro-0244)

7.11 Review

7.11.1 Key knowledge summary

7.2 The importance of businesses as producers

- The Australian economy is the total of all activities undertaken within Australia for the purpose of producing, distributing and consuming goods and services.
- We purchase goods and services to satisfy our needs and wants.
- Employees provide labour to businesses and receive money in return, enabling them to purchase goods and services from other businesses.

7.3 Responding to consumer demand

- A market is any organised exchange of goods and services for money, with many different markets operating in the economy as a whole.
- Markets in Australia are influenced by what consumers wish to buy, including products that are healthy and environmentally friendly.

7.4 Determining prices

- Businesses can determine their prices by using the recommended retail price, following price leaders, using percentage mark-ups, pricing according to what the market will bear, or offering quotes to customers.

7.5 Influencing overseas producers

- Australia is a major trading nation, with large volumes of exports and imports traded with countries all over the world.

7.6 Being an entrepreneur

- An entrepreneur takes on a risk by starting any business with an idea, hoping to make a profit through initiative and enterprise.
- Any person, of any age, can be an entrepreneur as long as they have a great idea and the determination to make it happen.

7.7 Business owner or entrepreneur?

- Business owners run businesses on a day-to-day basis to make a profit. They minimise risks and make calculated decisions where the outcome is reasonably clear. A business owner might have an idea for solving a problem and meeting a need in order to satisfy customers.

7.8 Business success: high-quality product and location

- A high-quality product is one that meets the expectations of the customer: the product is reliable, safe and easy to use, durable, well designed and delivered to customers on time.
- When locating a business, the owner needs to consider personal convenience, zoning regulations, the suitability of the premises for the business and the potential for expanding those premises, as well as visibility, accessibility, location of competitors, cost and reputation of an area.

7.9 Business success: quality service and sound management practices

- Businesses need to provide quality service so that customers will continue to return to the business.
- Business owners need to use sound management practices including the four crucial management roles, financial management, and ethical and socially responsible management to make sure that their business is successful.

7.11.2 Key terms

business an organisation that provides goods and/or services to consumers in order to make a profit
cash flow the amount of money moving in and out of the business at any given time
consumer a person or group who is the final user of goods and services produced within an economy
customer survey the polling of customers to identify their level of satisfaction with the business's products and quality of service
employees people who work for a wage or salary
enterprise the creative or bold efforts made by someone to achieve something new
entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise
ethical management the decisions made by the business owner abiding by moral standards
goods physical items that satisfy needs and wants
income money earned through employment or investment
initiative the first step or opening move in a series of actions
innovation either adding a new product to an existing product line, or significantly improving an existing product or process
labour the human skills and effort required to produce goods and services
needs goods or services that consumers consider necessary to maintain their standard of living
niche market a market in which a limited and clearly defined range of products is sold to a specific group
organisation an entity formed for a specific purpose, usually related to the production or provision of a good or service
passing trade the sales a business makes as a result of customers walking or driving past the store
percentage mark-up a way of determining selling price by adding a fixed percentage to the cost of the product
premises the land and buildings occupied by a business
producer an individual or business involved in the production of goods and services
profit what remains after all business expenses have been deducted from the money that has been collected from selling goods or services
retail describes a business that sells goods and services to consumers
services actions done for you by others to satisfy your needs and wants
socially responsible management the decisions made by the business owner reflecting the business's obligations to the wellbeing of society
target market a market at which a product is deliberately aimed
vision a statement expressing where a business is going or what it will be like
wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community
wellbeing an overall measure of quality of life
word-of-mouth the passing of information about a business from a satisfied customer to prospective customers
zoning regulations the decisions made by local council outlining the purpose for which a building or land can be used. Zones are usually based on land uses such as residential, commercial or industrial in the future.

7.11.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

In what way do you think the personal choices that you make, or the decisions that businesses make, can affect the Australian economy as a whole?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

Resources

eWorkbook Customisable worksheets for this topic (ewbk-4283)
Reflection (ewbk-4229)
Crossword (ewbk-4228)
Student learning matrix (ewbk-4222)

Interactivity Individual and business success crossword (int-7710)

7.11 Review exercise

Multiple choice

1. What is one way that producers and consumers depend on each other?
   - **A.** They want each other's money.
   - **B.** Producers pay the consumers who buy from them.
   - **C.** Consumers rely on producers to provide goods and services.
   - **D.** Consumers try to satisfy both needs and wants.
2. A market can work effectively only if:
   - **A.** consumers can find out about the goods or services available for sale.
   - **B.** consumers can use credit cards.
   - **C.** businesses employ enough consumers to provide the labour they need.
   - **D.** it can satisfy the needs and wants of all consumers.
3. How do businesses find out about their customers' preferences?
   - **A.** By providing healthy products
   - **B.** By importing cheaper goods from overseas
   - **C.** By carrying out market research
   - **D.** By supporting environmentally sustainable production
4. Percentage mark-ups are used by a business because they allow the business owner to:
   - **A.** make a much larger profit.
   - **B.** avoid using recommended retail prices.
   - **C.** keep prices close to those of price leaders.
   - **D.** cover all business expenses and make a profit.
5. One of the disadvantages to the Australian economy of imports is:
   - **A.** they discourage people in other countries from buying goods from us.
   - **B.** they make choosing between the large range of imported goods more difficult for consumers.
   - **C.** they can lead to a loss of skills in Australian manufacturing.
   - **D.** they force Australian producers to make goods and services more efficiently.
6. How can overseas manufacturers determine what products to sell to Australian consumers?
   - **A.** They carry out market research in Australia.
   - **B.** They know they can produce goods more cheaply than Australian businesses.
   - **C.** Australian retailers only import what they believe they can sell to their customers.
   - **D.** They produce a greater variety of goods than we can in Australia.
7. An entrepreneur is a person who:
   - **A.** runs a business.
   - **B.** takes on risk by starting a business with an idea, hoping to make a profit through initiative and enterprise.
   - **C.** has an idea for a business and starts one.
   - **D.** buys into a franchise.

8. What does having a shared vision mean?
   - **A.** Everyone in the business works as a team to develop and accomplish a goal.
   - **B.** The entrepreneur tells everyone what the goal is.
   - **C.** Everyone in the business has a turn at writing a goal.
   - **D.** Everyone in the business has an equal opportunity to succeed.
9. When choosing a location, a business needs to consider visibility because:
   - **A.** staff working at the business need to see what they are doing.
   - **B.** the business needs to be able to make its product.
   - **C.** sales can be made from customers walking or driving past the store.
   - **D.** competitors can see what the business is doing.
10. How can a business ensure that it provides quality service?
   - **A.** By offering cheap prices on its products
   - **B.** By running a free competition for customers
   - **C.** By asking suppliers for evidence of quality
   - **D.** By collecting feedback through a customer survey
11. When business managers plan, they are:
   - **A.** monitoring who is completing specific tasks in the business.
   - **B.** setting goals and working out the steps needed to achieve those goals.
   - **C.** creating a list of tasks that need to be completed.
   - **D.** inspiring staff to achieve the goals of the business.
12. An ethical and socially responsible business will:
   - **A.** treat employees fairly.
   - **B.** show respect to customers.
   - **C.** look after the environment.
   - **D.** do all of the above.

Short answer

Read the following case study and then answer questions 13–20.

Vanessa operates a kitchenware business. She sells cooking utensils, plates, cutlery and kitchen appliances. Vanessa employs three people in her shop, which is located in a busy shopping centre. There is no other specialist kitchenware retailer in the shopping centre, but there is a supermarket that sells some kitchen utensils and an electrical retailer selling some kitchen appliances.

13. Explain two ways in which Vanessa is participating in the economy.
14. Outline how her employees contribute to the economy.
15. What advantages might Vanessa have in the local market for kitchenware?
16. Identify and explain one method Vanessa can use to identify the preferences of her customers.
17. Which businesses in this market are likely to be price leaders in the kitchenware market? Give reasons for your answer.
18. If Vanessa decides to use percentage mark-ups to determine the prices she charges, what are two factors she will have to consider in her calculations?
19. Explain one way in which Vanessa's business is probably participating in international trade.
20. Identify and explain one advantage and one disadvantage of this participation.

Read the following case study and then answer questions 21–24.

A set of big dreams, a sense of naivety, determination, a generous splash of creativity and lots of hard work with persistence and time, in fact 12 long years, is all it took for Samantha Wills™ and her self-titled accessories (jewellery) company to become an 'overnight success'.

What started as a hobby is now an international brand stocked in eighty countries around the world. With a $12 million annual turnover, the primarily online business sells through department stores and boutique retailers, without any real plans to have bricks-and-mortar shops.

Seventy per cent of the annual turnover comes from product sales in Australia, while the rest comes from the United States, Japan, France and Korea. The jewellery adorns celebrities such as Eva Mendez, Katy Perry, Lady Gaga and Taylor Swift.

With no formal business training, Wills attributes much of her success to sheer tenacity and being passionate about her product. Wills says to be a successful entrepreneur you need to have a passion for what you are doing and stick with it, no matter what gets thrown at you.

Starting from scratch was not easy for Wills who faced many hurdles before she found success. Without any formal business education, she learnt the hard way 'on the job'. She learnt to surround herself with people who possessed the qualities and skills she doesn't.

It was with this in mind that she set up the Samantha Wills™ Foundation: for empowering women in business, with the aim of information sharing and developing a sense of community for young women wanting to start their own business. She regularly writes a blog and answers the questions of newer entrepreneurs starting out. Will believes it is important to give back and often speaks at conferences encouraging other women to become entrepreneurs.

Wills moved to Sydney at the age of 21. While many women her age were off having fun, she was concentrating on developing her business. During the day she worked in retail, going home each night to make jewellery to sell at markets. A friend offered her a spot on a showroom wall during the 2004 Australian Fashion Week. Investing her last $500, Wills hoped to make enough sales on the day to cover the costs of the stall. A sudden influx of orders worth $18 000 plunged her into $80 000 of debt. Promising customers that orders would be filled within two weeks, she quit her job the next day and threw everything she had at getting those orders out. It was naivety and not bravery that urged her on to becoming a success.

21. What business did Samantha Wills start and at what age?
22. What behaviours and skills does she display that make her an entrepreneur?
23. How have these entrepreneurial behaviours affected her business?
24. In what ways is Samantha Wills socially responsible?



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 7 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

7.1 Overview

Video eLesson
- What is economics? (eles-0253)

7.3 Responding to consumer demand

eWorkbook
- Supermarket shopping — the hidden persuaders (ewbk-4223)

Interactivity
- Responding to consumer demand (int-5685)

7.4 Determining prices demand

eWorkbook
- Determining prices (ewbk-4224)

7.5 Influencing overseas producers

eWorkbook
- Imports and exports (ewbk-4225)

Weblink
- Australian Government Department of Foreign Affairs and Trade

7.6 Being an entrepreneur

eWorkbook
- Entrepreneur mind map (ewbk-4226)

Weblink
- Small business entrepreneur

7.10 Thinking Big research project: Shopping habits

ProjectsPLUS
- Shopping habits (pro-0244)

7.11 Review

eWorkbook
- Wrap up! (ewbk-4227)
- Reflection (ewbk-4229)
- Crossword (ewbk-4228)
- Student learning matrix (ewbk-4222)

Interactivity
- Individual and business success crossword (int-7710)

To access these online resources, log on to **www.jacplus.com.au**.

8 Working for a living

8.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Some people work to make money, but are there other reasons to join the world of work?

8.1.1 Introduction

Life would be quite different from what it is today if people did not work. Food production would stop and people would begin to starve. Other supplies such as electricity, gas and clean water would dry up. Houses and other buildings would not be constructed. Buses and trains would stop running. Petrol production would cease, making it impossible for us to drive cars. The very nature of society would change, as would Australia's ability to trade with other countries.

For many individuals, work is how they make a living and generate the income needed to buy food for the table, clothes to wear or even the newest song to download. For others, it is their way of contributing to their own wellbeing and, by helping others to improve their lives, to the wellbeing of the wider community.

Every day, people perform tasks that make life easier for us all. Often they are paid for performing these tasks; sometimes they perform them voluntarily. We call these tasks 'work' or 'labour'. Work is more than getting up in the morning and going to a factory or an office. You can be working and still be at home — washing dishes, gardening, looking after your siblings or even cleaning your room. Most of these tasks can be physically exhausting for the body or even exhausting for the mind, and many of them are time and energy consuming.

The world of work is dynamic, and the introduction of technologies such as washing machines, computers, scanners and industrial robots has made work less physical and more intellectual. Today, people are more likely to use machines to perform the tasks that would previously have required the use of human muscle.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4284)

FIGURE 1 There are many types of work in Australia. What do you think this group of people do?



8.2 The importance of work

LEARNING INTENTION

By the end of this subtopic you will be able to explain the reasons why we work and outline why it is important to us and society in general.

8.2.1 Why we work

We all dream of being wealthy and able to buy the things we want, when we want them. For most of us, this means we get up and go to work each day to earn a **wage** or **salary**. It is this work or labour that has improved our lives and made us more comfortable.

wage payment for work completed or services performed, usually dependent on hours worked per week/month

salary fixed or regular payment for work completed or services performed

FIGURE 1 Examples of the types of activities people perform that can be classified as work



8.2.2 Labour, then and now

In early times, people performed activities such as hunting for food, gathering berries, planting seeds and picking fruit, all of which required manual labour. Today, labour requires the use of modern technology and an education at school, university or TAFE. The modern labour force includes scientists, graphic designers, architects, journalists, web developers, dentists, doctors, pharmacists, shopkeepers, managers and factory workers.

8.2.3 The importance of labour

When we think of the term **labour**, our first thought will often be 'work'. In very general terms, **work** is defined as human labour — whether paid or unpaid, voluntary or involuntary. A more complex definition is the performance of laborious tasks (mental and physical) and/or the provision of time and effort in exchange for money. If you are working, then you are part of the **labour force**.

In Australia, people are considered to be in the labour force if they are:

- over 15 years of age
- and either **employed** or looking for work.

Note that anyone who is not working and not looking for work is not considered to be in the labour force.

FIGURE 2 Doing your own household chores is classified as unpaid work.



The main reason we work is to get paid: to receive a wage or salary or other **remuneration** for the work that we perform or the services we provide. When someone is working, they are considered to be employed. According to the Australian Bureau of Statistics (ABS), a person is employed when they are engaged in some form of work for at least one hour a week. Specifically, it classifies a person as being employed if they work for one hour or more for pay or profit or an **income**. This includes everyone who works — from teenagers working part-time after school, to an older worker delivering advertising material in their local neighbourhood.

TABLE 1 shows that the number of employed people decreased from April to May 2020, while the number of unemployed people increased during the same period. Sometimes the number of unemployed and employed people can increase at the same time. This happens when, for example, more people enter the workforce for the first time (such as school leavers and graduates) or people return to the workforce (such as parents whose children have started school).

TABLE 1 Labour force figures in Australia, April – May 2020

	April	May
Employed persons ('000)	12 381	12 154
Unemployed persons ('000)	841.9	927.6
Unemployment rate (%)	6.4	7.1
Participation rate (%)	63.6	62.9

Source: https://www.abs.gov.au/ausstats/abs@.nsf/mf/6202.0?opendocument&ref=HPKI

labour the human skills and effort required to produce goods and services

work human labour — whether paid or unpaid, including voluntary labour

labour force people aged 15 and over who are able to work, and are either employed or looking for work

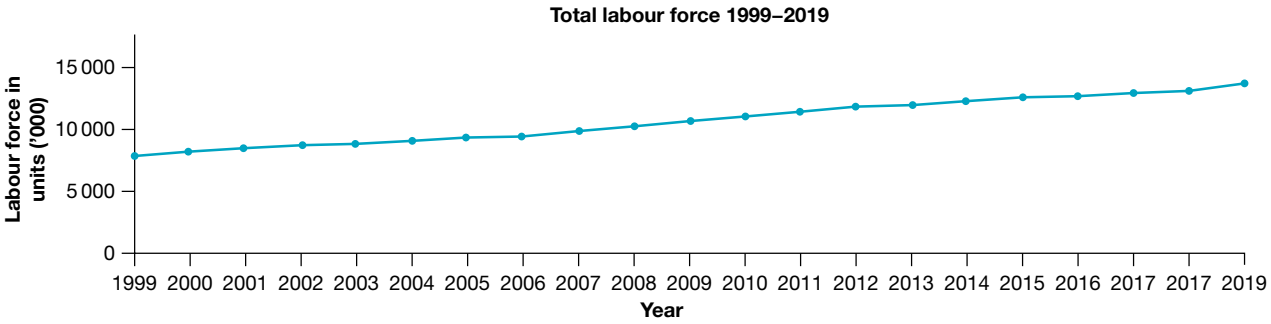
employed describes someone working in return for a wage or salary

remuneration payment for work or services performed

income money earned through employment or investment

Since 1999 Australia has experienced a steady growth in both population and labour force participants. In 1999, there were 9 379 000 participants in the labour force. By May 2020, this figure had grown by more than 3.5 million to 13 081 700. **FIGURE 3** displays the numbers of participants in Australia's labour force. From this graph, we can see a steady growth in the total labour force during the period 1999–2019.

FIGURE 3 The Australian labour force 1999–2019



Source: Graph based on data compiled from Australian Bureau of Statistics, *Labour force, Australia,* May 2020, (cat. no. 6202.0).

TABLE 2 shows that between 2001 and 2019 the number of females entering the workforce grew steadily, increasing by over 7 percentage points compared with an increase of just 0.4 percentage points for males. In 2018–19, the labour force participation rate for males was 78.5 per cent compared to 67.4 per cent for females.

TABLE 2 Labour force participation rates based on gender in Australia, 20–74 years, 2001–19

Year	Males (%)	Females (%)
2001–02	78.1	60.3
2002–03	77.9	61.2
2003–04	77.8	60.9
2004–05	78.2	61.9
2005–06	78.7	63.0
2006–07	79.1	63.7
2007–08	79.3	64.4
2008–09	79.3	65.0
2009–10	79.2	64.7
2010–11	79.5	65.1
2011–12	79.1	65.2
2012–13	78.8	65.1
2013–14	78.4	65.0
2014–15	78.3	65.1
2015–16	78.3	65.9
2016–17	77.9	66.0
2017–18	78.3	67.1
2018–19	78.5	67.4

Source: Data compiled from Australian Bureau of Statistics, *Gender indicators, Australia, September 2019* (cat. no. 4125.0).

8.2.4 The importance of unemployment

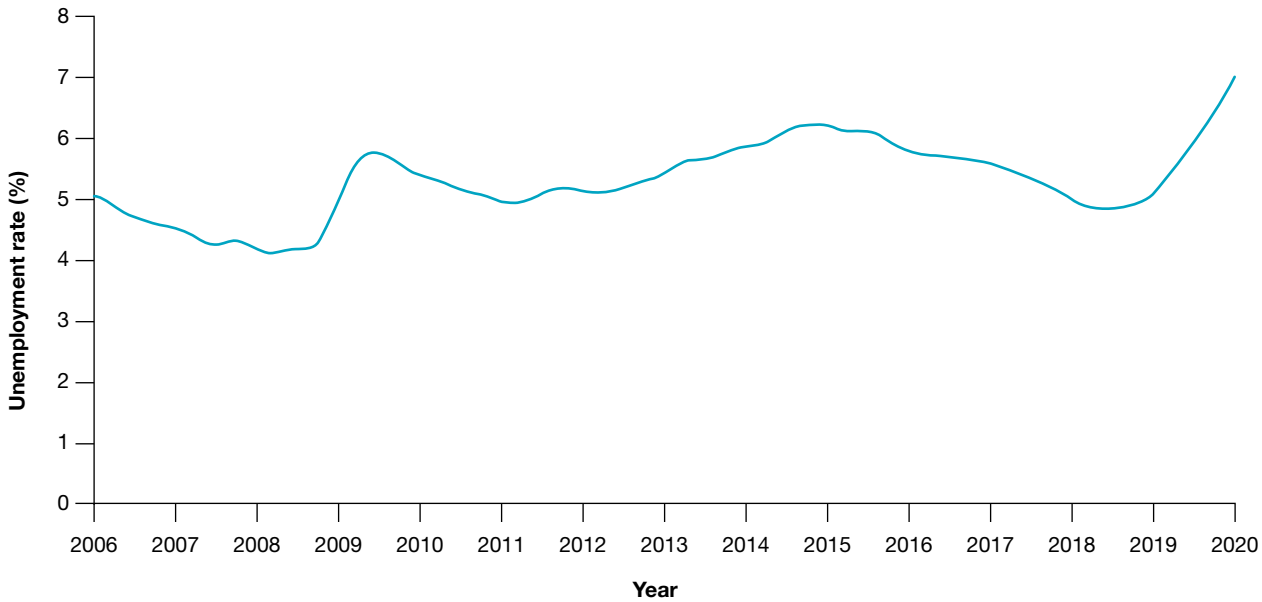
When the ABS examines growth in labour, it also examines unemployment levels. This is because the total labour force is made up of both employed people and people looking for work.

The level of unemployment is an indicator of the number of people unsuccessfully trying to get into the workforce. **FIGURE 5** shows that over a period of 14 years, the unemployment rate (the percentage of the labour force actively looking for work) varied up and down gradually — except in 2009 and 2020, when it spiked. The first major spike can be attributed to the start of the global financial crisis. After the global financial crisis, the unemployment rate drifted downward again until 2011, when a steady increase began. Since 2015, the unemployment rate again trended down. In 2020 there was a second major spike in unemployment due to the economic impact of the COVID-19 pandemic.

FIGURE 4 There are higher unemployment rates for young people because of the difficulty of getting experience to land that first job.



FIGURE 5 Unemployment rate in Australia, 2006–20



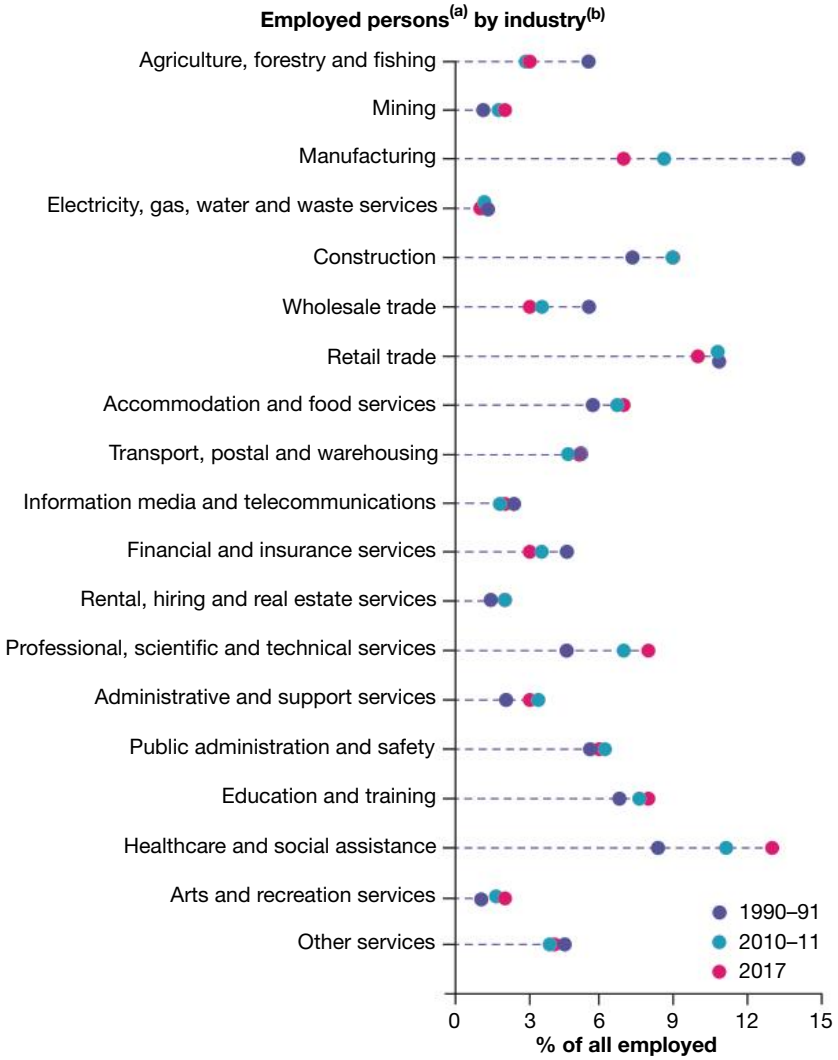
Note: 2020 data is correct as of July 2020.

Source: Graph based on data compiled from Australian Bureau of Statistics, *Labour force, Australia*, May 2020, cat. no. 6202.0.

8.2.5 Industries people work in

When gathering data, the ABS splits the areas in which people work into 19 industries. These are made up of mining, manufacturing, retail, construction, education, health, plus 13 other industries. **FIGURE 6** shows these industries and compares the number of people employed in each industry in 1990–91, 2010–11 and 2017. Notice since 1990, the number of people employed in manufacturing decreased from about 14 per cent to 7 per cent.

FIGURE 6 Number of people employed by industry in Australia, 1990–91, 2010–11 and 2017



(a) Annual average of quarterly data.
(b) Classified according to the Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 1.0) (1292.0).

The very nature of work has changed dramatically over the last century. Much of this change has been driven by advances in technology, the movement of women into the workforce, and major shifts in society's values and attitudes. In the past, the vast majority of the paid workforce was made up of men. Now we see an increasing number of women entering paid employment in preference to staying at home and engaging solely in unpaid work.

Recently, the COVID-19 pandemic caused large amounts of unemployment when lock-downs were implemented and businesses were forced to close in order to protect public safety. The effects of the pandemic are expected to be felt for years to come.

FIGURE 7 The ABS classifies an ambulance officer as part of the 'Healthcare and social assistance' industry.



8.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 8	Questions 3, 6, 7, 9	Questions 5, 10, 11

Check your understanding

1. How does the ABS define work?
2. Why do you think the ABS definition of employed requires a minimum of one hour of work per week?
3. Why is remuneration important for someone who is working?
4. Are the following statements true or false?
   a. Pocket money is a form of income.
   b. If you work only three hours a week, you are not employed.
   c. A full-time employee works, on average, about 40 hours per week.
5. Provide two reasons why people may not look for work.

Apply your understanding

6. Examine **FIGURE 1** and answer the following questions:
   a. Identify the types of activities that each person performs.
   b. State whether the activity would be voluntary or involuntary in each case.
   c. Explain how technology may have affected how the work depicted is done.
   d. How may these jobs change in the future? Give examples.
7. Examine **TABLE 1** and answer the following questions:
   a. Was there an increase or a decrease in the number of people employed? By how much?
   b. Was there an increase or a decrease in the number of people unemployed? By how much?
8. Examine **FIGURE 5**. To what can you attribute the spike in 2009 after a steady drop during 2002–08?
9. Examine **FIGURE 6** and answer the following questions:
   a. Has manufacturing increased or decreased? To what can you attribute this change?
   b. What other industries have shown a drop in numbers?
   c. Which industries have grown?
   d. Which industry shows the greatest change (positive or negative)?
10. Examine **TABLE 2** and answer the following questions:
    a. When did the biggest growth in the male participation rate occur?
    b. When did the biggest growth in the female participation rate occur?
    c. When did the male participation rate decline?
    d. When did the female participation rate decline?
11. Choose three industries from the list in **FIGURE 6**. For each chosen industry, make a list of five jobs that could be found in that industry. For example, the 'Healthcare and social assistance' industry would include doctors, nurses, physiotherapists, IT specialists and administrative assistants — but you have to think of your own examples!

For sample responses to every question, go to www.jacplus.com.au.

8.3 Why we work

LEARNING INTENTION

By the end of this subtopic you will be able to identify the reason why people work including that it is not just about money.

8.3.1 Work to earn a living

How many times have you heard the saying, 'Money doesn't grow on trees'? As you get older, the importance of money and its uses becomes clearer. For example, you need money when you catch up with friends and plan a day out to the movies, ice skating, rollerblading, visiting the art gallery or any other exciting or interesting activities. You need money to fund your lifestyle.

So where does the money you need come from? If you said your parents, you know that the money comes from your parents going to work. Once you leave school, though, chances are you will enter the workforce if you haven't already started working while at school. Being part of the workforce will enable you to start earning money, which you can then use to buy things that you want. Earning a living is often the primary reason that people work. It is, however, not the only one.

FIGURE 1 Going to a concert is just one of the many activities for which you need money.



FIGURE 2 Jobs provide income that is used to buy goods and services.



8.3.2 Why do people work?

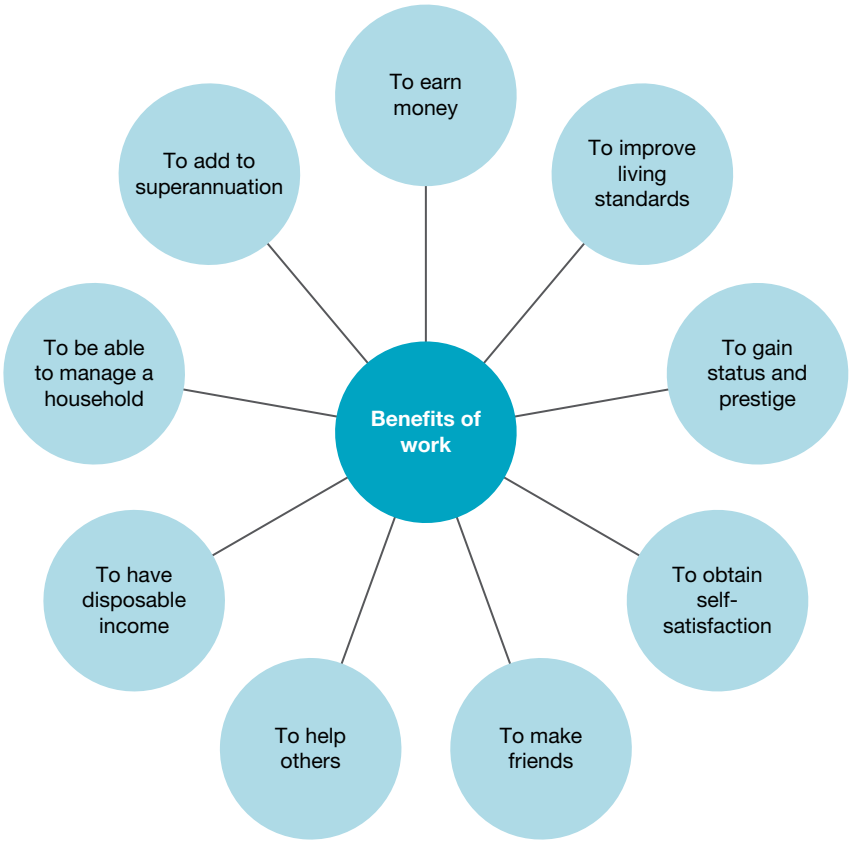
Imagine for a moment that you are unbelievably rich. You have so much money that you will never have to worry about working to earn more. What would you do? Most likely you are imagining a life of non-stop fun. Now it's time for a reality check! Even the wealthiest people in the world often choose to work. This is because there are many personal benefits to be gained from working aside from financial benefits.

Non-financial benefits of participating in the workforce include:	The financial benefits of participating in the workforce can include:
• the opportunity to use your skills and abilities in a positive way • meeting and mixing with new people • doing something you love and are passionate about • increasing your self-esteem and confidence • developing your natural strengths and talents • wanting to be part of a group or a team at work • having friends at work • contributing to the Australian economy • being happy	• earning an income • exchanging money for goods and services • being a consumer • having the ability to buy what you need and want • creating and maintaining a good standard of living for your family

8.3.3 Benefits of paid work

The main reason that people work is to be paid — to receive an income — but there are other reasons too. Let's look at some of the most common ones.

FIGURE 3 There are many benefits of work besides earning an income.



To earn money

To survive, we must have money. Most people sell their labour to an **employer** and receive an income in return. The most common forms of income are wages and salaries. While earning money, many workers will struggle to maintain some degree of balance between work and leisure, known as the **work–life balance**. This need for work–life balance is important to many workers and can form the foundations of a good life and a worker's sense of **wellbeing**.

To improve living standards

Imagine a teenage girl who has just received her first pay packet from a part-time job. On her way home, she decides to visit a shopping centre and buy new clothes. The income from her job has allowed her to improve her **standard of living** and given her a brand new wardrobe.

Working generates an income that enables consumers to satisfy their needs and wants. What if those needs and wants are intrinsic? That describes something inside the individual that will motivate them to want to go to work — for example, to be happy, to have a good life, to feel valued for the work they perform, and to pass on their knowledge and skills to the next generation.

employer a person or organisation hiring others to work for them

work–life balance a balance between working time and leisure/recreation

wellbeing an overall measure of quality of life

standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)

FIGURE 4 Earning money is important for most workers, but achieving a work–life balance is necessary for wellbeing.



A July 2006 study found:

> With societies becoming more affluent and the nature of work changing there has been a change from a focus on extrinsic work values (pay, working hours — the benefits a job has for the employees' lives outside of work), to a focus on intrinsic work values (the quality of the work itself).
>
> ***Source:*** FDS International, *What Workers Want: A Worldwide Study of Attitudes to Work and Work–Life Balance*.

What this means is that workers are no longer so preoccupied with pay rates. Instead, they are more concerned as to whether the work they do will make them happy and improve their wellbeing.

To gain status and prestige

The type of work a person does is often used to measure that person's status and prestige within our society. In other words, their status comes from their occupation. The value we place on a person's job determines his or her income. For example, a heart surgeon's highly skilled work is valued more than a labourer's, so the surgeon receives a higher income. This is partly due to the education and training needed to become a surgeon.

FIGURE 5 The work of a heart surgeon is well remunerated because it is a highly skilled profession that requires years of training before you can begin work.



To obtain self-satisfaction

Two hundred employees of a factory were asked to write down the most important aspect of their work. The responses revealed that it was not money: 67 per cent of the employees said that knowing they had done the job well and received some praise from the supervisor were the most rewarding aspects. Both job satisfaction and self-satisfaction were seen as important. This doesn't mean that money is not important; it is. However, there are many other rewards you can get from a job.

To make friends

Work provides the opportunity to meet other people and make friends. Sometimes workplaces have social clubs that employees can join to make friends and have fun.

To help others

Voluntary workers play an essential role in our society. Many people in the local community work for voluntary agencies such as country fire brigades, Meals on Wheels or the State Emergency Service. They receive no financial payment, but do it for pleasure and the satisfaction of being able to help others.

FIGURE 6 Volunteers, such as lifesavers, receive no payment for their work but offer their services to the community freely.



DISCUSS

Would you work if you had an alternative source of income that meant you didn't have to? What factors would influence your decision?

General capability: Personal and social capability

8.3 ACTIVITIES

1. Conduct a small survey of your family and friends to find the reasons they go to work. Present your information in a table similar to the one shown below. What are the top three reasons people work? Present your results to the class and discuss your conclusions.

	Reasons for working
Person 1	
Person 2	
Person 3	

HASS skills: Questioning and researching, Communicating and reflecting
Economics and Business concept: Specialisation and trade

2. You have been hired by a voluntary agency such as Kids Helpline to prepare a float display in a forthcoming street procession. The display must raise the status of the agency's volunteer workers. Work in groups to design and present a float display for your selected voluntary agency. Consider your message, costumes, roleplay actions, banners, decorations and music. Incorporate constructive feedback provided by the class in deciding how you could improve a future display.

HASS skills: Analysing, Evaluating
Economics and Business concept: Specialisation and trade

3. Using online resources, prepare a list of five volunteer agencies that operate in your area.

HASS skills: Questioning and researching

8.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 5, 7, 8	Questions 4, 9, 10

Check your understanding

1. Are the following statements true or false?
   a. Five important reasons why people work are to earn an income, to improve their standard of living, to gain prestige and status, to obtain self-satisfaction and to make friends.
   b. The primary reason why people work is to earn a living.
   c. One benefit of working is to have your own office.
   d. Feeling a part of the work environment is important to workers.
   e. Most people sell their labour to an employee.
   f. The most common form of income is pocket money.
   g. The type of work someone does is often used to measure that person's status and prestige.
   h. Voluntary workers play a very small role in our society.
2. List three examples of voluntary work.
3. Look at the reasons given in this subtopic for why people work. Do you agree with them? Explain your answer.
4. Explain how the teenage girl with her first pay packet was able to improve her standard of living.
5. Complete these sentences:
   a. We purchase goods and services to _____.
   b. Voluntary work is just as important as paid work because _____.
   c. The income I will earn from my job will help me to _____.
   d. We can improve our standard of living by _____.
   e. Self-satisfaction is important because _____.

Apply your understanding

6. Rank each of the following occupations according to their level of status and prestige on a 1 to 10 scale, where 1 is the highest status and 10 the lowest. Compare your list with other class members.
   - Entertainers
   - Doctors
   - Teachers
   - Bankers
   - Firefighters
   - Scientists
   - Police
   - Athletes
   - Plumbers
   - Computer programmers
7. Discuss the following statement: 'What a person does is more important than what she or he is paid'.
8. Explain the importance of volunteer work to the economy.
9. Describe two reasons why it is important for people to work.
10. Discuss the statement: 'All work is valuable in its own way'.

For sample responses to every question, go to www.jacplus.com.au.

8.4 Different types of work

LEARNING INTENTION

By the end of this subtopic you will be able to describe the different types of work that people do.

8.4.1 Paid and unpaid work

As we have already discovered, paid work is defined by the Australian Bureau of Statistics as performing services for one hour or more per week in return for receiving money or income, while unpaid work comprises those tasks performed without receiving an income. Jobs such as cooking, cleaning and gardening are all work, but you cannot argue that you are employed when you are cleaning your room! Household chores do not earn an income, although your parents may reward you with pocket money for performing them. In the world of economics, however, pocket money is not considered an income. Other examples of unpaid work are family duties, school, voluntary work and community service.

8.4.2 The labour force and its workers

Australia's labour force is made up of people who are working and people who are actively looking for employment, whether it is **full-time**, **part-time**, **casual** or **seasonal**. As we saw in subtopic 8.2, the labour force is made up of people aged 15 and over who are either employed (including self-employed people) or unemployed. People not regarded as part of the labour force include:

- pensioners
- people with a physical or mental disability who are unable to work
- full-time students who do not work
- full-time carers who look after children or other family members
- volunteers working without pay in institutions such as the State Emergency Service and charities.

A small percentage of the labour force (7.1 per cent in May 2020) is unemployed. This group is still included in the statistics on employment rates in Australia.

FIGURE 1 People who work or are looking for work are part of the labour force.



full-time describes an employee who works 35 hours or more per week, or who works the minimum number of hours stipulated by the industrial award for that occupation or industry

part-time describes an employee who works less than 35 hours per week

casual describes an employee who works only when needed

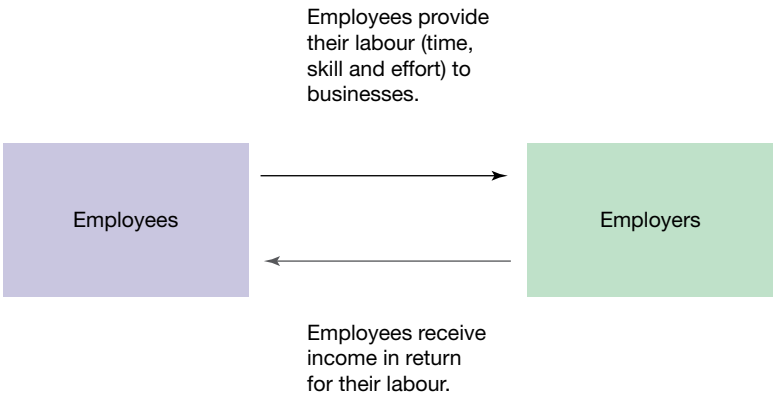
seasonal describes an employee who usually works during a season, such as winter or the fruit-picking season

To be considered employed, you must fulfil all these requirements:

- be aged 15 years or over
- have worked for at least one hour in the week, or have a job even though you were not at work in the week
- have received pay, profit, commission, or payment of some kind for your work.

In Australia we have **industry-wide awards** that set out the minimum wages and **working conditions** for all employees in an entire industry or occupation. These awards also set out the award hours, which are the minimum weekly hours of work that a person covered by that award must be given.

FIGURE 2 The employment relationship



Types of workers

In Australia, workers are classified as full-time or part-time, permanent or casual, self-employed, seasonal, or even on and off. The four main categories are described in **TABLE 1**.

Since 2014, the number of casual and part-time workers has grown, with an increasing number of women in the workforce. According to the ABS in May 2020, women make up 47.4 per cent of employed people, with men making up 52.6 per cent. Women make up 37.7 per cent of full-time employees and 68.2 per cent of all part-time employees (ABS 2020, Labour Force). Here there are striking differences between working men and women: 75.1 per cent of male employees worked full-time but only 45.4 per cent of female employees did so (see **TABLE 2**). The majority of female employees worked part time (54.6 per cent), and a greater proportion of casual employees were female (25 per cent) than male (19 per cent). Responsibility for the care of children is a likely factor for women finding it more difficult to work full time or overtime.

TABLE 1 Different types of workers

Type of worker	Features
Full-time worker	• Ongoing employment • Number of hours per week is 35 or more
Part-time worker	• Ongoing employment • Number of hours per week is fewer than 35 • Number of hours may be fixed or variable
Casual worker	• Employed on an 'as needed' basis • No permanent weekly roster • Hours vary from week to week; for instance, 10 hours one week and 3 hours the next • May work for more than one employer
Self-employed	• An individual who works for himself or herself.

industry-wide awards legally binding documents that set out the minimum wages and other entitlements for all employees in an industry or occupation

working conditions refers to all those things an employer has agreed to provide in exchange for the employee's work, ranging from the physical work environment to hours of work, rates of pay and leave entitlements

TABLE 2 Work differences between the sexes, 2018

	% of male employees	% of female employees	% of total labour force
In full-time work	75.1	45.4	60.2
In part-time work	24.9	54.6	38.8
In casual work	19	25	22

Source: Data compiled from Australian Bureau of Statistics, *Employee Earnings and Hours, Australia, May 2018* (cat. no. 6306.0).

The unemployed

The unemployed are those people who are actively looking for work but are not presently employed. It includes people who have lost their jobs because of changes in the economy, those about to start a new job, and those who are between jobs (such as fruit pickers and ski-resort workers). Remember that not all work is paid. Volunteers freely give up their time and energy to help the community, and parents stay at home to look after small children. These people are performing important work but they are not counted as part of the labour force.

TABLE 3 compares unemployment rates across three countries. It shows that the unemployment rate for Australia spiked in 2008–09 during the global financial crisis (GFC), then remained fairly steady for the next three years before starting an upward trend. In contrast, the US unemployment rate has shown a steady decline after a massive jump in 2009. This jump can be attributed to the GFC, which has also contributed to the trend towards an increase in the number of part-time jobs. Another spike due to the COVID-19 pandemic in 2020 is to be expected in later releases of this data. As of May 2020, the unemployment rates were 7.1 in Australia, 2.6 in Japan and 13.3 per cent in the USA.

TABLE 3 Unemployment rates (annual percentage) across three countries, 2007–19

	Australia	Japan	USA
	%	%	%
2007	5.1	4.0	5.1
2008	4.2	4.0	5.8
2009	5.6	5.1	9.3
2010	5.2	5.0	9.6
2011	5.1	4.6	8.9
2012	5.2	4.3	8.1
2013	5.7	4.0	7.3
2014	6.1	3.6	6.2
2015	6.1	3.4	5.3
2016	5.7	3.1	4.9
2017	5.6	2.8	4.4
2018	5.3	2.4	3.9
2019	5.2	2.3	3.5

Source: Unemployment rates 2019, OECD.

Permanent, casual and seasonal workers

Permanent workers are those who as part of their working conditions are entitled to either paid holiday leave or sick leave, or both. Casual workers are those who as part of their working conditions are not entitled to either paid holiday leave or sick leave, or both. Seasonal workers are usually workers who are employed during

a season, such as summer or winter. For example, apple fruit pickers would work only during the apple harvesting season and ski instructors would work only during the cold winter season when there is snow.

FIGURE 3 Ski instructors are seasonal workers who are employed only during winter.



8.4.3 Voluntary work

When we look at Australia's labour force, we tend to focus on who is employed, who is unemployed or who is seeking employment. Often we neglect to acknowledge the valuable contributions made by groups that do not fit into these categories. These groups include:

- volunteers, such as country firefighters or medical specialists working with Doctors without Borders (Médecins Sans Frontières)
- a grandparent caring for a grandchild
- parents caring for a sick or disabled child
- parents who stay at home to raise the family.

FIGURE 4 City ambassadors are volunteer workers who provide assistance to tourists.



Voluntary workers play a significant role in society. Their contribution to the economy is vital, necessary and valuable. Many people work part-time for non-profit agencies such as the Volunteer Fire and Rescue Service (VFRS), Meals on Wheels, help lines, and with community support groups such as those helping the aged, reading to preschool children, or even handing out pamphlets for political parties on election day. These workers will usually not receive any payment for the work they perform. They freely volunteer their time and effort to help others in the community, yet in many cases are undervalued and do not receive the recognition they deserve.

DISCUSS

Many charities rely solely on donations and volunteers to conduct their operations. Should charities also be assisted by our government, or is the system we have the best way of managing things?

General capability: Ethical understanding

8.4.4 Self-employment

The majority of people employed in Australia — almost 57.3 per cent — work for medium and large **organisations** that have between 100 and 1000 employees and are involved in **business activities**. About 23.3 per cent are employed by small businesses with fewer than 20 employees. However, a minority of people find it more fulfilling to run their own businesses rather than work for someone else. They prefer to be self-employed.

organisation an entity formed for a specific purpose, usually related to the production or provision of a good or service

business activities the combined economic activities of buying, selling and investing performed by an organisation

People who believe they have the necessary skills and knowledge to start up their own business are called **entrepreneurs**. Entrepreneurs often display **enterprising behaviours** by starting businesses in new markets — locally, nationally or globally. They are usually highly skilled in areas such as manufacturing, design and production, accounting, management or marketing, which shows their **entrepreneurship**. Entrepreneurship is the ability to demonstrate the skills and risk taking related to the creation, organisation and management of a business or enterprise.

The ABS reports (in cat. no. 8165.0) that at the end of 2017–18, there were 2 313 291 actively trading businesses in the market sector in Australia, an increase of 3.4 per cent (74 992 businesses) from the end of 2016–17. The vast majority of failed businesses were small businesses. This means that, although many people see themselves as having the necessary skills, ability and knowledge to start a business of their own, the chances are high that they will not succeed and will end up seeking employment elsewhere.

entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise

enterprising behaviours describes a range of skills including adaptability, initiative, communication, management, leadership and problem solving, and associated behaviours such as working productively with others to achieve common goals, planning and organising, using resources effectively, analysing issues and managing risk

entrepreneurship the ability to demonstrate the skills and risk-taking related to the creation, organisation and management of a business or enterprise

CASE STUDY

Infinite energy

Infinite Energy is a Western Australian-based solar power company and is Australia's fourth largest retailer of solar power. Under the leadership of co-founder and Managing Director Mr Aiden Jenkins, Infinite Energy developed a system in which it installs and owns the solar infrastructure and sells power to customers at a discount. In 2018, the company was one of the winners in Western Australia of the EY Entrepreneur of the Year awards. The awards judges said Mr Jenkins' 'innovative concept is at the forefront of the important changes in this industry, with the potential to impact significantly on householders'.

on Resources

Weblink ABS labour statistics

8.4 ACTIVITIES

1. Undertake a quick survey of your class to see how many people have parents who work for a living. List the type of work they do and present this information in a table. **HASS skills: Questioning and researching**
   Economics and Business concept: Specialisation and trade
2. Conduct a survey of your family and friends on the hours they work. Present your information in a table and discuss your conclusions with the class. **HASS skills: Questioning and researching**
   Economics and Business concept: Specialisation and trade
3. The Australian Bureau of Statistics has a graph that plots the changes in the proportion of people participating in the labour market from 1966 to 2013. Go to the **ABS labour statistics** weblink in the Resources tab to view this graph and then describe the changes in the labour market that it illustrates. **HASS skills: Analysing, Evaluating**

8.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 6	Questions 3, 7, 8	Questions 5, 9, 10

Check your understanding

1. Distinguish between paid and unpaid work.
2. How many hours a week must an employee work to be considered working full time?
3. List three examples of volunteer work.
4. Match the following terms to the statements listed.

Term	Statement
Part time	Thirty-five hours a week are worked.
Full time	Working two hours each day from Monday to Friday.
Casual	The hours of work change each week.

5. Explain the difference between:
   a. casual work and part-time work
   b. paid and unpaid work.

Apply your understanding

6. Tom stays home and looks after the house and children all week, and Janet works as a doctor. Who is working? Explain your answer.
7. Why do you think the role of women in the workforce has changed since the 1970s?
8. Why do the greatest majority of people who work full time happen to be men, while the greatest proportion of part-time or casual workers are usually women? Discuss.
9. There has been an increase in the number of people looking for and accepting part-time work. Analyse why this may be occurring.
10. Voluntary workers play a significant role in society. Do you agree or disagree? Justify your response.

For sample responses to every question, go to www.jacplus.com.au.

8.5 Work, the economy and society

LEARNING INTENTION

By the end of this subtopic you will be able to describe the relationship between work and the economy and explain how this relationship can affect society.

8.5.1 The benefits of work

Much of this topic has focused on the importance of work for individuals. However, work also plays an important role within the Australian economy and wider society. The work that people do is what keeps the Australian economy ticking over.

Work affects the economy in a number of ways such as:

- avoiding poverty
- improving productivity
- generating income.

8.5.2 Poverty

When you use the term 'poverty' to describe a person's living conditions, what do you imagine? Do you think that poverty exists only in developing countries? Is it only unemployed people who live in poverty?

FIGURE 1 Having a job usually reduces the likelihood of living in poverty.



For a wide variety of reasons, many people live in poverty, both in Australia and globally. Work is important because it reduces the likelihood of a person living in poverty. In saying this, there are people who work and still struggle to meet their basic needs. Some groups such as single parents, young people and people with a disability face a higher risk of living in poverty (see **TABLE 1**).

It is quite difficult to measure poverty. In particular, it is difficult to compare the experience of people living in poverty in Australia with that of those living overseas. This is because the income of people and the cost of living varies greatly from country to country. When measuring poverty, it is useful to consider both absolute poverty and relative poverty.

- *Absolute poverty* is often referred to as extreme poverty. This condition refers to an individual or family's inability to pay for basic necessities in life such as food and shelter. Australia is a very wealthy country and therefore the number of people living in absolute poverty is much lower than in developing countries such as China and India. Governments and charities (e.g. the Salvation Army) provide assistance to people who cannot afford basic needs.
- *Relative poverty* is a measure of a person or family's income compared to the income of others. It is measured by working out the median (middle) income and then setting a 'poverty line' — usually a proportion of the median income. For example, it may be determined that a person earning less than 50 per cent of the median income is living below the poverty line.

TABLE 1 shows that certain groups in Australia are at a high risk of living in poverty. For example, 17.2 per cent of people with a disability were living in poverty in 2017–18. They were considered to be living in poverty because they earned less than 50 per cent of the median income.

A person's employment status (full-time, part-time or unemployed) also greatly affects their likelihood of living in poverty. **TABLE 2** shows that only a small number of full-time workers (5.6 per cent) were living below the poverty line in 2020. However, 65.9 per cent of unemployed people were considered to be living below the poverty line. This shows that working greatly reduces the risk of poverty.

TABLE 1 Groups in Australia at high risk of poverty, 2017–18

Specific group	Proportion of each group earning less than 50% of the median income
Unemployed households	65.9%
Single adults, no children (15–64)	26.6%
Households whose main income is a welfare payment	35.6%
People with a disability	17.2%
Single parent families	35.2%
All people	**13.6%**

Source: Davidson, P., Bradbury, B., Hill, T., and Wong, M. (2020), *Poverty in Australia 2020: Part 2, Who is affected?* ACOSS/UNSW Poverty and Inequality Partnership Report No. 4, Sydney: ACOSS, https://bit.ly/PovertyinAusPt2

TABLE 2 Risk of poverty based on employment status, 2020

Specific group	Proportion of each group earning less than 50% of the median income
Employed full-time	5.6%
Employed part-time	15.2%
Unemployed	65.9%
Not in labour force (>65 years old)	16.1%
Not in labour force (<65 years old)	44.9%
All people	**13.6%**

Source: Davidson, P., Bradbury, B., Hill, T., and Wong, M. (2020), *Poverty in Australia 2020: Part 2, Who is affected?* ACOSS/UNSW Poverty and Inequality Partnership Report No. 4, Sydney: ACOSS, https://bit.ly/PovertyinAusPt2

8.5.3 Work and productivity

Productivity is an important indicator in our economy. It tells us how efficiently inputs (such as labour and machinery) are being used to produce outputs (finished products). Businesses are always striving to improve productivity because this will help them be more profitable.

Whether we work at school, at home or in a workplace, we are always looking for ways to improve how we do things. At school, you may use tools such as a diary or a computer to help you work. The aim of these tools is to help you do things more efficiently and to a higher quality. They help you become a more productive student.

One of the most important ways to increase productivity is to improve the education, training and skills of workers. This can be seen in the case study below relating to Stephen. While Stephen was still the same worker after completing a training course, and he was still using the same tools, the extra training allowed him to become a more productive worker. This would also help generate greater profit for the business.

The productivity of workers can also be improved by introducing technology that helps them perform their tasks.

A common way to measure a country's productivity is to calculate how much is produced by the entire workforce per hour worked. This is called labour productivity. In Australia, labour productivity is calculated by the Australian Bureau of Statistics

productivity a measure of how efficiently inputs are used to produce outputs

as Gross Domestic Product per hour worked. Generally, the more each worker produces in a given period, the more productive the country.

CASE STUDY

Stephen improves his productivity

Stephen is a hairdresser. On average, when Stephen started working, he was able to complete two haircuts per hour. Stephen's boss sent him to a training course to improve his confidence and expertise. At the course, Stephen learned a number of strategies and skills to help him perform his job more effectively. After the course, Stephen was able to complete three haircuts per hour. His level of productivity had increased.

FIGURE 2 Stephen's new skills improved his productivity.



8.5.4 Generating income

As we discovered earlier in this topic, work is the main way that people earn income. Income is important as it allows people to satisfy their needs and wants. A large proportion of a person's income is spent on goods and services to improve the quality of their life. The productive work of people also helps businesses to generate income in the form of profit.

FIGURE 3 Governments use taxation to build infrastructure such as roads.



Governments rely on individuals and businesses to generate income in our economy. When a person earns an income, part of it is paid to the government as taxation (see **TABLE 3**). Similarly, when a business makes a profit, part of its income is taxed. Governments use the money collected from taxation to pay for collective services such as roads, hospitals and education. These services benefit all people in society and therefore improve our standard of living. They also help to reduce poverty.

TABLE 3 Individual income tax rates, 2019–20

Taxable income	Tax on this income
0–$18 200	Nil
$18 201–$37 000	19c for each $1 over $18 200
$37 001–$90 000	$3572 plus 32.5c for each $1 over $37 000
$90 001–$180 000	$20 797 plus 37c for each $1 over $90 000
$180 001 and over	$54 097 plus 45c for each $1 over $180 000

Source: Australian Taxation Office (ATO) website, *Individual Income Tax Rates.*

8.5 ACTIVITY

Research an Australian or international business (or industry) that has improved its level of productivity. Use your research to:

a. identify the business or industry
b. provide statistics or other evidence which prove that productivity levels have increased
c. outline some of the strategies that have been used to improve productivity.

HASS skills: Analysing, Evaluating
Economics and Business concept: Allocation and markets

8.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 4, 7, 8	Questions 5, 9, 10

Check your understanding

1. Identify some ways that work contributes to the economy and society.
2. Define the term 'productivity'.
3. Explain the difference between absolute poverty and relative poverty.
4. Explain some strategies that a business may use to increase the productivity of its workers.
5. What does the government use the income it collects as taxes for?

Apply your understanding

6. What do you think might be the problem if tax rates are too high? Or too low?
7. Examine the current rates of income tax in Australia shown in **TABLE 3**. Do you believe that these rates are set at an appropriate level? Justify your answer.
8. 'Productivity can only be increased so much — at some point it can be improved upon.' Analyse this statement.
9. 'Cutting income tax is one way of reducing poverty in Australia.' Analyse this, either agreeing or disagreeing with the statement.
10. Using the information in the income tax table shown in **TABLE 3**, draft a tax table of your own that you think may be more appropriate. Share your tax table with the rest of the class and be prepared to justify your answer.

For sample responses to every question, go to www.jacplus.com.au.

8.6 Alternative sources of income

LEARNING INTENTION

By the end of this subtopic you will be able to describe the different types of income a person can earn other than from a job.

8.6.1 Where does income come from?

Income can come from many sources. The main form of income for most people is the wage or salary they earn from their job. A person who receives a wage is paid an hourly rate for each hour they work and their wage may vary from week to week. A person on a salary receives a set amount of pay regardless of how many hours they work.

As well as wages and salaries, there are a number of alternative forms of income. Some of these alternative sources are outlined in **TABLE 1**.

TABLE 1 Alternative sources of income

Alternative source of income	Description
Superannuation	Superannuation is the money that people save for their own retirement. Money is deducted from a person's weekly income and placed into a superannuation fund. People are able to access their superannuation upon retirement. Given that Australia's population is ageing, superannuation will become an increasingly important form of income.
Commission	People such as real estate agents may earn a commission. This means that for every sale they make, they receive a small percentage of the money made. The more they sell, the larger the commission they receive.
Welfare payments	People may receive a welfare payment for a range of different reasons. Some retired people receive a pension to help them with their living expenses. Other people may receive a welfare payment if they are unemployed or if they are not working for some other reason (such as illness).
Rental income	A large number of people in Australia own an investment property. An investment property is one that the owners do not live in. Instead, they rent it out to tenants. The rent payments received from tenants provide an alternative source of income for the owners of the property.
Dividends	Some people choose to invest in companies. To do this they buy a 'share' in the company. These people will then become part owners of the business and they are known as shareholders. When the company makes a profit, they give some of the profit to the shareholders and this is called a dividend.

TABLE 2 Average weekly earnings of adults in full-time employment, 2008–19

Sex	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Male	$1232	$1311	$1362	$1420	$1492	$1532	$1588	$1604	$1615	$1640	$1678	$1726
Female	$1030	$1081	$1131	$1174	$1230	$1271	$1293	$1328	$1351	$1387	$1433	$1506

Source: Adapted from Australian Bureau of Statistics, *Average weekly earnings* (cat. no. 6302.0).

8.6.2 Retirement income — a growing form of income in Australia

Planning for your future

Your parents probably started planning your future from the time they knew a baby was on the way — from how to furnish your bedroom, to what sort of education they would like you to receive and how to fund it. As you get older, you assume the responsibility for planning your life and start to make your own plans — about buying a car, travelling overseas, undertaking further training or education, buying a house, getting married, having children, perhaps helping your children achieve their goals, and finally retiring. Your plans need not be so conventional, of course, but you cannot work all your life and you must expect to retire one day. Although that day seems like it is very far away, retirement is something you should start planning for from the time you begin working and paying taxes.

An ageing population

Australia's population is ageing, and the Baby Boomer generation (those born in the two decades following the end of World War II) have begun reaching retirement age. This trend will have a great impact on the nation's ability to provide support for retirees. In the past, the government has supported retirees by providing them with an income in the form of a government pension. However, by the time the bulk of the Baby Boomers retire, this may no longer be an option because there will be more people in the non-working category than there are in the working category.

The federal government is responsible for developing retirement policies to help ensure that most Australians can live a decent life after they stop working. It has made significant changes to its retirement age policies, prompted mainly by the increased life expectancy of Australians. Advances in medicine — mainly due to technology in the form of new surgical equipment and new drug development resulting in new medicines — have enabled people to live longer. As you can see from **TABLE 3**, by 2017 life expectancy at birth had reached 80.5 years for males and 84.6 years for females. Life expectancy in 1996 was lower at 75.2 years for males and 81.1 years for females.

FIGURE 1 Although it will probably be decades before you retire, you should start planning for retirement as soon as you begin earning money and paying taxes.



FIGURE 2 Improvements in science and technology have decreased infant mortality and increased life expectancy, creating an ageing society.



TABLE 3 Life expectancy (in years) at birth in Australia, 2006–17

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Males	78.7	79.0	79.2	79.3	79.5	79.7	79.9	80.1	80.3	80.4	80.4	80.5
Females	83.5	83.7	83.7	83.9	84.0	84.2	84.3	84.3	84.4	84.5	84.6	84.6

Source: *Deaths in Australia*, Australian Institute of Health and Welfare, 2019.

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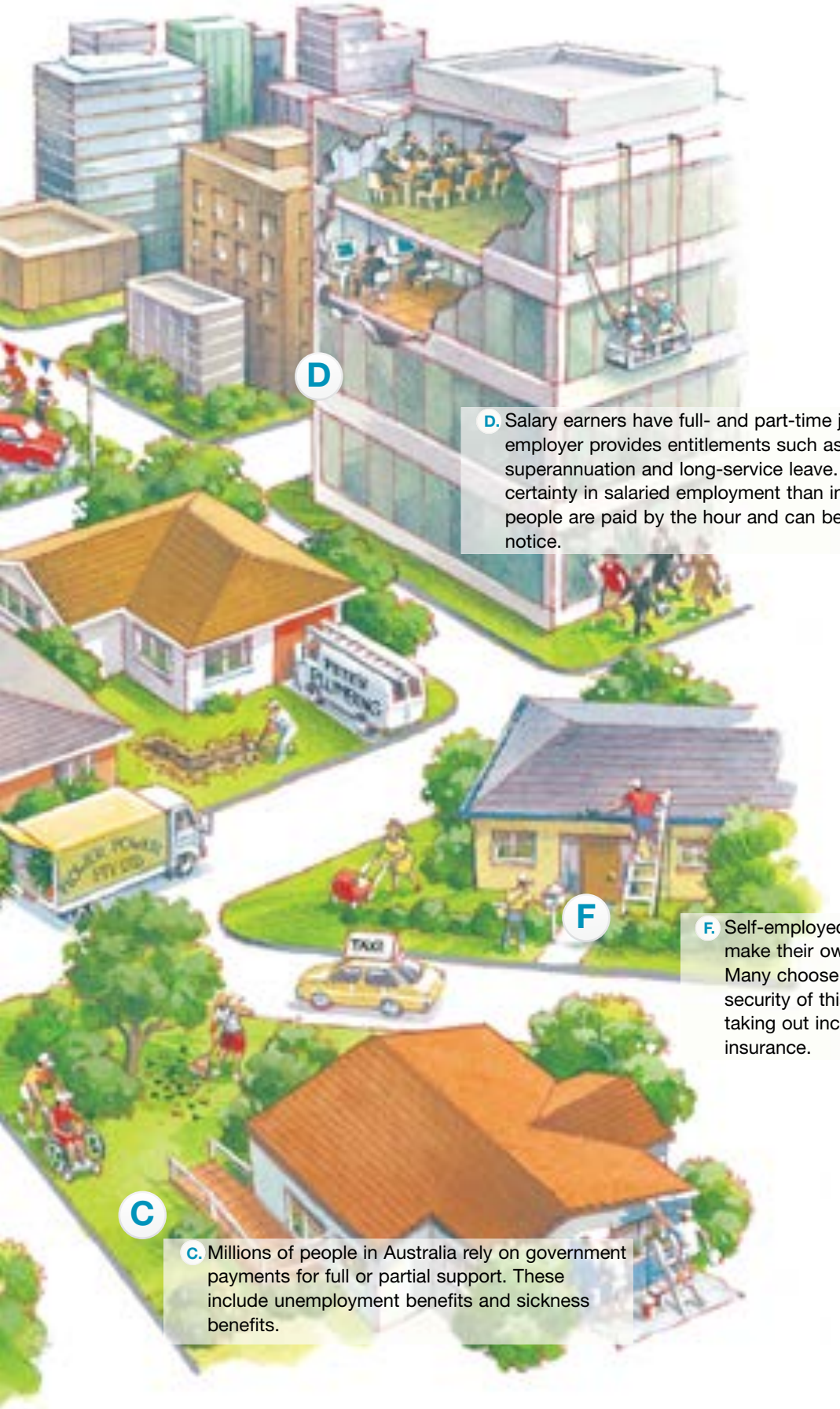
FIGURE 3 Various ways money is earned

A. Many teenagers start earning wages when they are 15 as casual workers at places such as supermarkets and bakeries. If you work more than your allocated hours per week, you may be eligible for overtime payments. You also may earn penalty rates for working on public holidays and weekends. Employees' rights are protected by awards. Taxation is payable on wages.

E. People such as real estate agents and sales assistants in car yards may elect to be paid on commission. This means they are paid according to the volume of sales they generate through their work.



B. You may be financially rewarded for performing odd jobs. For example, if you helped your neighbours to build a front fence, they might pay you $50 for a day's work. Some parents pay their children to mow the lawn, wash the car, weed the garden or walk the dog. Odd jobs require you to complete the task before you are paid. Pocket money is usually freely given to children by parents or carers.



D. Salary earners have full- and part-time jobs where the employer provides entitlements such as sick leave, superannuation and long-service leave. There is more certainty in salaried employment than in casual work, where people are paid by the hour and can be dismissed at short notice.

F. Self-employed people make their own income. Many choose to protect the security of this income by taking out income protection insurance.

C. Millions of people in Australia rely on government payments for full or partial support. These include unemployment benefits and sickness benefits.

If you retire … where will your income come from?

Having enough income is vital if you want to enjoy your retirement. While working, you receive a regular income that you use to pay bills and buy goods and services to satisfy your needs and wants. You adapt your spending to suit your income pattern. For example, you will probably pay your bills or buy your groceries on pay day. Taxation automatically comes out of your wage and is managed by your employer so you don't have to really worry about it. What happens when you retire — where will your income come from and how much money will you need?

CASE STUDY

How much money will you need in retirement?

The Association of Superannuation Funds of Australia (ASFA) Retirement Standard regularly releases figures showing how much an individual or a couple will need in order to live modestly or comfortably when they retire. For example, in December 2018 it was estimated that a single retiree living a modest lifestyle required $27 648 per year while a couple needed $39 775. For a slightly more comfortable lifestyle, a single retiree would require $43 317 while a couple would need $60 977. A modest lifestyle is defined as having a lifestyle which is better than the current age pension but still only affording fairly basic activities, while a comfortable retirement lifestyle is defined as a lifestyle that enables:

> *an older healthy retiree to be involved in a broad range of leisure and recreational activities and to have a good standard of living through the purchase of such things as household goods, private health insurance, a reasonable car, good clothes, a range of electronic equipment, and domestic and occasionally international holiday travel.*

Source: Association of Superannuation Funds of Australia.

Sources of retirement income include:

- superannuation
- the age pension
- private savings
- part-time work.

Superannuation

Superannuation is a way of accumulating money for retirement through a combination of employer, employee and government contributions towards a special fund for this purpose. If you earn more than $500 a month, your employer automatically pays a contribution towards your superannuation. (You can see the amount listed on your pay slip.) In addition, you could start making your own contributions to your superannuation fund as part of a savings plan. When you retire you can then access your superannuation — but not before that time, other than in exceptional circumstances.

Upon retirement you are given a choice as to how you will receive your superannuation income: as a lump sum, or as a regular weekly or fortnightly income.

FIGURE 4 Retirees can access an income from a wide variety of sources.



Age pension

By the time you are old enough to retire, there is a real possibility that the only support for retirees will come from funds such as superannuation. Your grandparents, however, were able to receive the age pension. The age pension consists of income support payments from the government to people needing social security and other related government programs. Other pensions and allowances are currently paid to the unemployed, the disabled, the sick, certain families with children, veterans and their survivors, and some students.

Australian men and women can access the age pension at 65 years of age, but by 2023 this will rise to 67 years of age. Other countries have different rules about when people can access government benefits after they retire. In France, for example, the age at which both men and women can access the pension is 62 years. Sweden has a flexible retirement age, allowing Swedes to retire and claim the state pension as early as 61 years. This is partly due to Sweden's strong economy and steady population.

Private savings

Another source of retirement income is any savings that you have accumulated during your working life and the interest received from banking those savings. You can then use these savings to buy an annuity (a stream of regular payments for a fixed period or for the rest of your life), or be very frugal and dip into your savings to pay your living expenses until your money runs out.

Part-time work

For many retirees, a natural progression towards retirement is to gradually leave the workforce by reducing their working hours. Simply changing from full-time to part-time employment can ease the transition towards retirement. During 2016, 27 per cent of the total population in Australia was aged 55 years and over, and one-third of this age group was part of the labour force. The government has encouraged seniors to remain part of the workforce, and to contribute to the economy, by offering them tax benefits. It has also increased the minimum age at which they become eligible for the pension, thereby forcing many to remain at work.

Older workers — those aged between 45 and 64 years — currently account for nearly a quarter of those who are officially unemployed. In reality, this figure is likely to be even higher, as many older workers become discouraged about finding work, stop looking and 'retire'. Older workers are also much more likely to experience periods of long-term unemployment than younger workers. This is due to several factors:

- Some employers have negative attitudes towards older workers and discriminate on the grounds of age.
- Some employers believe older workers are slower and unable to adjust to new technology.
- Some employers have the attitude that older workers are likely to leave the job earlier as they are closer to retirement.
- Some older workers are reluctant to work under a younger manager.
- Some older workers are inflexible.

More men than women report that they are discriminated against on the basis of their age. The fact is there are laws that protect workers from discrimination at work on the basis of their age. Whatever our age, we all have the right to be treated fairly and to be given the same opportunities.

8.6 ACTIVITY

Undertake research on Australia's superannuation system. Use your research to:

a. identify when superannuation became compulsory in Australia
b. determine the minimum amount of a person's income that must be contributed to their superannuation fund
c. discuss some of the advantages of *compulsory* superannuation.

HASS skills: Analysing, Evaluating
Economics and Business concept: Specialisation and trade

8.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 4, 7, 8	Questions 5, 9, 10

Check your understanding

1. Identify four reasons why a person may receive a welfare payment.
2. Define the term 'commission'.
3. Explain how a *wage* is different to a *salary*.
4. Explain why dividends are not a reliable source of income.
5. Rental income often comes from an investment property. What do you think could be some of the risks involved in owning a rental property?

Apply your understanding

6. Explain what is meant by superannuation.
7. Why are older workers more likely to experience periods of long-term unemployment than younger workers?
8. Many employees contribute additional funds to their superannuation account. Explain why they might do this.
9. Explain why working on a commission basis can be both a positive and negative form of income arrangement.
10. Australia's population is ageing. Describe what this might mean for the current group of employees and future generations.



For sample responses to every question, go to www.jacplus.com.au.

8.7 Thinking Big research project: How technology gets me to school

Scenario

Technology has changed our lives in nearly every area. For some people — Year 7 students — the changes may not seem significant because they have grown up with most of them. Others — for example your parents, grandparents and teachers — will have noticed more of these changes.

These changes have affected the way we work, shop and generally conduct our daily lives.



Task

You are to work in pairs and complete two tasks:

1. Make a list of ten jobs that would need to be performed on a daily basis in order for you to attend school. For each one, explain how it affects you (for example, a baker would need to bake bread for you to eat your toast in the morning).
2. Conduct research, either through the internet or through an interview, and prepare a presentation or poster depicting how five of the jobs you included on your list in part 1, have changed due to technology or other societal factors. For example, the baker would most likely now make different varieties of bread that they didn't previously make – sourdough, grain, rye bread, etc.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the ProjectsPLUS application for this topic. Click on the **Start new project** button to enter the project due date and set up your project group.
- Work in pairs; this will allow you to share ideas and responsibility for various aspects of the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- Each of you should present your list of 10 jobs and then as a pair consider the ones you have in common and refine your list until you come up with 10 between you.
- Determine if you will use a presentation (PowerPoint) or poster to present your information. Your teacher may allow you a choice.
- Allocate jobs for each person to research. Identify the 5 jobs you will conduct further research on – consider likely areas of change, ease of accessing information, etc.
- Conduct some research for each job. Include interesting facts about each job that most people won't know about.
- Use the information you have found and some photos to create your presentation/poster.
- Present your findings to the class and submit your completed assignment to your teacher for assessment and feedback.

on Resources

ProjectsPLUS How technology gets me to school (pro-0243)

8.8 Review

8.8.1 Key knowledge summary

8.2 The importance of work

- Work is an important part of every person's life, necessary to fund the purchase of goods and services to meet needs and wants. Work also has non-financial benefits.

8.3 Why we work

- People work for different reasons: to earn money, to improve living standards, to gain prestige, to obtain self-satisfaction, to make friends, to help others.

8.4 Different types of work

- Work can be paid or unpaid.
- Work can be voluntary, and volunteers make an important contribution to the community.
- There are more men than women in full-time employment. Women tend to have more part-time or casual employment.

8.5 Work, the economy and society

- Work contributes to the Australian economy by helping to reduce poverty, improve productivity and generate income.

8.6 Alternative sources of income

- Alternative forms of income include superannuation, commission, welfare payments, rental income and dividends.
- The population of Australia is ageing as infant mortality falls, life expectancy rises, and new technology and medicines are developed.
- It is a good idea to start planning for your retirement as soon as you start working.
- Retirees still need to have an income.
- Retirement income streams consist of superannuation, pensions and savings.

8.8.2 Key terms

business activities the combined economic activities of buying, selling and investing performed by an organisation

casual describes an employee who works only when needed

employed describes someone working in return for a wage or salary

employer a person or organisation hiring others to work for them

enterprising behaviours describes a range of skills including adaptability, initiative, communication, management, leadership and problem solving, and associated behaviours such as working productively with others to achieve common goals, planning and organising, using resources effectively, analysing issues and managing risk

entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise

entrepreneurship the ability to demonstrate the skills and risk-taking related to the creation, organisation and management of a business or enterprise

full-time describes an employee who works 35 hours or more per week, or who works the minimum number of hours stipulated by the industrial award for that occupation or industry

income money earned through employment or investment

industry-wide awards legally binding documents that set out the minimum wages and other entitlements for all employees in an industry or occupation

labour the human skills and effort required to produce goods and services

labour force people aged 15 and over who are able to work, and are either employed or looking for work

organisation an entity formed for a specific purpose, usually related to the production or provision of a good or service

part-time describes an employee who works less than 35 hours per week

productivity a measure of how efficiently inputs are used to produce outputs

remuneration payment for work or services performed
salary fixed or regular payment for work completed or services performed
seasonal describes an employee who usually works during a season, such as winter or the fruit-picking season
standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)
wage payment for work completed or services performed, usually dependent on hours worked per week/month
wellbeing an overall measure of quality of life
work human labour — whether paid or unpaid, including voluntary labour
work–life balance a balance between working time and leisure/recreation
working conditions refers to all those things an employer has agreed to provide in exchange for the employee's work, ranging from the physical work environment to hours of work, rates of pay and leave entitlements

8.8.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Some people work to make money, but are there other reasons to join the world of work?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4284)
Reflection (ewbk-4237)
Crossword (ewbk-4236)
Student learning matrix (ewbk-4230)

Interactivity Individual and business success crossword (int-7710)

8.8 Review exercise

Multiple choice

1. Sources of income include:
   - A. casual work and odd jobs.
   - B. salaries from working full-time or part-time.
   - C. payments from superannuation.
   - D. all of the above.
2. What is a work–life balance?
   - A. Struggling to meet work and life commitments
   - B. Ensuring that life commitments do not interfere with work commitments
   - C. Ensuring that work commitments do not interfere with life commitments
   - D. Maintaining evenness between life and work commitments.
3. To be officially considered employed, you must be:
   - A. working in a full-time, part-time or casual position.
   - B. 14 years of age or over.
   - C. 15 years of age or over.
   - D. 16 years of age or over.

4. Which of the following groups is not part of the labour force?
   - **A.** People actively looking for work
   - **B.** Unemployed people
   - **C.** Casual workers
   - **D.** Pensioners
5. The retirement age in Australia is:
   - **A.** 69 years for men and 59 years for women.
   - **B.** There is no official retirement age.
   - **C.** 65 years for men and women.
   - **D.** 70 years for men and women.
6. A person is considered to be working full time if they:
   - **A.** work 35 hours or less in a week.
   - **B.** work 35 hours or more in a week.
   - **C.** work up to 35 hours in a week.
   - **D.** work the number of hours they want in a week.
7. Most people work because they want to:
   - **A.** get rich and famous.
   - **B.** buy a brand new car and designer clothes.
   - **C.** receive an income.
   - **D.** fulfil a lifelong dream.
8. Wellbeing is an overall measure of the quality of life for:
   - **A.** individuals.
   - **B.** society.
   - **C.** workers.
   - **D.** individuals and society.
9. The Australian labour force has:
   - **A.** more full-time workers than part-time workers.
   - **B.** more part-time workers than full-time workers.
   - **C.** equal numbers of part-time workers and full-time workers.
   - **D.** more casual workers than part-time workers.
10. Which of these is not an example of income?
    - **A.** Payments from superannuation
    - **B.** A lottery win
    - **C.** Commission received from selling smartphones
    - **D.** Money received from running your own business

Short answer

11. Discuss the benefits of being employed.
12. Explain how the concept of work has changed over time.
13. How do Australia's unemployment rates compare with those of other countries?
14. Research one volunteer group that offers its services to the community. Examine what contributions it makes to society and how society or the community views them.
15. 'More males work full time than females.' Do you agree? Explain your response.
16. List all the activities you perform that could be classified as work but for which you don't get paid.

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 8 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

8.3 Why we work

eWorkbook
- Teenage spending habits (ewbk-4231)

8.4 Different types of work

eWorkbook
- Different types of work (ewbk-4232)

Weblink
- ABS labour statistics

8.5 Work, the economy and society

eWorkbook
- Paid and unpaid work (ewbk-4233)

8.6 Alternative sources of income

eWorkbook
- Alternative income (ewbk-4234)

Interactivity
- Various ways money is earned (int-5691)

8.7 Thinking Big research project: How technology gets me to school

ProjectsPLUS
- How technology gets me to school (pro-0243)

8.8 Review

eWorkbook
- The language of work (ewbk-4235)
- Reflection (ewbk-4237)
- Crossword (ewbk-4236)
- Student learning matrix (ewbk-4230)

Interactivity
- Individual and business success crossword (int-7710)

To access these online resources, log on to **www.jacplus.com.au**.

Geography

GEOGRAPHY CONCEPTS AND SKILLS

9 Geography concepts and skills 236

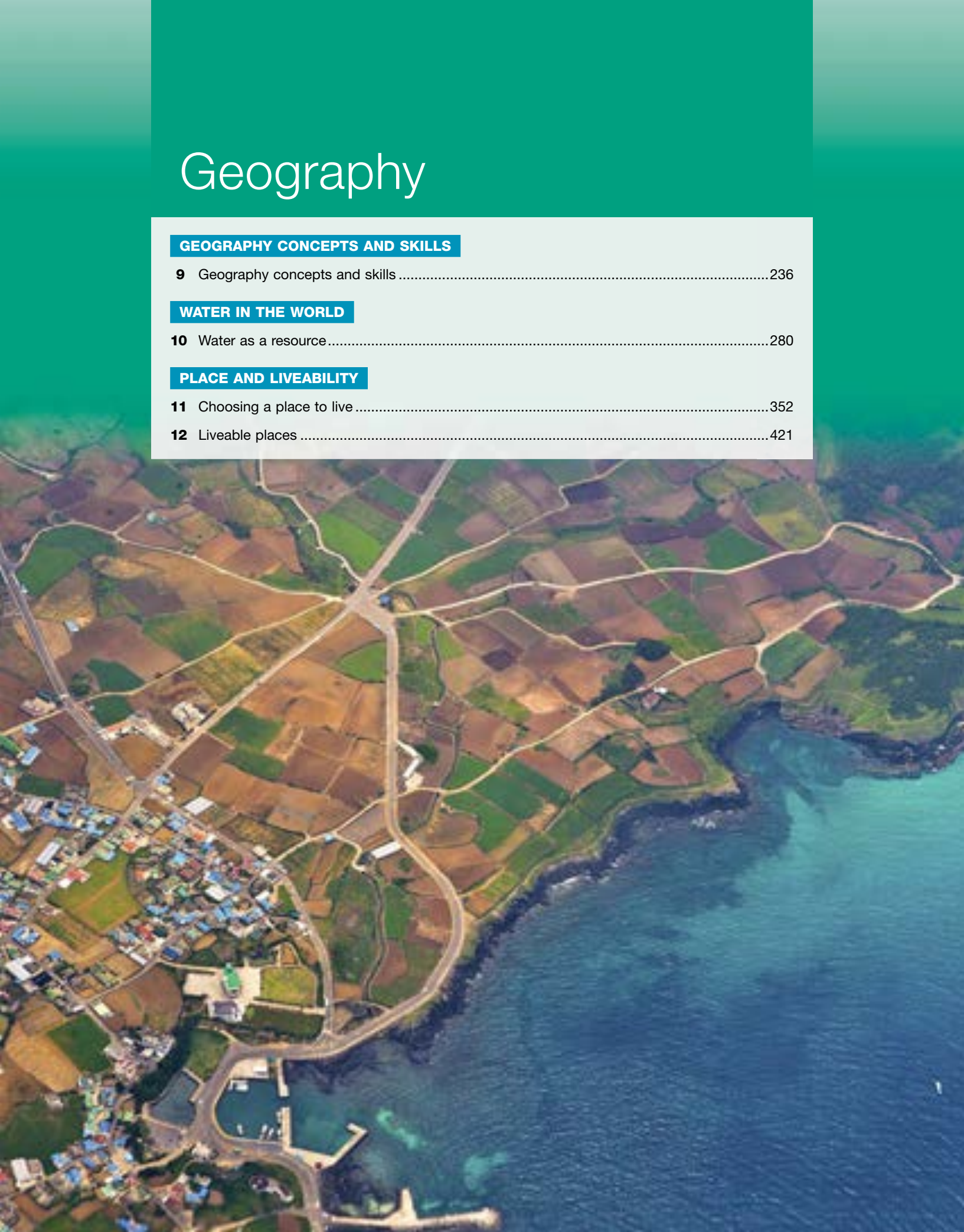
WATER IN THE WORLD

10 Water as a resource 280

PLACE AND LIVEABILITY

11 Choosing a place to live 352

12 Liveable places 421



9 Geography concepts and skills

9.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

9.1.1 What is Geography?

The world around us is made up of a large range of interesting places, people, cultures and environments. Geography is a way of exploring, analysing and understanding this world of ours — especially its people and places. Studying Geography at school allows you to build up your knowledge and understanding of our planet, at different scales: the local area, our nation, our region and our world. In essence, geographers investigate the characteristics of places and the relationships between people and places.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4285)

FIGURE 1 Geography helps you explore and understand the amazing world we live in.



9.2 Concepts in Geography

LEARNING INTENTION

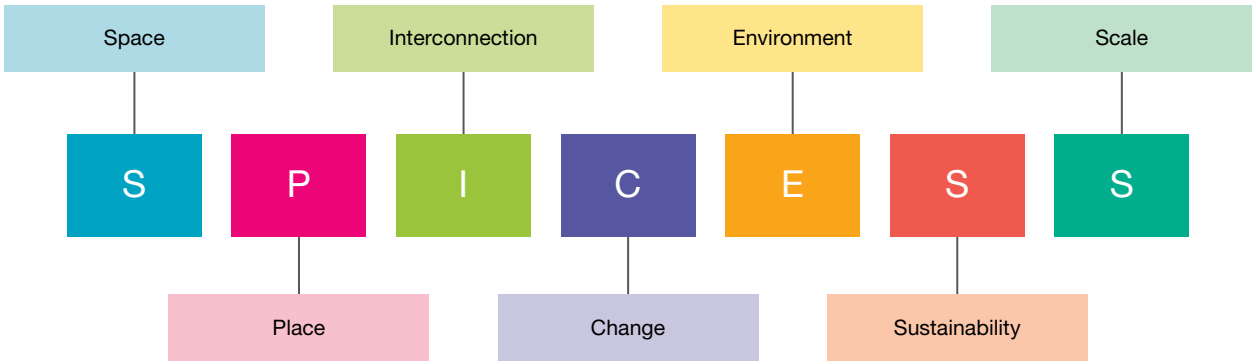
By the end of this subtopic you will be able to:

- identify the seven geography concepts using the acronym SPICESS
- explain each of the geography concepts
- apply the geography concepts.

9.2.1 Geography concepts: SPICESS

Geographical concepts help you to make sense of your world. You can use these topics to both investigate and understand the world you live in. You can also use them to try to imagine a different world. The concepts help you to think geographically. The seven major concepts are ***space***, ***place***, ***interconnection***, ***change***, ***environment***, ***sustainability*** and ***scale***. You will use the seven concepts to investigate two aspects: water as a resource, and place and liveability.

FIGURE 1 A way to remember these seven concepts is to think of the term SPICESS.



9.2.2 What is space?

Everything has a location on the space that is the surface of the Earth, and studying the effects of location, the distribution of things across this space, and how the space is organised and managed by people, helps us to understand why the world is like it is.

Explore more with myWorld Atlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Space**

9.2.3 What is place?

The world is made up of places, so to understand our world we need to understand its places by studying their variety, how they influence our lives and how we create and change them.

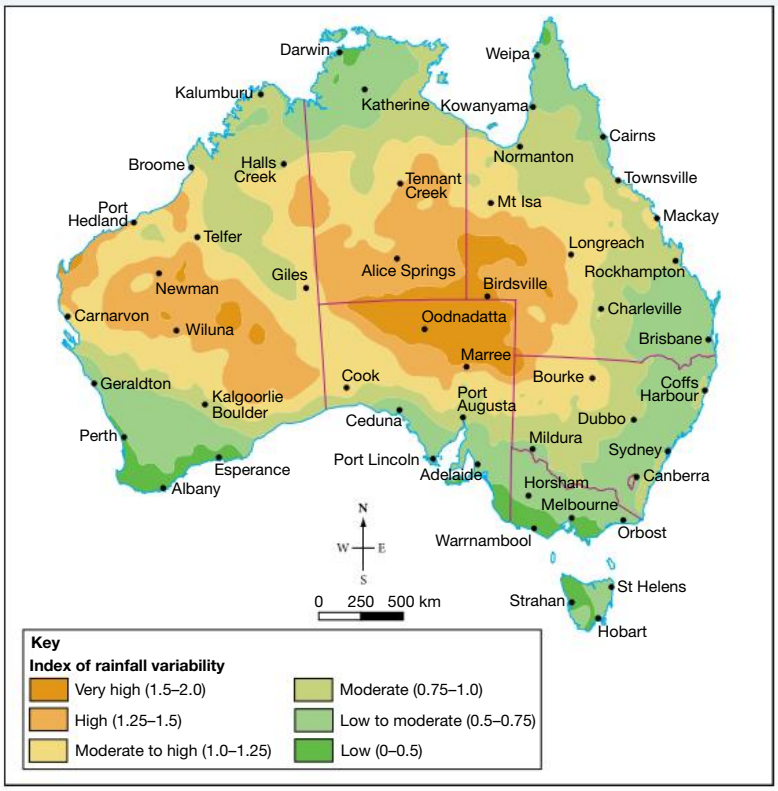
You often have mental images and perceptions of places — your city, suburb, town or neighbourhood — and these may be very different from someone else's perceptions of the same places.

Explore more with myWorld Atlas

Deepen your understanding of this topic with related case studies and questions.

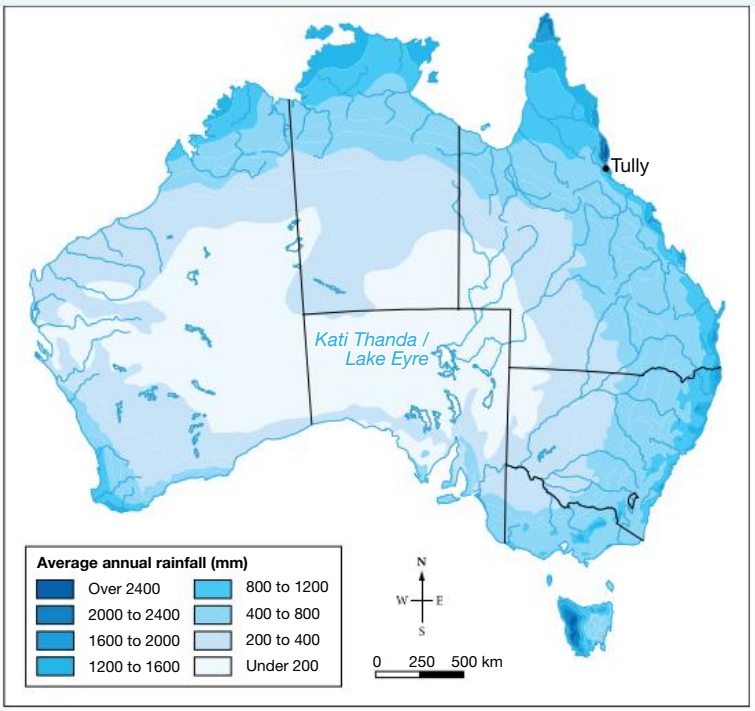
- Developing Australian Curriculum concepts > **Place**

FIGURE 2 Australian annual rainfall variability



Source: MAPgraphics Pty Ltd, Brisbane

FIGURE 3 The amount of rain that falls in Australia varies from place to place, as this rainfall map shows.



Source: Bureau of Meteorology, 2003, on the Australian Water Map, Earth Systems Pty Ltd

9.2.4 What is interconnection?

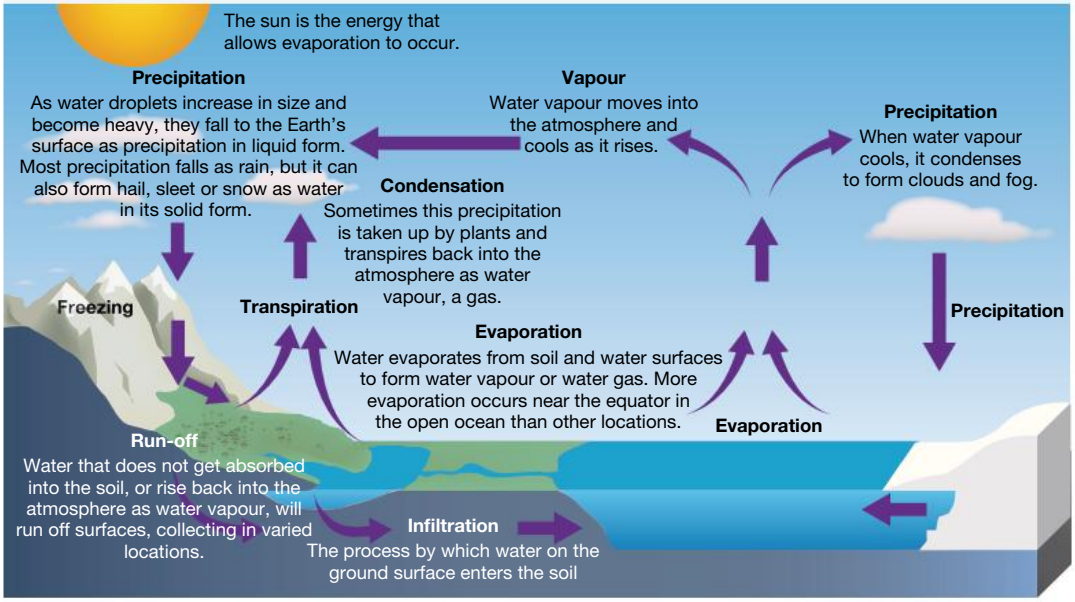
People and things are connected to other people and things in their own and other places, and understanding these connections helps us to understand how and why places are changing.

An event in one location can lead to change in a place some distance away.

FIGURE 4 Mount Tom Price township and mine in Western Australia, with fly in, fly out (FIFO) worker huts in the left foreground



FIGURE 5 The water cycle shows many interconnections.



Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Interconnection**

9.2.5 What is change?

The concept of change is about using time to better understand a place, an environment, a spatial pattern or a geographical problem.

The concept of change involves both time and space — change can take place over a period of time, or over an area. The time period for change can be very short (for example, the impact of a flash flood) or over thousands or millions of years (for example, the development of fossil fuel resources).

FIGURE 6 Port Douglas, 60 km north of Cairns, was a busy port in the 1870s, with a population over 10 000. The mining that had attracted people to this hot, wet area, however, did not last. By the 1960s, the population was only 100. In the 1980s, road and air access to the town improved and tourist numbers to the area grew. The permanent population is now about 3500. During the peak holiday season (May to November), this number increases by four times.



You will learn, practise and master a range of essential practical skills as you study Geography. The SkillBuilder subtopics found throughout this title will tell you about the skill, show you the skill and let you apply the skill to the topics covered.

Environmental change can occur over short or long periods of time. The use of technology can result in rapid change — think of the explosions at a mining site that reveal mineral seams.

The degree of change occurring can be used to predict, or plan for, actual or preferred futures.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Change**

9.2.6 What is environment?

People live in and depend on the environment, so it has an important influence on our lives.

The environment, defined as the physical and biological world around us, supports and enriches human and other life by providing raw materials and food, absorbing and recycling wastes, and being a source of enjoyment and inspiration to people.

Explore more with myWorldAtlas

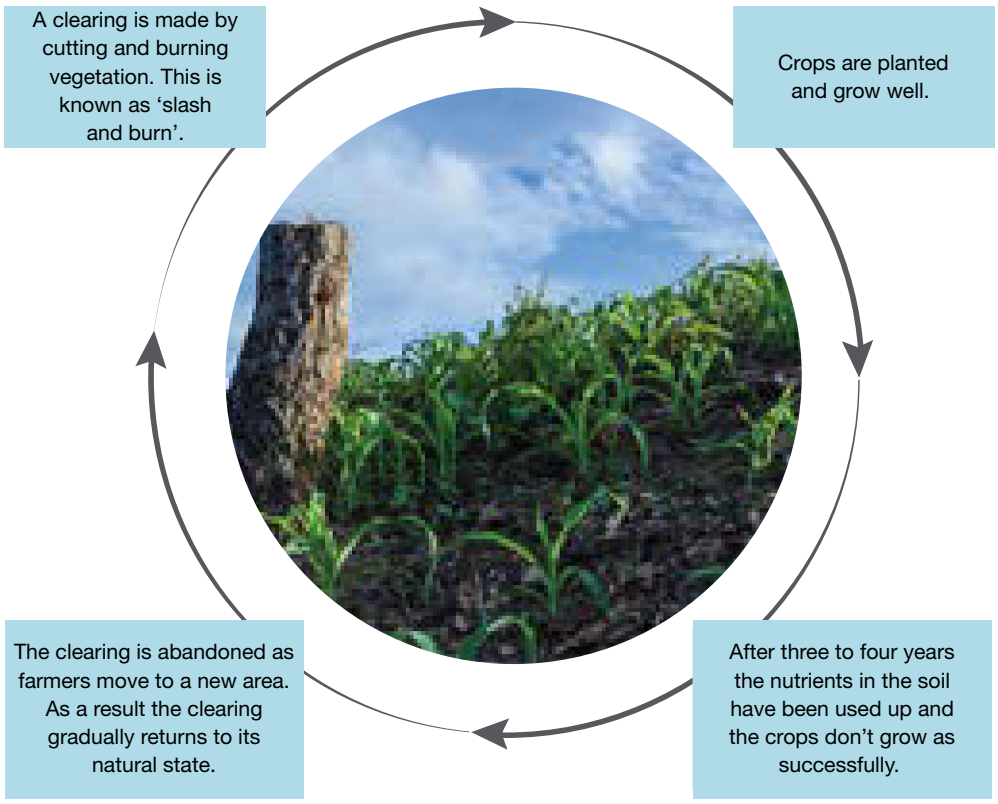
Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Environment**

FIGURE 7 Pacific Islanders use traditional methods to fish sustainably.



FIGURE 8 The process of shifting cultivation means that farmers move on when an area becomes unproductive, allowing the land to recover.



9.2.7 What is sustainability?

Sustainability is about maintaining the capacity of the environment to support our lives and those of other living creatures.

Sustainability considers the interconnection between the human and natural world and who gets which resources and where, in relation to conservation of these resources and prevention of environmental damage.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Sustainability**

9.2.8 What is scale?

When we examine geographical questions at different spatial levels, we are using the concept of scale to find more complete answers.

Scale can be applied from personal and local levels to regional, national or global levels. Looking at things at a range of scales allows a deeper understanding of geographical issues.

Different factors can be involved in explaining phenomena at different scales. Local events can have global outcomes; for example, removing areas of forest at a local scale can have an impact on climate at a global scale. A policy at a national scale, such as forest protection, can have an impact at a local scale, such as the protection of an endangered species.

FIGURE 9 Mental map of Jayden's local place (a) by Jayden and (b) by Annette, Jayden's mother

(a)



(b)



Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Developing Australian Curriculum concepts > **Scale**

FIGURE 10 Railway route and main settlements between Sydney and Perth



Source: Spatial Vision

9.3 Skills used in Geography

LEARNING INTENTION

By the end of this subtopic you will be able to:

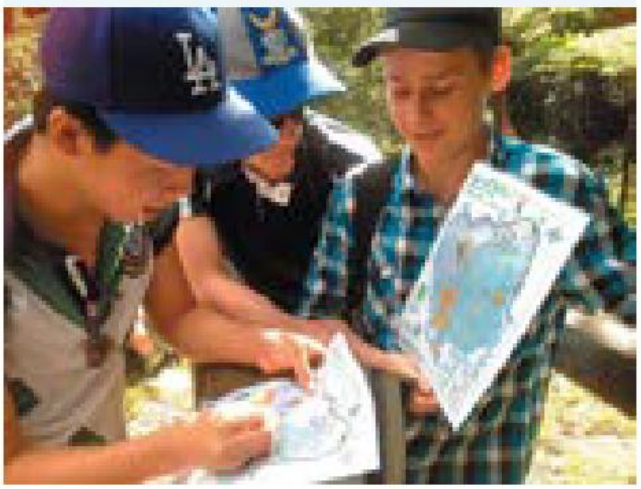
- write a class definition of Geography
- explain what geographers do
- identify different types of maps and their purpose.

9.3.1 Geography is … about our wonderful world

Have you ever visited a place other than the one you live in? If so, you probably noticed that some of the features and characteristics are similar and some are different. Geographers aim to understand these characteristics as well as the relationship between people and the different environments around us.

As a geographer, you answer questions ranging from the local to the global, in the past, present and future. Along the way, you will develop skills and inquiry methods to answer these questions for yourself.

FIGURE 1 Using maps to work out locations and to plot data



9.3.2 Geography is … something you do

One of the best parts of studying Geography is the opportunity to visit places outside the classroom. Going on a field trip allows you to collect data and information for yourself and to work collaboratively with other members of your class.

Geographers use what is called an 'inquiry' approach. This means that you will investigate geographical questions by collecting, analysing, and interpreting information and data in order to develop your own

understanding and draw your own conclusions. This helps you develop proposals for what should happen and what action should be taken in the future.

Studying Geography develops a wide range of skills that you can apply in your everyday life, in your future life and possibly in your career!

FIGURE 2 Conducting a survey in the field



FIGURE 3 Collecting your own data and information



9.3.3 Geography is … a way of thinking

Geography is a way of thinking and a way of looking at the world. One of the key tools geographers use is a map. If you look really carefully at them, maps (such as the ones shown in **FIGURES 4** and **5**) contain a lot of information. As a student, you will often use a variety of different types of maps produced by someone else (for example, from this textbook, atlases and online). However, as a geographer, you will produce your own maps and spatial information, by hand or digitally. Using and interpreting maps are important skills you will develop. It is also important to identify major patterns and trends in maps in order to unlock information they contain.

As a geographer, you will use a set of geographical concepts to help you not only think geographically but also investigate and understand the world. These concepts are ***space***, ***place***, ***interconnection***, ***change***, ***environment***, ***sustainability*** and ***scale***.

As a geographer, you should also ask yourself: 'What can I do and contribute as an informed and responsible citizen to make this world a better place?'

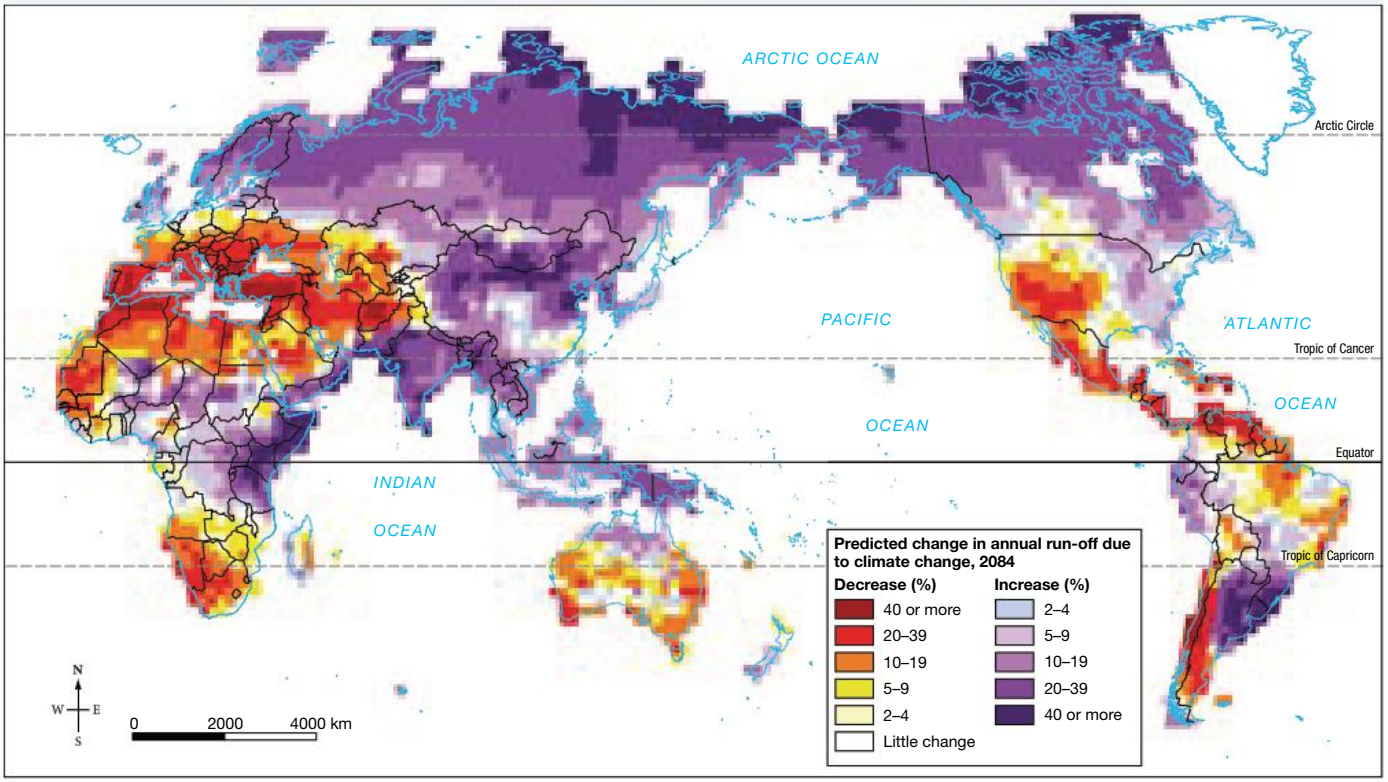
9.3.4 Skills used in studying Geography

You will learn, practise and master a range of essential practical skills as you study Geography. The SkillBuilder subtopics found throughout this title will tell you about the skill, show you the skill and let you apply the skill to the topics covered.

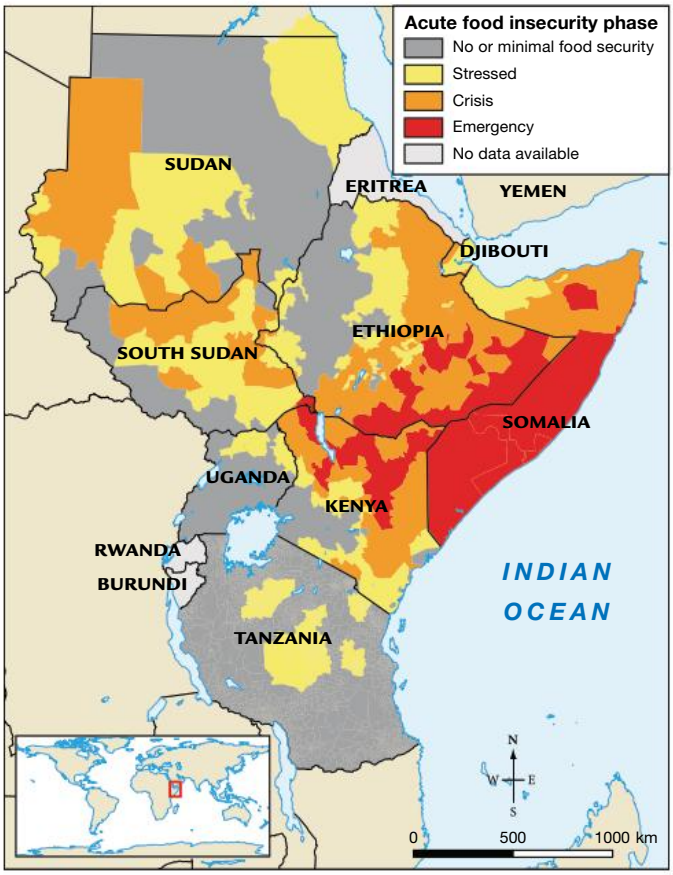
The SkillBuilders you'll use at Year 7 level are as follows.

- Constructing a pie graph
- How to read a map
- Reading a weather map (SkillBuilder available online)
- Creating a simple column or bar graph
- Using topographic maps
- Using alphanumeric grid references
- Drawing a climate graph (SkillBuilder available online)
- Creating and analysing overlay maps (SkillBuilder available online)
- Annotating a photograph (SkillBuilder available online)
- Drawing a line graph

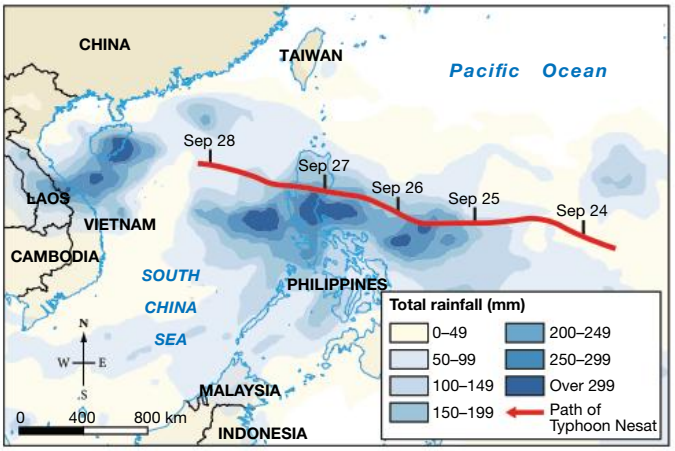
FIGURE 4 Maps: a key tool for the geographer



Source: Geophysical Fluid Dynamics Labratory, National Oceanic and Atmospheric Administration



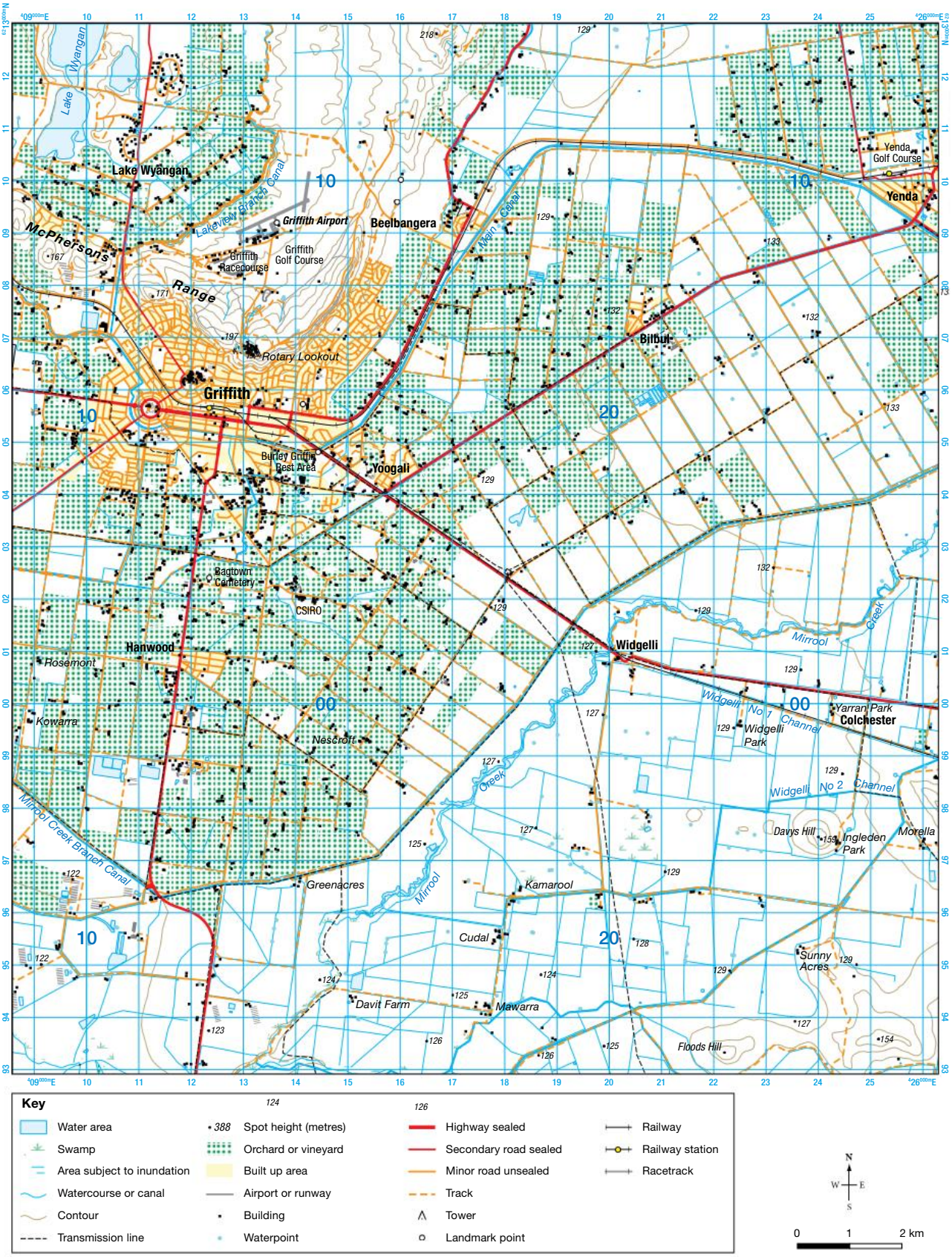
Source: USAID, FEWS NET 2011



Source: NASA Earth Observatory



FIGURE 5 Topographic maps are very useful for geographers because they provide a large amount of detail about places and environments.



Source: Spatial Vision

- Interpreting diagrams (SkillBuilder available online)
- Cardinal points and wind roses (SkillBuilder available online)
- Creating a concept diagram (SkillBuilder available online)
- Interpreting topological maps (SkillBuilder available online)
- Understanding satellite images

9.4 SkillBuilder: Constructing a pie graph

LEARNING INTENTION

This SkillBuilder shows you how to construct a pie graph. Creating graphs is part of the questioning and researching HASS skill.

9.4.1 Tell me

What is a pie graph?

A pie graph, or pie chart, is a graph in which slices or segments represent the size of different parts that make up the whole. The circle of 360 degrees represents the total, or 100 per cent of whatever is being examined. The size of the segments is easily seen. Presenting the parts in order, from largest to smallest, makes it easier to interpret.

A pie graph can be drawn by hand or by using a spreadsheet program.

How are pie graphs useful?

Pie graphs give us an overall impression of data. They are useful for comparing proportions of categories. However, if more than eight segments are needed, the graph becomes difficult to read and it is better to use a bar graph. Unlike line graphs, pie graphs are not useful for showing a trend over time.

A good pie graph:
- has a clear and accurate title that explains the purpose of the graph
- has segments that are either labelled directly or indicated by means of a colour key
- includes percentages or raw figures
- has segments drawn clockwise from largest to smallest, starting at 12 o'clock with the largest and finishing at 12 o'clock with the smallest, unless there is a segment for 'other', which is always last
- includes the source of the data.

9.4.2 Show me

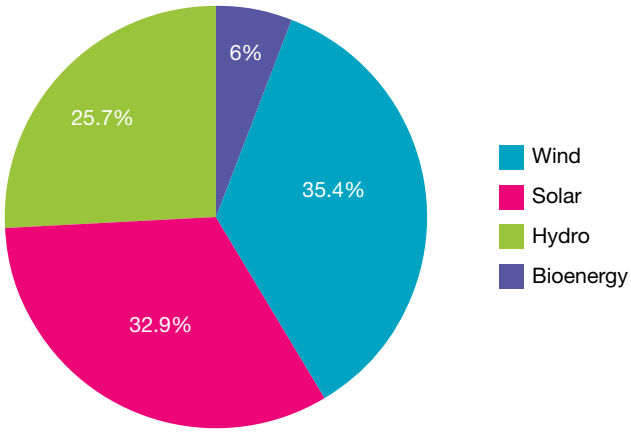
How to complete a pie graph

You will need:

- paper
- a pencil
- a protractor
- a ruler
- coloured pencils
- a data set — in this case, energy generated from renewables in New Zealand (see **TABLE 1**).

Model

FIGURE 1 Percentage of electricity generated from renewables in Australia by energy source (2019)



Source: Based on Clean Energy Australia Report 2020. Clean Energy Council (2020). Retrieved from https://assets.cleanenergycouncil.org.au/documents/resources/reports/clean-energy-australia/clean-energy-australia-report-2020.pdf [Online Resource]

Note: 24% of total energy consumption in Australia is from renewable sources.

TABLE 1 Percentage of electricity generated from renewables in New Zealand by energy source (2010)

Renewable energy	Percentage (%)
Hydro	28
Bioenergy and solar	20
Wind	2
Geothermal	50

Note: In 2019, 84% of all electricity generated in New Zealand came from renewable resources.

Source: New Zealand Energy Data File 2012

Procedure

Step 1

Order the statistics from largest to smallest. If there is an 'other' category, put it last.

Step 2

If you have not been given percentages, you will need to calculate them. Add all of the categories together to give you your total figure. Divide each individual category by the total figure and then multiply by 100. This will give you a percentage.

Step 3

Convert the percentage to degrees of a circle by multiplying by 3.6. (100 per cent of the circle = 360 degrees, so 1 per cent of the circle = 3.6 degrees.)

TABLE 2 Converting percentages to degrees in circle

Renewable energy	Percentage (%)	Degrees in circle (percentage × 3.6)
Hydro	28	100.8
Bioenergy and solar	20	72
Wind	2	7.2
Geothermal	50	180

Step 4

Draw a straight line from the centre of the circle to 12 o'clock.

Step 5

Use the protractor to mark the first and largest segment, working clockwise. To do this, place the 0 degrees line on the protractor along the line you have just drawn. Now mark in the second largest group. Use the protractor to mark each of the other segments in descending size, marking the 'other' category last (if needed).

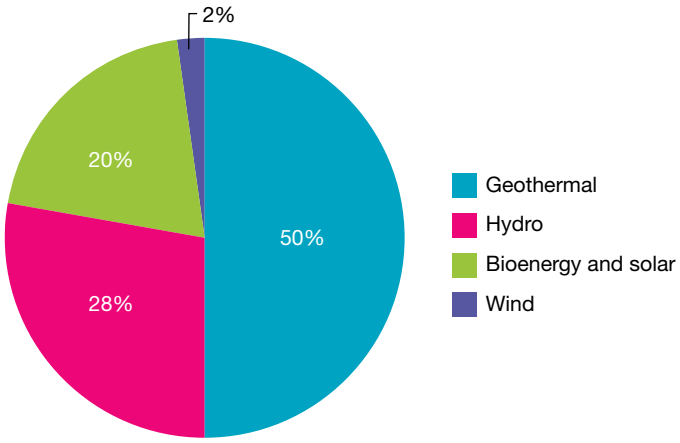
Step 6

Label and colour each segment, making sure you include the percentage label.

Step 7

Provide a clear title and source.

FIGURE 2 Percentage of electricity generated from renewables in New Zealand by energy source (2010)



Source: New Zealand Energy Data File 2012

on Resources

Video eLesson Constructing a pie graph (eles-1632)
Interactivity Constructing a pie graph (int-3128)

9.4.3 Let me do it

Complete the following activities to practise this skill.

9.4 ACTIVITIES

1. Use the data in **TABLE 3** to create a pie graph. Use the checklist provided to ensure you cover all aspects of the task.

TABLE 3 Source of electricity worldwide, 2017

Source of electricity	Percentage (%)
Coal	38
Oil	3
Natural gas	23
Nuclear	10
Hydro	16
Other	9

Source: Based on IEA data from the IEA (2017). World gross electricity production, by source, 2017. https://www.iea.org/data-and-statistics/charts/world-gross-electricity-production-by-source-2017. All rights reserved.

HASS skills: Questioning and researching

2. Once you have created your pie graph, apply the skills you have developed in this SkillBuilder to answer the following questions.
   a. What is the most common source when producing electricity?
   b. Are renewables or non-renewables the main source of electricity?
   c. Name a renewable that is part of the 'other' category.

d. In Iceland, 70 per cent of all electricity is produced from hydro power and 30 per cent is produced from geothermal power. Is this similar to or different from the world trend?

e. Research the sources of energy production for another country. Compare your results to Australia and Iceland.

Geography concept: Environment

Checklist

I have:

- provided a clear title and source
- plotted the data accurately and labelled each segment
- included the percentages
- shown largest to smallest clockwise from 12 o'clock, with 'other' last.

9.5 SkillBuilder: How to read a map

LEARNING INTENTION

This SkillBuilder shows you how to read a map. Interpreting maps is part of the questioning and researching HASS skill.

9.5.1 Tell me

What are maps and why are they useful?

Maps represent parts of the world as if you were looking down from above. The mapmaker, or cartographer, simplifies the plan view from a vertical aerial photograph or satellite image. Cartographers use colours and symbols on the map to show how features such as roads, rivers and towns are organised spatially. Six features should be included on all maps. To help us remember these, we use the acronym BOLTSS (see **FIGURE 1**). Maps are useful to show features so that we have a deeper understanding of places. When travelling, maps are essential to navigate unfamiliar places.

FIGURE 1 Essential map features

BOLTSS

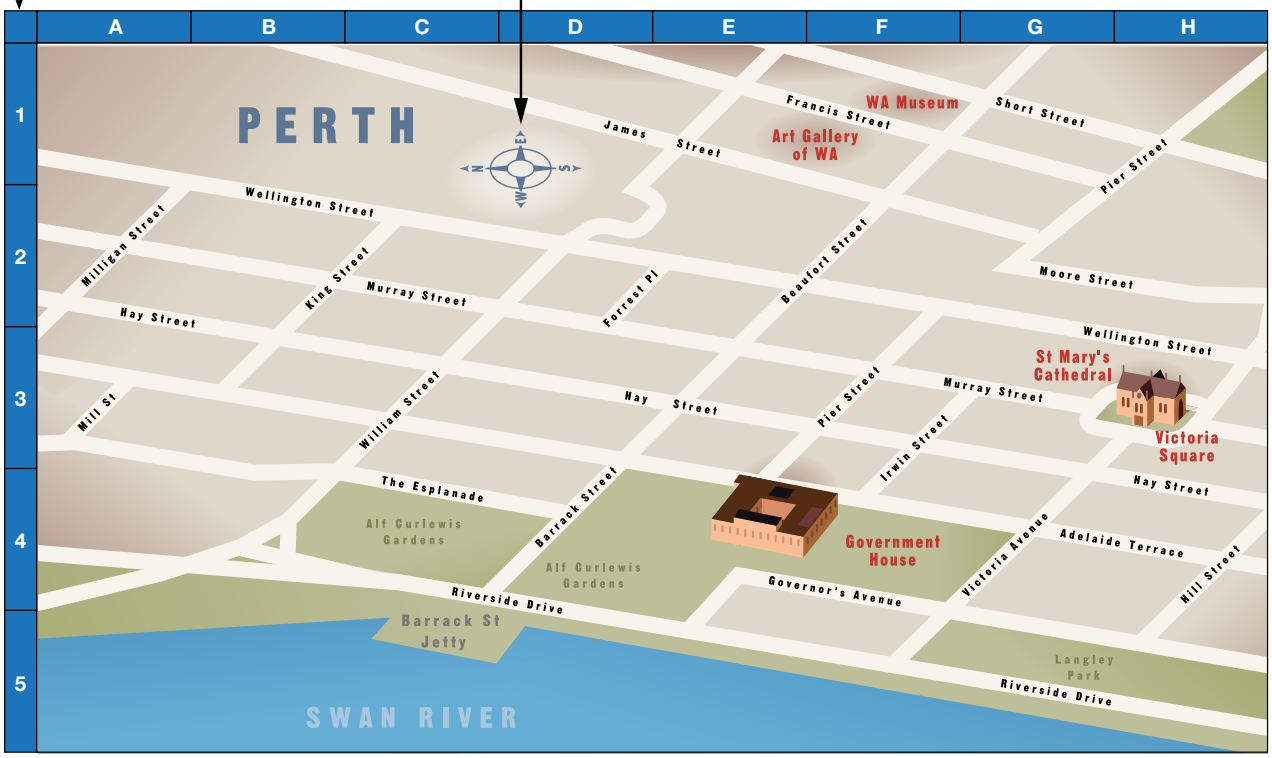
- B — **Border** — a box around the map to clearly show its extent
- O — **Orientation** — a compass direction
- L — **Legend** — a key to what the symbols and colours on the map stand for
- T — **Title** — a clear indication of what the map is about or its theme
- S — **Scale** — indicates distances on the map compared with the actual area being shown
- S — **Source** — where possible, the information used to make the map should be sourced

Understanding map legends

When you look at a map, you no doubt immediately notice the various colours and symbols used on the map. The legend, or key, lists and explains these. The legend is usually found next to or in a corner of the map, or it may be located in a special reference section.

Cartographers overcome the difficult task of showing all features of an area on a map by using symbols and colour to show point symbols (for example, a church), line symbols (a road) and area symbols (a forest). Many maps use the same symbols to help the reader instantly recognise features; for example, blue lines to represent rivers. These conventional symbols are usually drawn to look like the objects they represent. The many symbols used in atlases and other maps are small. It is important that you keep symbols small when making your own maps.

FIGURE 2 A section of the Perth CBD



Source: Russell Tate / Getty Images Australia

Source

Maps often show features that can be seen from an aeroplane but they also show features that are not visible from the air.

As mentioned, a good map has BOLTSS:

- Border — to show the boundaries of the map
- Orientation — to show direction on the map
- Legend — to explain the symbols and colours used
- Title — to describe what the map is
- Scale — to indicate distances on the map
- Source — to explain the source of the information for the map

Importantly, the map must also be accurate and neat.

9.5.2 Show me

How to read a map

You will need:

- a map of the region being considered (see **FIGURE 3**).

Procedure

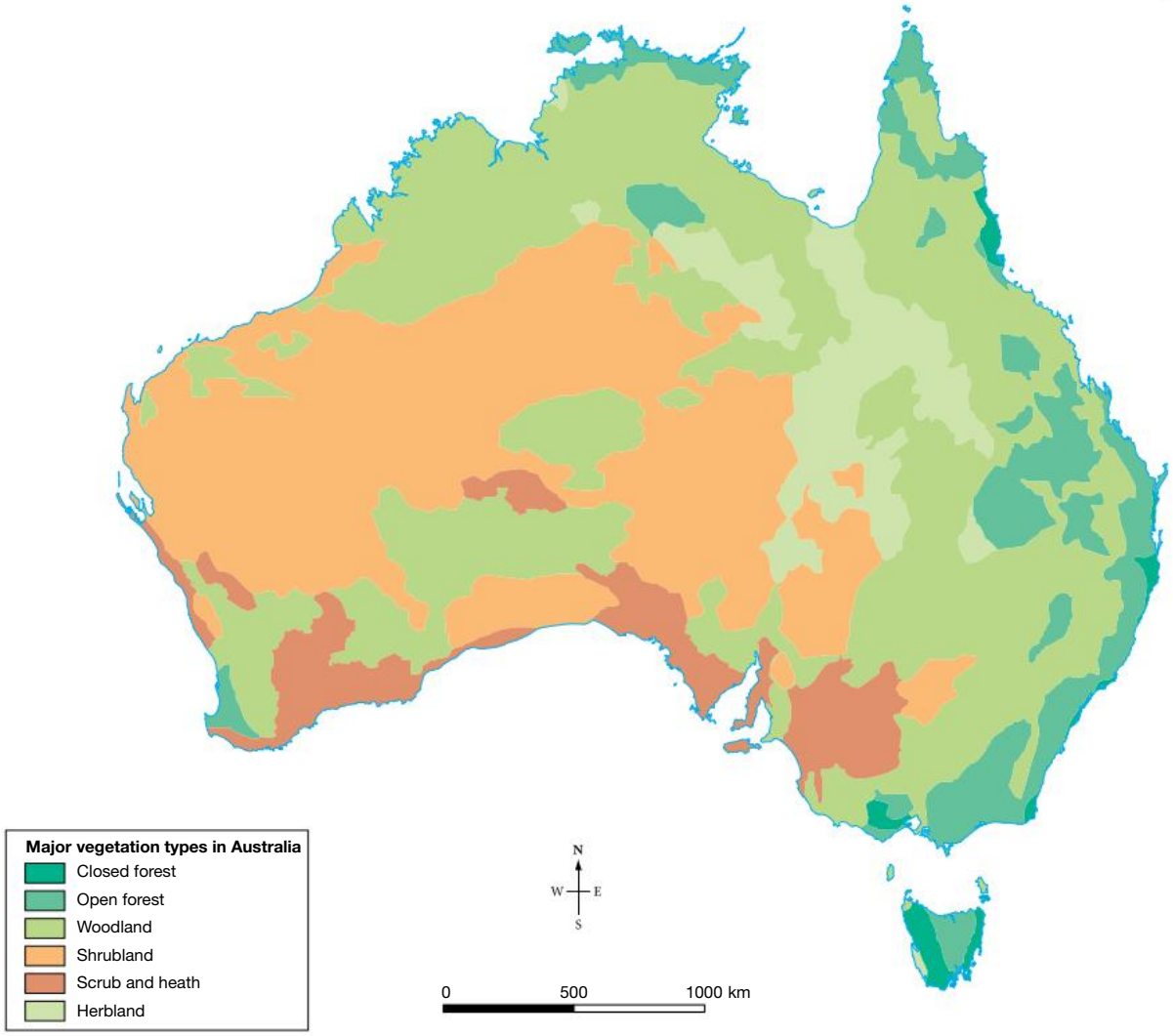
Step 1

Identify and carefully read the title of the map because it will provide you with an understanding of the information you can expect to see on the map. Sometimes the title tells you the date of the information that has been mapped. The map shown in **FIGURE 3** has a title that tells us it is a map of Australia showing major vegetation types. The colours in the key help us to understand the distribution of vegetation.

Step 2

Next, examine the key. We notice that closed forest is found in about half the area of Tasmania, small linear coastal tracts along parts of the east coast of mainland Australia and in the Otway region of Victoria. We could make a similar detailed description of open forest. Looking at the pattern of forests overall, we conclude that only a small area of Australia is forested — less than 10 per cent.

FIGURE 3 Major vegetation types in Australia



Source: Map taken from http://www.anbg.gov.au/aust-veg/veg-map.html. Reproduced with permission from Sydney University Press

Resources

Video eLesson How to read a map (eles-1634)
Interactivity How to read a map (int-3130)

9.5.3 Let me do it

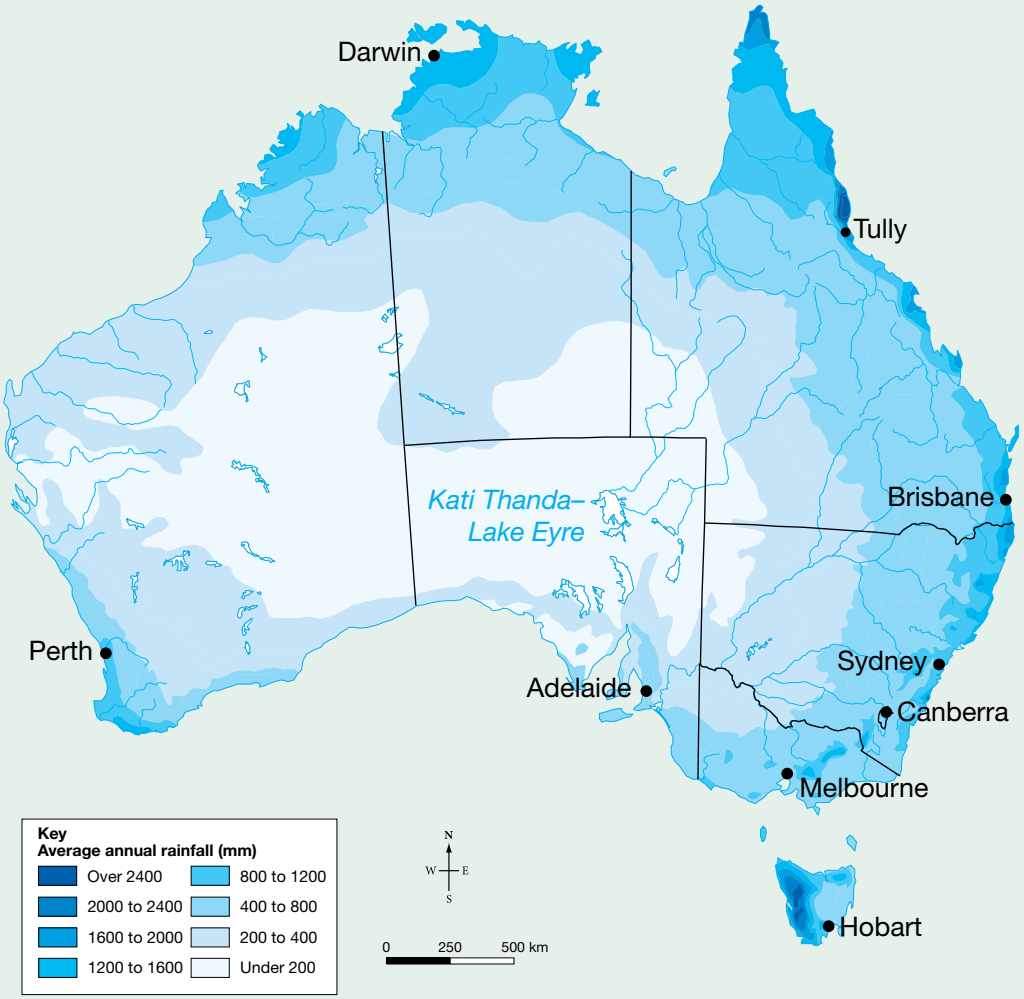
Complete the following activity to practise this skill.

9.5 ACTIVITY

Apply your skills to answer the following questions. Use the checklist provided to ensure you have covered all aspects of the task.

a. Refer to **FIGURE 4**. Describe the map of Australia's average annual rainfall.
- **i.** What is the average annual rainfall of Cairns?
- **ii.** What is the average annual rainfall of Australia's state capital cities?
- **iii.** Describe the area of Australia that receives less than 200 mm of annual rainfall.
- **iv.** Describe the distribution of the wettest areas in Australia.

FIGURE 4 Average annual rainfall



Source: Bureau of Meteorology

b. Compare **FIGURE 3** and **FIGURE 4**.

i. What types of vegetation are found in the area of Australia that receives less than 200 mm of annual rainfall?

ii. What is the relationship between high annual rainfall and closed forest?

HASS skills: Questioning and researching
Geography concept: Interconnection

Checklist

I have:

- understood the title
- examined all of the parts of the map: key, source, scale, and any annotations and accompanying text
- considered the map as a whole.

9.6 SkillBuilder: Reading a weather map

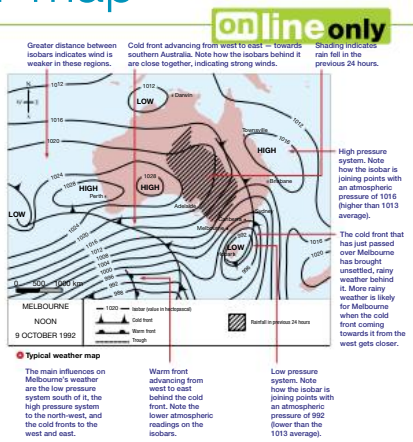
online only

What are weather maps?

Weather maps, or synoptic charts, show weather conditions over a larger area at any given time. They appear every day in newspapers and on television news. Being able to read a weather map is a useful skill because weather affects our everyday life.

Go online to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).



Resources

Video eLesson Reading a weather map (eles-1637)

Interactivity How to read a weather map (int-3133)

9.7 SkillBuilder: Creating a simple column or bar graph

LEARNING INTENTION

This SkillBuilder shows you how to create a simple column or bar graph. Creating a graph is part of the questioning and researching HASS skill.

9.7.1 Tell me

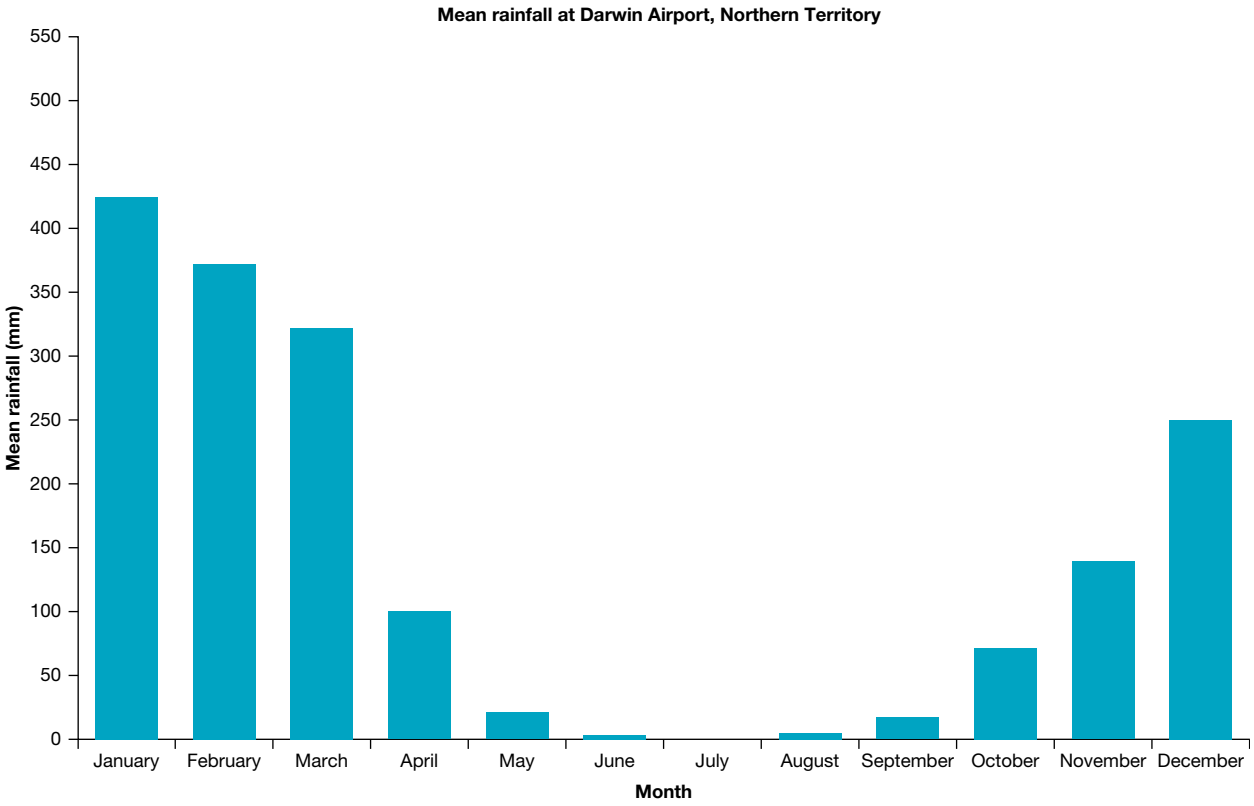
What are column or bar graphs?

Column graphs show information or data in vertical columns. In a bar graph, the data is shown in bars that are drawn horizontally. Column and bar graphs can be drawn by hand, or constructed using a computer spreadsheet.

How are column graphs useful?

Column graphs are useful for comparing quantities. They can help us understand and visualise data, see patterns and gain information. For example, we can use them to help understand rainfall patterns in different months (see **FIGURE 1**).

FIGURE 1 Rainfall at Darwin Airport



Source: © Bureau of Meteorology

A good column graph has:

- ruled axes
- labelled axes
- a space between each column
- a title
- the source of information.

9.7.2 Show me

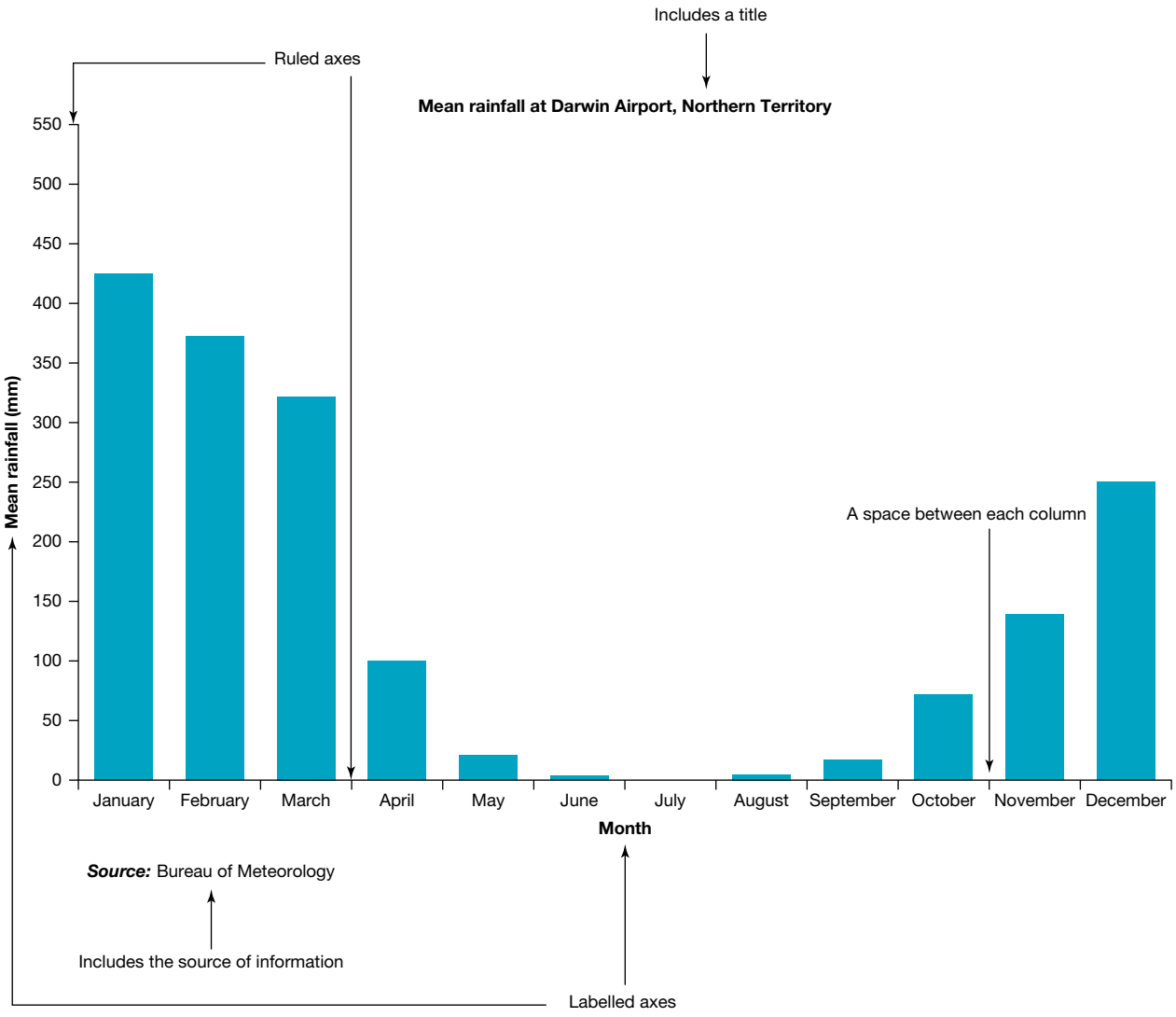
How to complete a column graph

You will need:

- a table of data (see **TABLE 1)**
- graph paper
- a pencil
- a ruler.

Model

FIGURE 2 A labelled column graph



Procedure

Step 1

Examine the data. Decide on the scale to use for your vertical axis. For this example, the vertical axis should start at zero and increase at intervals to suit the data. Because the highest rainfall for any month for Cardwell is 465.9 mm, intervals of 50 would be suitable. For this exercise, you could use 1 cm to represent 50 mm of rainfall. Draw your vertical axis according to the scale you have devised.

TABLE 1 Mean monthly rainfall (mm) for the years 1871 to 2016, Cardwell, Queensland

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
438.5	465.9	400	208.6	94.7	47	32.4	29.2	38.5	54.4	115.2	193.5

Source: © Bureau of Meteorology

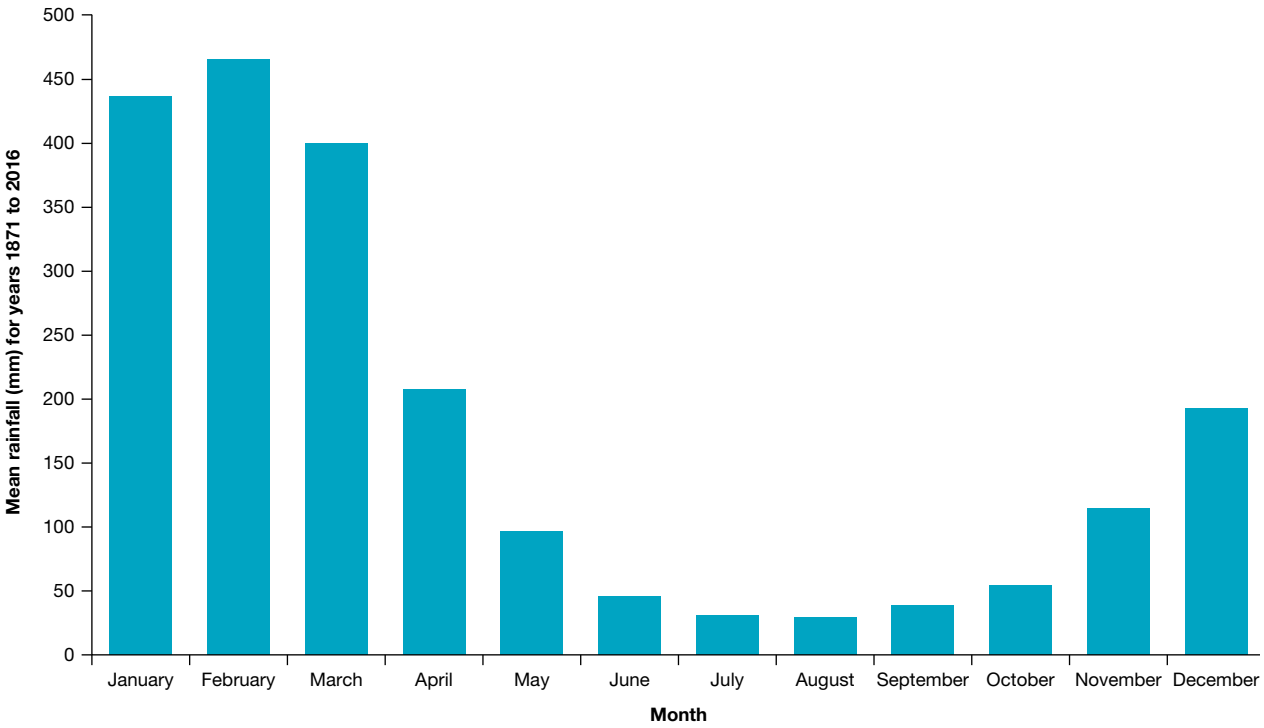
Step 2

Decide on the width and spacing of the columns and draw your horizontal axis to fit. Ensure that each column is the same width.

Step 3

For each column, mark the meeting point of the two pieces of information with a dot, and then use your ruler to neatly complete the column. Shade it in using colour.

FIGURE 3 Mean monthly rainfall for the years 1871 to 2016, Cardwell, Queensland



Source: © Bureau of Meteorology

Step 4

Label the vertical and horizontal axes and give the graph a title. Include a key if necessary.

Step 5

Provide the source beneath your graph, to enable the reader to locate the source data if they wish.

on Resources

Video eLesson Constructing a simple column or bar graph (eles-1639)

Interactivity Creating a simple column or bar graph (int-3135)

9.7.3 Let me do it

Complete the following activities to practise this skill.

9.7 ACTIVITIES

1. Using the data in **TABLE 2**, construct your own graph of average monthly rainfall for Innisfail, Queensland.

TABLE 2 Mean rainfall (mm) for the years 1881 to 2016, Innisfail, Queensland

Jan	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov.	Dec.
507.3	590.1	662.2	456.3	302.2	189	137.6	116.9	86.1	87.7	157.9	262.6

Source: © Bureau of Meteorology

HASS skills: Questioning and researching

2. Once you have constructed your graph, apply the skills you have learned in this SkillBuilder to answer the following questions.
   a. Which month has the most rainfall?
   b. Which month is the driest?
   c. Imagine you are a filmmaker, planning to film on location in Innisfail for three months. Because rain would cause problems for your filming schedule, which months would be best for your requirements?

HASS skills: Evaluating

Checklist

I have:

- ruled axes
- labelled axes
- a space between each column
- included a title
- included the source of information.

9.8 SkillBuilder: Using topographic maps

LEARNING INTENTION

This SkillBuilder shows you how to use a topographic map. Using a topographic map is part of the questioning and researching HASS skill.

9.8.1 Tell me

What are topographic maps?

Topographic maps are more than just contour maps showing the height and shape of the land. They also show features of the natural environment, such as forests and lakes, and features of human environments, such as roads and settlements (places where a community of people live).

FIGURE 1 This is an aerial photograph of Mount Gambier, South Australia, an area with many extinct volcanoes. Lakes have formed in the craters of several volcanoes, and the most famous of these is Blue Lake. We can see many features in the photo, but a topographic map can give us more information, especially about the shape of the landscape — its topography.



Why are topographic maps useful?

All topographic maps use similar symbols to show the main features in the landscape. These conventional symbols make it easy for map readers to quickly identify the features shown in the legend, or key. Topographic maps are useful for a range of purposes, from bushwalkers wanting to gain an understanding of the landscape in which they plan to walk, to town planners and engineers needing to construct infrastructure such as roads and bridges.

9.8.2 Show me

How topographic maps help us to locate places on a map

You will need:

- a topographic map (see **FIGURE 3**).

Many observations can accurately be made from a topographic map. **FIGURE 3** is a topographic map extract of Mount Gambier. Blue Lake is a distinctive feature on this map, and it is surrounded by a steep slope. The built-up area, or township, is situated north of Blue Lake. A railway line passes through the town and the station is close to the civic centre and post office. The main town extends approximately four kilometres east–west and four kilometres north–south. The local golf club can be found in the north-east of town. These observations are made by using the legend, north arrow and scale.

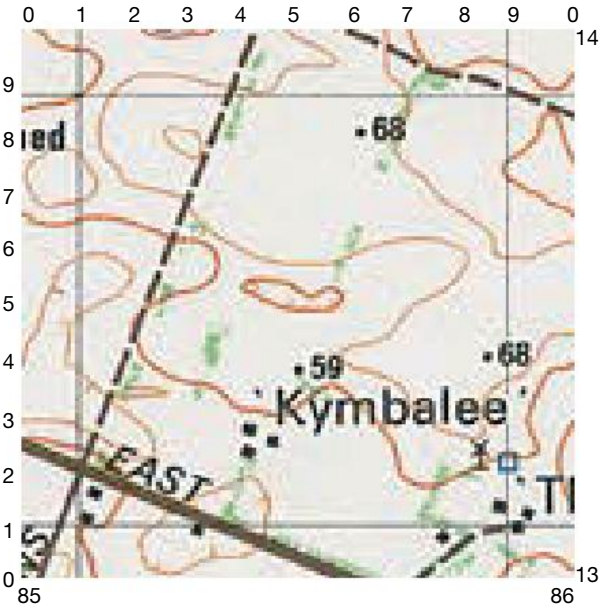
Area and grid references

A one-kilometre-square grid is overprinted on a topographic map. These grid lines are numbered with two-digit numbers in the map's margins. Lines that run up and down the map (north–south) are called eastings. The numbers increase as you move to the east. Lines that run horizontally across the map (east–west) are called northings. The numbers increase as you move north. In a grid reference, the eastings are given first, and then the northings.

Four-figure grid references tell you the grid square in which to find a feature. The letters AR are placed in front of a four-figure reference to show the area reference. For example, AR8513 contains the town of Kymbalee (see **FIGURE 2**).

Six-figure grid references pinpoint an exact point in the grid square. The third and sixth figures represent one-tenth of the distance between the two grid numbers. These divisions are not written on the map, so they must be estimated. The letters GR are used in front of a six-figure grid reference. No spaces are used between the digits in four- or six-figure references; for example, Kymbalee's grid reference is GR854132.

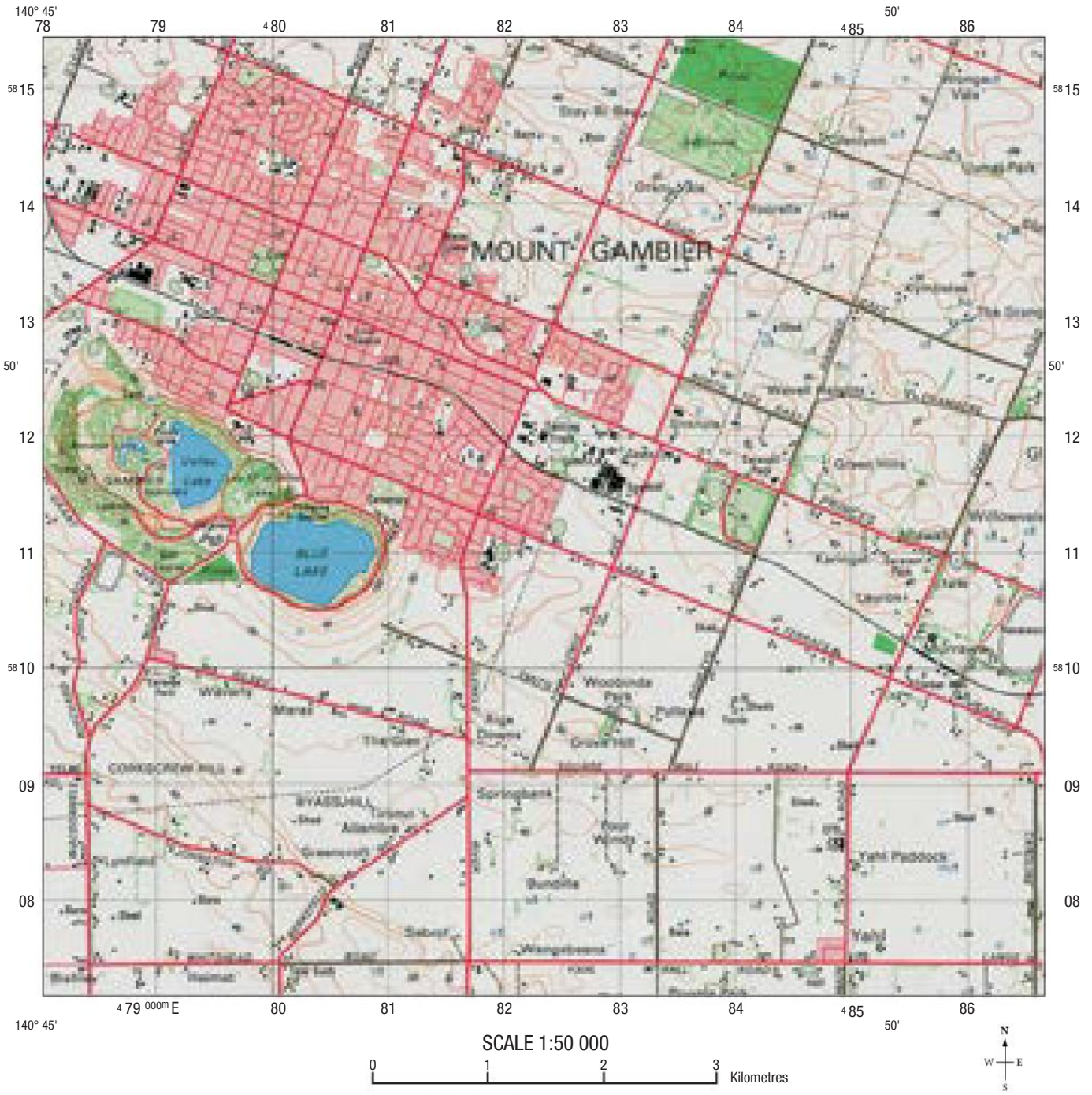
FIGURE 2 Working out a six-figure grid reference



Resources

Digital document	Topographic map extract — Mt Gambier (doc-17951)
Video eLesson	Using topographic maps (eles-1641)
Interactivity	Using topographic maps (int-3137)
Google Earth	Mount Gambier

FIGURE 3 This topographic map extract of Mount Gambier can be used to determine the location, direction and distance of physical and human features in the area shown on the map.



Built-up area; Parks, recreation areas. .....
Road, sealed surface, two or more lanes; National route marker. .....
Road, sealed surface, one lane. .....
Road, unsealed surface, two or more lanes; Bridge. .....
Road, unsealed surface, one lane; Gate; Cattle grid. .....
Vehicular track. .....
Railway, mulitple track; Station; Siding. .....
Railway, single tract, Cuttting; Embankment. .....
Building; Post office; Police station; School. .....
Hospital; Church; Mine; Windmill. .....
Fence; Guerry. .....

Power transmission line; Levee or bank. .....
Survey beacon; spot elevation. .....
Lake perennial; Watercourse. .....
Lake, intermittent; Land subject to inundation. .....
Dam or waterhole on watercourse; Tank or small dam. .....
Contours; Depression contours. .....
Cliff; Escarpment or low cliff. .....
Pine plantation; Orchard or low cliff. .....
Windmark. .....
Trees and scrub, scattered .....
Trees and scrub, medium, dense. .....

Source: Government of South Australia, Department of Environment, Water and Natural Resources.

9.8.3 Let me do it

Complete the following activity to practise this skill.

9.8. ACTIVITY

Answer these questions using the **FIGURE 1** aerial photograph and **FIGURE 3** topographic map extract of Mount Gambier. Use the checklist provided to ensure you have covered all aspects of the task.

a. Examine **FIGURE 1.** From which direction was this photograph of the crater lakes taken?
b. Examine **FIGURE 3.** Look at the contour lines to the south of Blue Lake. Is the land flat or steep? How can you tell?
c. Sketch the special symbols used in the legend showing that the crater lakes:
  i. form a depression
  ii. have steep sides.
d. Give the main features found at the following area references.
  i. AR8010
  ii. AR8013
e. Give area references for the following features.
  i. Valley Lake
  ii. The trotting track
f. Find the following features.
  i. GR858087
  ii. GR816077
  iii. GR807128
  iv. GR812123
g. From the topographic map extract of Mount Gambier, give six-figure grid references for features that show the following.
  i. Mount Gambier has a large timber industry.
  ii. Mount Gambier is a popular tourist resort.
  iii. Mount Gambier has many sporting facilities.
  iv. Mount Gambier is the centre of a farming region.
h. Approximately how wide is Blue Lake at its widest point? **HASS skills: Analysing**

Checklist

I have:
- identified north, south, east and west using the north point
- used the key to identify features
- used grid references to describe the location of a specific feature
- used the scale to calculate distances
- interpreted topography by considering how close together the contour lines are.

9.9 SkillBuilder: Using alphanumeric grid references

LEARNING INTENTION

This SkillBuilder shows you how to use an alphanumeric grid reference. Using an alphanumeric grid reference is part of the analysing HASS skill.

9.9.1 Tell me

What are alphanumeric grid references?

Alphanumeric grid references are a combination of letters and numbers that help us locate specific positions on a map. They are linked to the lines that form a grid over certain kinds of maps. The letters and numbers are placed alongside the gridlines, just outside the map. The grid, letters and numbers allow you to pinpoint a place or feature by stating its alphanumeric grid reference. For example, in **FIGURE 1**, the Queen Victoria Market is located at grid reference B1; Federation Square is located at F4 and the Rialto Tower is located at B4.

Why are alphanumeric grid references useful?

If it weren't for grid references, finding places in detailed books of maps such as street directories and atlases would be very time consuming. Grid references allow the user to quickly locate the information they want among the hundreds of other features shown on a map. They also allow people to communicate with one another about location when they are using the same map.

FIGURE 1 A section of the Melbourne CBD



Source: Russell Tate / Getty Images Australia

9.9.2 Show me

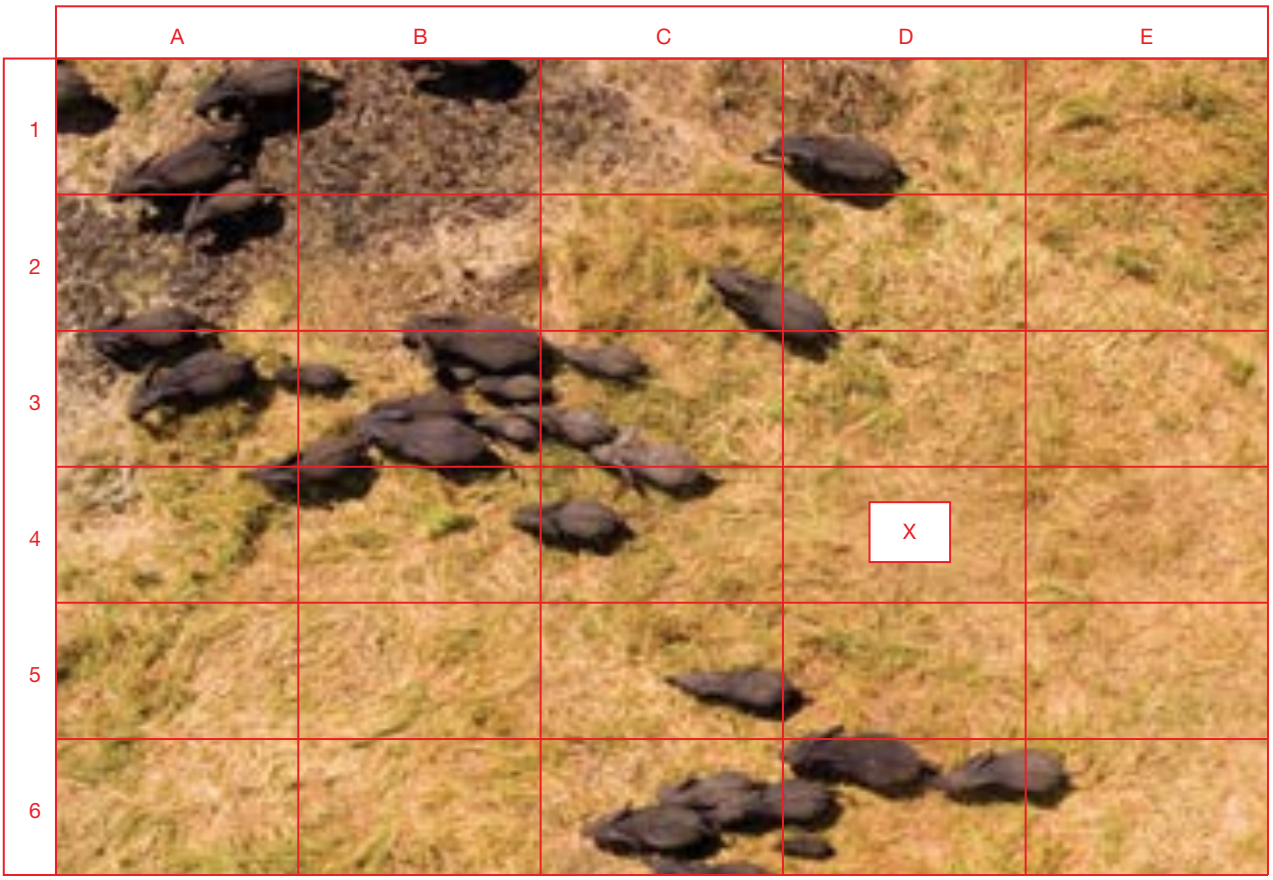
How to use alphanumeric grid references

You will need:

- a map that has alphanumeric grid references (see **FIGURE 3**)
- a pen and notebook.

Model

FIGURE 2 Aerial photo of elephants in Botswana



Procedure

Step 1

We will demonstrate this skill using the photo in **FIGURE 2**. In this aerial photograph of elephants in Botswana, we want to locate the veterinarian, Jessica, who is at point X.

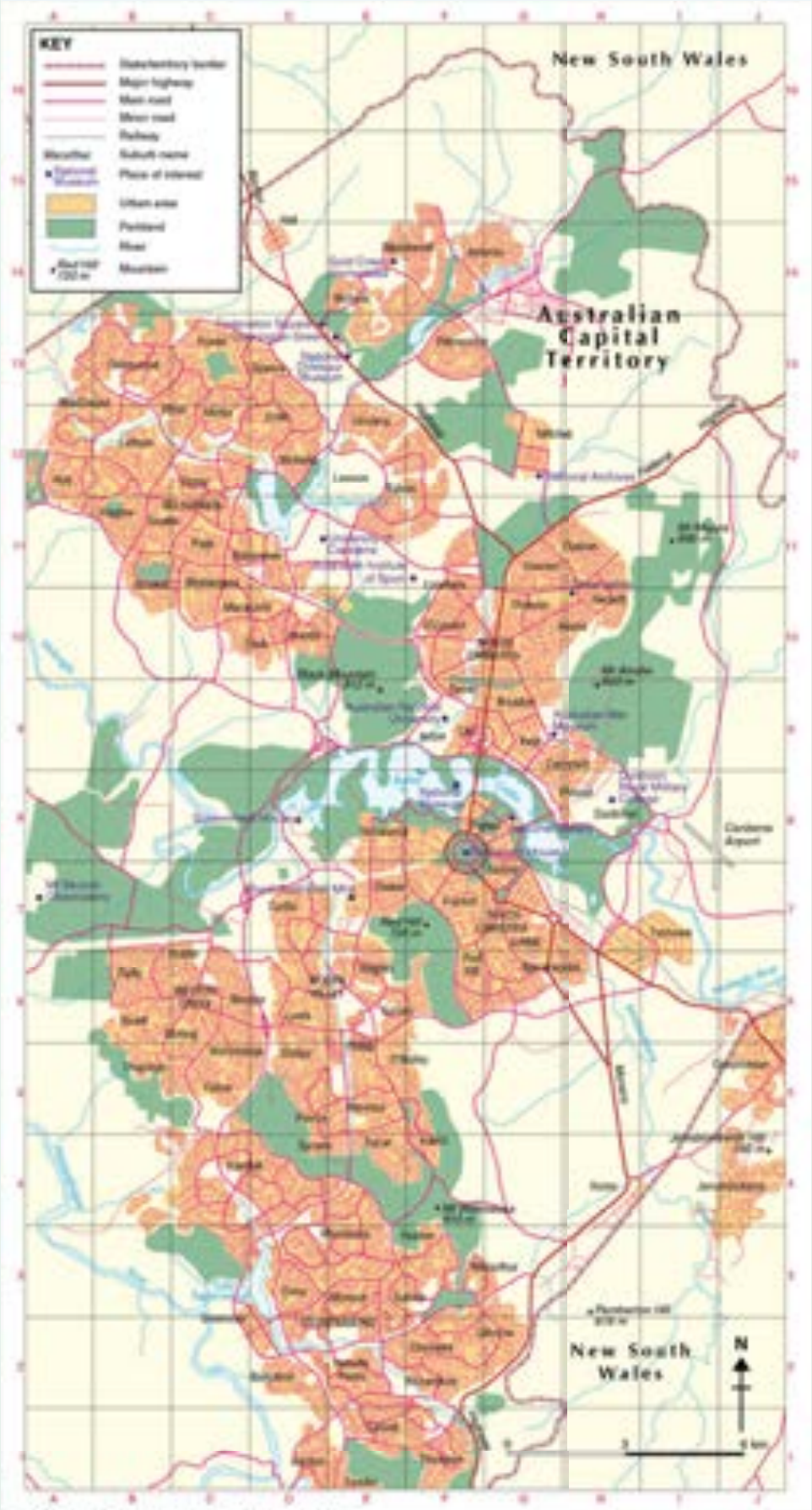
Step 2

Place your finger in the grid square that contains the X. By running your finger up the column of squares, you can see that Jessica is in column D. Write this down in your notebook.

Step 3

Now run you finger across the row of squares and you can see that she is in row 4. Write this down to the right of the letter D in your notebook. This gives us the grid reference for Jessica's location: D4. Now write the name of the feature (in this case, Veterinarian: Jessica) beside the grid reference.

FIGURE 3 Canberra and its suburbs



Source: MAPgraphics Pty Ltd, Brisbane.

Resources

Video eLesson Using alphanumeric grid references (eles-1642)
Interactivity Using alphanumeric grid references (int-3138)

9.9.3 Let me do it

Complete the following activity to practise this skill.

9.9 ACTIVITIES

1. Using **FIGURE 3**, give grid references for the following features.
   a. Canberra airport
   b. Queanbeyan
   c. Mt Ainslie

   Geography concept: Place
2. The Prime Minister is hosting a group of leaders from the Asia–Pacific region. As part of their trip, the leaders will be visiting some of the local attractions in and around Canberra. Use the Canberra map in **FIGURE 3** and the following grid references to report on the places of interest that the group visited.
   a. Before lunch, the group went to E7, E13 and F11.
   b. They had lunch at F9.
   c. After lunch, they visited G9 and H8 before making their way to A7.
   d. That night they had dinner at D8.

   HASS skills: Analysing

Checklist

I have:
- run up or down the column of squares first and then run across the row of squares to identify the grid references
- written the letter of the alphabet before the numeral for each reference
- double-checked my answers.

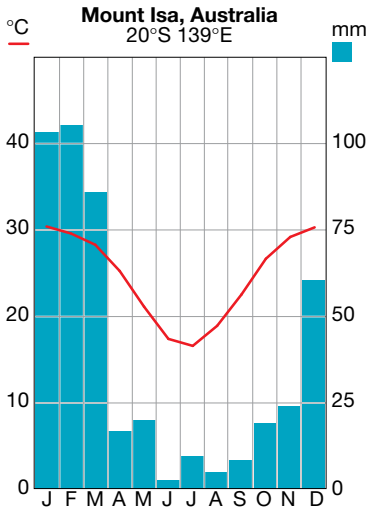
9.10 SkillBuilder: Drawing a climate graph

online only

What are climate graphs?

Climate graphs, or climographs, are graphs that show climate data for a particular place over a 12-month period. They combine a column graph and a line graph. The line graph shows average monthly temperature, and the column graph shows average monthly precipitation (rainfall).

Select your learnON format to access:
- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).



Resources

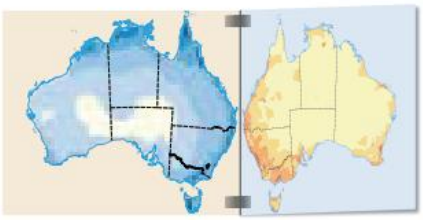
- **Video eLesson** Drawing a climate graph (eles-1644)
- **Interactivity** Drawing a climate graph (int-3140)

9.11 SkillBuilder: Creating and analysing overlay maps

online only

What are overlay maps?

An overlay map usually consists of two or more maps of the same area. A base map is overlaid with a transparent overlay, showing different information. Overlay maps allow users to see the relationships between the information on two or more maps.



Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).

Resources

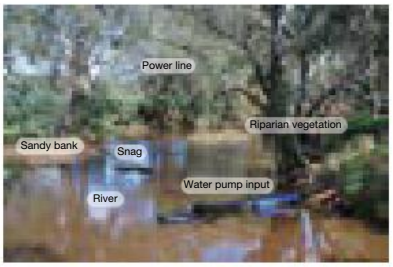
- **Video eLesson** Creating and analysing overlay maps (eles-1645)
- **Interactivity** Creating and analysing overlay maps (int-3141)

9.12 SkillBuilder: Annotating a photograph

online only

What are annotated photographs?

Photographs are used to show aspects of a place. Annotations are added to photographs to draw the reader's attention to what can be seen and deduced.



Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).

Resources

- **Video eLesson** Annotating a photograph (eles-1633)
- **Interactivity** Annotating a photograph (int-3129)

9.13 SkillBuilder: Drawing a line graph

LEARNING INTENTION

This SkillBuilder shows you how to draw a line graph. Drawing a line graph is part of the questioning and research HASS skill.

9.13.1 Tell me

What is a line graph?

A line graph displays information as a series of points on a graph that are joined to form a line. A line graph can be drawn by hand or by using a spreadsheet program such as Excel.

How are line graphs useful?

Line graphs are very useful to show change over time. They can show a single set of data, or they can show multiple sets based on a common theme, such as water use in the Murray–Darling Basin compared to water use in South Australia (see **FIGURE 1**). This enables us to compare similarities and differences between two sets of data at a glance.

A good line graph has:

- been drawn in pencil
- an appropriate scale to show the data clearly
- labelled axes
- used small dots joined by a line to make a smooth curve
- a legend, if necessary
- a clear and accurate title that explains the purpose of the graph
- the source of the data.

9.13.2 Show me

How to complete a line graph

You will need:

- data (see **TABLE 1**)
- graph paper
- a pencil
- a ruler.

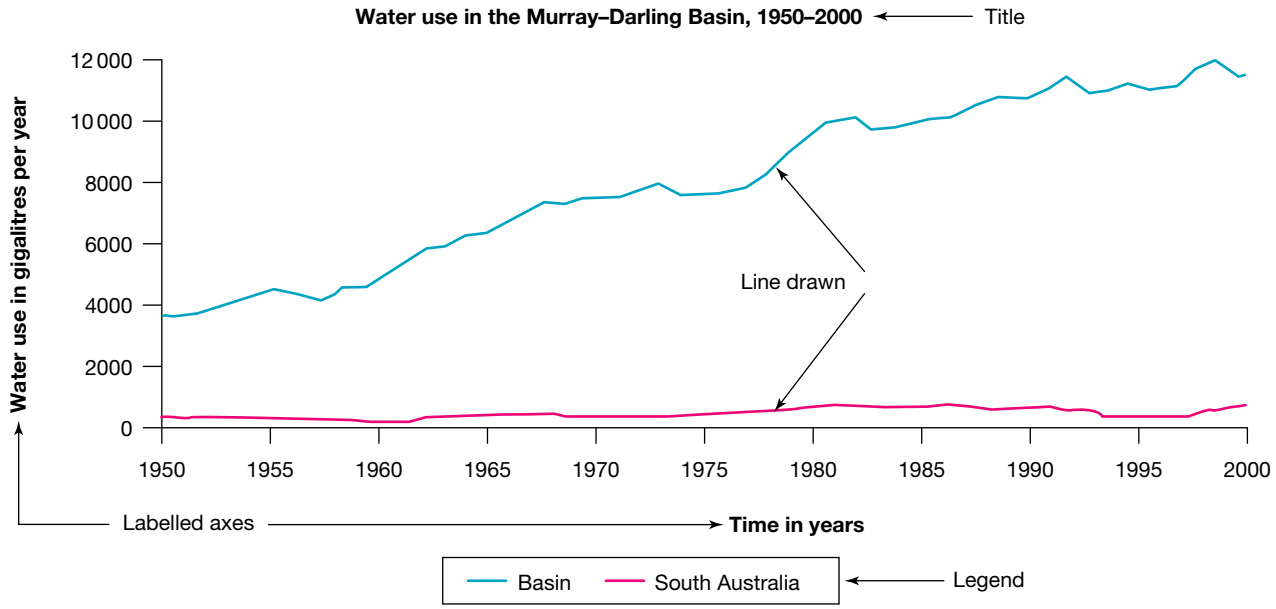
TABLE 1 Use of rainwater tanks by household, 2001–2010

Year	Use of rainwater tanks by household (%)
2001	16
2004	17
2007	19
2010	26

Source: © Australian Bureau of Statistics

Model

FIGURE 1 Water use in the Murray–Darling Basin and in South Australia



Source: © Department of Environment, Water and Natural Resources, South Australia Government

Procedure

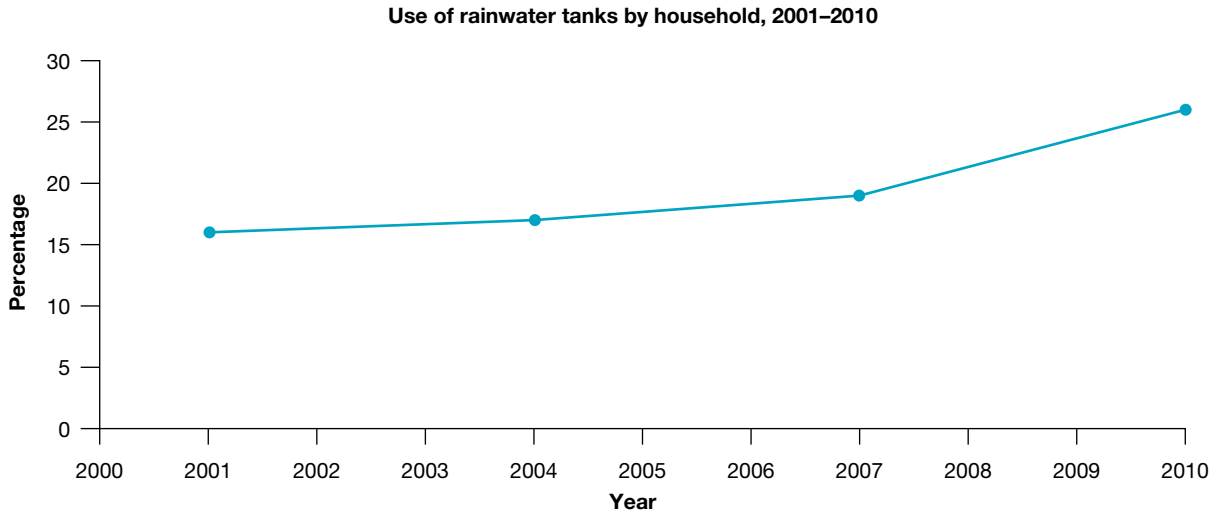
Step 1

Select the data you wish to compare or interpret (see **TABLE 1**).

Draw a horizontal and vertical axis using a ruler.

Evenly space and then label the years along the horizontal axis. Look carefully at your range of data and work out appropriate increments for the vertical axis, and then evenly space and label this information on the axis. Start at zero where the axes join. For the **TABLE 1** data, an increment of 5 percentage points would be appropriate.

FIGURE 2 Use of rainwater tanks by household, 2001–2010



Source: © Australian Bureau of Statistics

Step 2

Label the *x* and *y* axes. In this case, the *x*-axis would be labelled 'Year', and the *y*-axis would be labelled 'Percentage'.

Plot the statistics. Draw a dot at the point where the year on the horizontal axis meets the relevant position on the vertical axis. Once you have plotted all the statistics, join the dots. This can be done freehand or using a ruler.

Step 3

Add a title and a source to the graph.

on Resources

Video eLesson Drawing a line graph (eles-1635)
Interactivity Drawing a line graph (int-3131)

9.13.3 Let me do it

Complete the following activities to practise this skill.

9.13 ACTIVITIES

1. Use the data in **TABLE 2** to create a line graph. Use the checklist provided to ensure you cover all aspects of the task. **HASS skills: Questioning and researching**

TABLE 2 Daily residential water consumption for South Australia

Year	Daily residential water consumption (litres)
2001	539
2002	502
2003	532
2004	460
2005	465
2006	440
2007	413
2008	410
2009	395

Source: SA Water, Annual Reports

2. Based on what you have learned in this SkillBuilder and referring to your graph, apply your skills to answer the following questions.
   a. In which year was water consumption lowest?
   b. Describe the pattern shown by the graph.
   c. What reasons might explain the changes from 2001 to 2009?
   d. When water restrictions were lifted in 2011, predict what happened to water consumption.
   e. If the government made every household adopt water saving measures in 2022, what might happen to water consumption?
   f. Find statistics for water consumption for your area and compare these to another area.
   g. Explain how useful the graph was in helping you understand the changes that occurred to water consumption in South Australia compared to reading a table of figures. **HASS skills: Questioning and researching**

Checklist

I have:

- labelled the axes
- provided a clear title and source
- plotted the data accurately
- joined the points with a smooth line.

9.14 SkillBuilder: Interpreting diagrams

online only

What are diagrams?

A diagram is a graphic representation of something. In Geography, it is often a simple way of showing the arrangement of elements in a landscape and the relationships between those elements. Diagrams also have annotations: labels that explain aspects of the illustration.



Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).

on Resources

Video eLesson Interpreting diagrams (eles-1636)

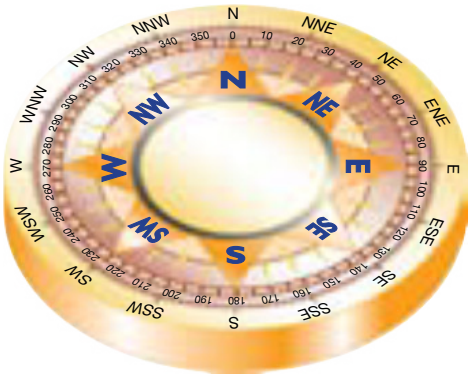
Interactivity Interpreting diagrams (int-3132)

9.15 SkillBuilder: Cardinal points — wind roses

online only

What are wind roses?

A wind rose is a diagram that shows the main wind features of a place; in particular, wind direction, speed and frequency. Wind directions can be divided into 8 or 16 compass directions.



Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).

on Resources

Video eLesson Cardinal points: wind rose (eles-1638)

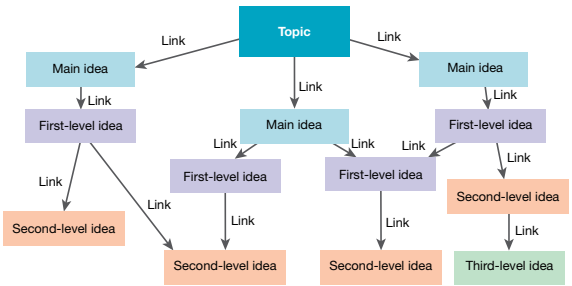
Interactivity Cardinal points: wind rose (int-3134)

9.16 SkillBuilder: Creating a concept diagram

online only

What is a concept diagram?

A concept diagram, sometimes mistakenly called a concept map, is a graphical tool that shows links between ideas, or concepts. Concept diagrams organise links into different levels. Concept diagrams enable you to organise your ideas and communicate them to others.



Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).

on Resources

Video eLesson Creating a concept diagram (eles-1640)

Interactivity Creating a concept diagram (int-3136)

9.17 SkillBuilder: Interpreting topological maps

online only

What are topological maps?

Topological maps are very simple maps, with only the most vital information included. These maps generally use pictures to identify places, are not drawn to scale and give no sense of distance. However, everything is correct in its interconnection to other points.



Select your learnON format to access:

- an overview of the skill and its application in Geography (Tell me)
- a video and a step-by-step process to explain the skill (Show me)
- an activity and interactivity for you to practise the skill (Let me do it).

on Resources

Video eLesson Interpreting topological maps (eles-1736)

Interactivity Interpreting topological maps (int-3354)

9.18 SkillBuilder: Understanding satellite images

LEARNING INTENTION

This SkillBuilder shows you how to understand a satellite map. Understanding a satellite map is part of the analysing HASS skill.

9.18.1 Tell me

What are satellite images?

Satellite images show parts of our planet from space. They are taken from satellites and transmitted to stations on Earth. Satellites can collect a variety of data, including standard photographic imagery, colour infrared and radar data. They can show Earth in close-up or from far away. Special computer techniques allow data from satellites to be used to highlight patterns on the Earth's surface.

The most common type of satellite image comes from Landsat satellites. They are positioned 700 kilometres above the ground, orbiting the Earth every 100 minutes, and they use special cameras to detect variations in the light reflected from features on Earth. The process of detecting and recording the reflection of light is known as remote sensing.

Different features can be highlighted in satellite images by selecting only certain bands of light reflected from Earth. These bands of light are assigned false colours to help reveal spatial patterns more clearly. In **FIGURE 1**, showing the Mt Lofty Ranges in South Australia, the labels point out the patterns.

Why are satellite images useful?

Satellite images help geographers observe a much larger area of the Earth's surface than photographs taken from an aircraft. They can also provide data relatively quickly, so they are often used to monitor natural disasters, including cyclone activity, bushfires and floods. Digital information from satellites is beamed to stations on Earth as radar or microwave signals. Computers are then used to enhance the images, which enable the study of landforms, farmland, disasters, environmental change, weather patterns and even military targets.

9.18.2 Show me

How to interpret a satellite image

You will need:

- a satellite image (see **FIGURE 2**).

Procedure

When you look at images taken from above, including satellite images, it can be confusing but your ability to interpret what you see will improve with practice. The following steps will help you to systematically gather the most information possible from images.

Step 1

Read the title and check for the date indicating when the image was taken. Read any accompanying information.

Step 2

Identify the main features of the image. What stands out? For example, roads will appear as continuous lines intersected by other lines. Rivers tend to be snake-like, and sometimes you may notice trees lining the riverbanks. Dwellings usually have rectangular roofs and are often clustered together.

FIGURE 1 A false-colour satellite image of the Mt Lofty Ranges



Source: © Commonwealth of Australia. Geoscience Australia 1982.

The **FIGURE 2** image of Canberra is centred on Parliament House, although its prominent central flag mast (visible at ground level) does not stand out. There appear to be wide circular roads and, if you can zoom in, cars are visible.

Step 3

Look for and label the biophysical features. For example, the black area is Lake Burley Griffin. Green vegetation in a city might be planted or it might be remnant vegetation. Look at the patterns of green to make predictions. Remnant (or remaining) vegetation will often be in an irregular pattern, whereas planted vegetation may be in rows.

Step 4

Look for and label the built features, such as roads, bridges, sports stadiums and residential housing. Again, look at patterns. Areas of small roofs with road access and surrounding vegetation suggest detached residential housing.

Step 5

Some colours, patterns and shapes may still be puzzling. Obtain a map of the same area — try an atlas or street directory, Google Maps, Bing or Nearmap. Find names of key features to use in your description. If the features you have identified are shown on the map, check whether your analysis so far matches the map. Use the map to investigate the aspects that are still puzzling. Be aware that the image may have been taken at a different date from the date the map was produced; this might explain other differences in what you see.

FIGURE 2 Satellite image of Canberra, by GeoEye, 26 September 2011



Source: © 2016 Digital Globe

on Resources

Video eLesson Understanding satellite images (eles-1643)

Interactivity Understanding satellite images (int-3139)

9.18.3 Let me do it

Complete the following activity to practise this skill.

9.18 ACTIVITY

If you have ever holidayed on the Gold Coast, you may have visited the Currumbin Wildlife Sanctuary. As seen in **FIGURE 3**, Currumbin generally has more natural vegetation than much of the Gold Coast, partly because it is more difficult to build on the steep hills there, and partly because the forests are valued as wildlife habitat. Currumbin is a popular surf beach and holiday destination.

FIGURE 3 Satellite image of Currumbin on Australia's Gold Coast, 8 May 2000



Source: Satellite image courtesy of GeoEye. Copyright 2009. All rights reserved

Study **FIGURE 3** and answer the following questions. Use the checklist provided to ensure you have covered all aspects of the task.

a. Look carefully at the satellite image and make a list of features you can recognise.
b. Find the bridge that crosses Currumbin Creek. Are any cars on the bridge?
c. What impact have visitors had on the plant life behind the beach?
d. Go to Google Maps and zoom in to Currumbin Beach, Queensland, to find a map of the area shown in **FIGURE 3**. Turn the satellite layer on. What ***changes*** can you see?
e. Suggest how the biophysical features and topography have influenced the settlement pattern in this area.

Geography concept: Change

Checklist

I have:

- checked the title
- identified biophysical and built features
- compared the satellite image with another map to check my interpretation.

9.19 Review

9.19.1 Key knowledge summary

9.2 Concepts in Geography

- The acronym SPICESS helps you remember the seven geographical concepts:
  - space
  - place
  - interconnection
  - change
  - environment
  - sustainability
  - scale.

9.3 Skills in Geography

- Geography is a way of exploring, analysing and understanding this world of ours, especially its people and places.
- Geographers use what is called an 'inquiry' approach. This means that you will investigate questions by collecting, analysing, and interpreting information and data in order to develop your own understanding and draw your own conclusions.
- Geography is a way of thinking and a way of looking at the world. One of the key tools geographers use is a map.
- Maps contain a lot of information about people and places. As a geographer, you will produce your own maps and spatial information, by hand or digitally.

Resources

eWorkbook
Customisable worksheets for this topic (ewbk-4285)
Reflection (ewbk-4323)
Student learning matrix (ewbk-4280)

Interactivity
Geography concepts and skills crossword (int-7698)

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 9 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

9.2 Concepts in Geography

My World Atlas

- Developing Australian Curriculum concepts > **Space**
- Developing Australian Curriculum concepts > **Place**
- Developing Australian Curriculum concepts > **Interconnection**
- Developing Australian Curriculum concepts > **Change**
- Developing Australian Curriculum concepts > **Environment**
- Developing Australian Curriculum concepts > **Sustainability**
- Developing Australian Curriculum concepts > **Scale**

9.4 SkillBuilder: Constructing a pie graph

eWorkbook
- SkillBuilder: Constructing a pie graph (ewbk-4193)

Video eLesson
- Constructing a pie graph (eles-1632)

Interactivity
- Constructing a pie graph (int-3128)

9.5 SkillBuilder: How to read a map

eWorkbook
- SkillBuilder: How to read a map (ewbk-4238)

Video eLesson
- How to read a map (eles-1634)

Interactivity
- How to read a map (int-3130)

9.6 SkillBuilder: Reading a weather map

eWorkbook
- SkillBuilder: Reading a weather map (ewbk-4239)

Video eLesson
- Reading a weather map (eles-1637)

Interactivity
- How to read a weather map (int-3133)

9.7 SkillBuilder: Creating a simple column or bar graph

eWorkbook
- SkillBuilder: Creating a simple column or bar graph (ewbk-4240)

Video eLesson
- Constructing a simple column or bar graph (eles-1639)

Interactivity
- Creating a simple column or bar graph (int-3135)

9.8 SkillBuilder: Using topographic maps

eWorkbook
- SkillBuilder: Using topographic maps (ewbk-4241)

Digital document
- Topographic map extract — Mt Gambier (doc-17951)

Video eLesson
- Using topographic maps (eles-1641)

Interactivity
- Using topographic maps (int-3137)

Google Earth
- Mount Gambier

9.9 SkillBuilder: Using alphanumeric grid references

eWorkbook
- SkillBuilder: Using alphanumeric grid references (ewbk-4242)

Video eLesson
- Using alphanumeric grid references (eles-1642)

Interactivity
- Using alphanumeric grid references (int-3138)

9.10 Skillbuilder: Drawing a climate graph

eWorkbook
- SkillBuilder: Drawing a climate graph (ewbk-4243)

Video eLesson
- Drawing a climate graph (eles-1644)

Interactivity
- Drawing a climate graph (int-3140)

9.11 SkillBuilder: Creating and analysing overlay maps

eWorkbook
- SkillBuilder: Creating and analysing overlay maps (ewbk-4244)

Video eLesson
- Creating and analysing overlay maps (eles-1645)

Interactivity
- Creating and analysing overlay maps (int-3141)

9.12 SkillBuilder: Annotating a photograph

eWorkbook
- SkillBuilder: Annotating a photograph (ewbk-4245)

Video eLesson
- Annotating a photograph (eles-1633)

Interactivity
- Annotating a photograph (int-3129)

9.13 SkillBuilder: Drawing a line graph

eWorkbook
- SkillBuilder: Drawing a line graph (ewbk-4246)

Video eLesson
- Drawing a line graph (eles-1635)

Interactivity
- Drawing a line graph (int-3131)

9.14 SkillBuilder: Interpreting diagrams

eWorkbook
- SkillBuilder: Interpreting diagrams (ewbk-4247)

Video eLesson
- Interpreting diagrams (eles-1636)

Interactivity
- Interpreting diagrams (int-3132)

9.15 SkillBuilder: Cardinal points and wind roses

eWorkbook
- SkillBuilder: Cardinal points and wind roses (ewbk-4248)

Video eLesson
- Cardinal points: wind rose (eles-1638)

Interactivity
- Cardinal points: wind rose (int-3134)

9.16 SkillBuilder: Creating a concept diagram

eWorkbook
- SkillBuilder: Creating a concept diagram (ewbk-4249)

Video eLesson
- Creating a concept diagram (eles-1640)

Interactivity
- Creating a concept diagram (int-3136)

9.17 SkillBuilder: Interpreting topological maps

eWorkbook
- SkillBuilder: Interpreting topological maps (ewbk-4250)

Video eLesson
- Interpreting topological maps (eles-1736)

Interactivity
- Interpreting topological maps (int-3354)

9.18 SkillBuilder: Understanding satellite images

eWorkbook
- SkillBuilder: Understanding satellite images (ewbk-4251)

Video eLesson
- Understanding satellite images (eles-1643)

Interactivity
- Understanding satellite images (int-3139)

9.19 Review

eWorkbook
- Reflection (ewbk-4323)
- Student learning matrix (ewbk-4280)

Interactivity
- Geography concepts and skills crossword (int-7698)

To access these online resources, log on to **www.jacplus.com.au**.

9.6 SkillBuilder: Reading a weather map

LEARNING INTENTION

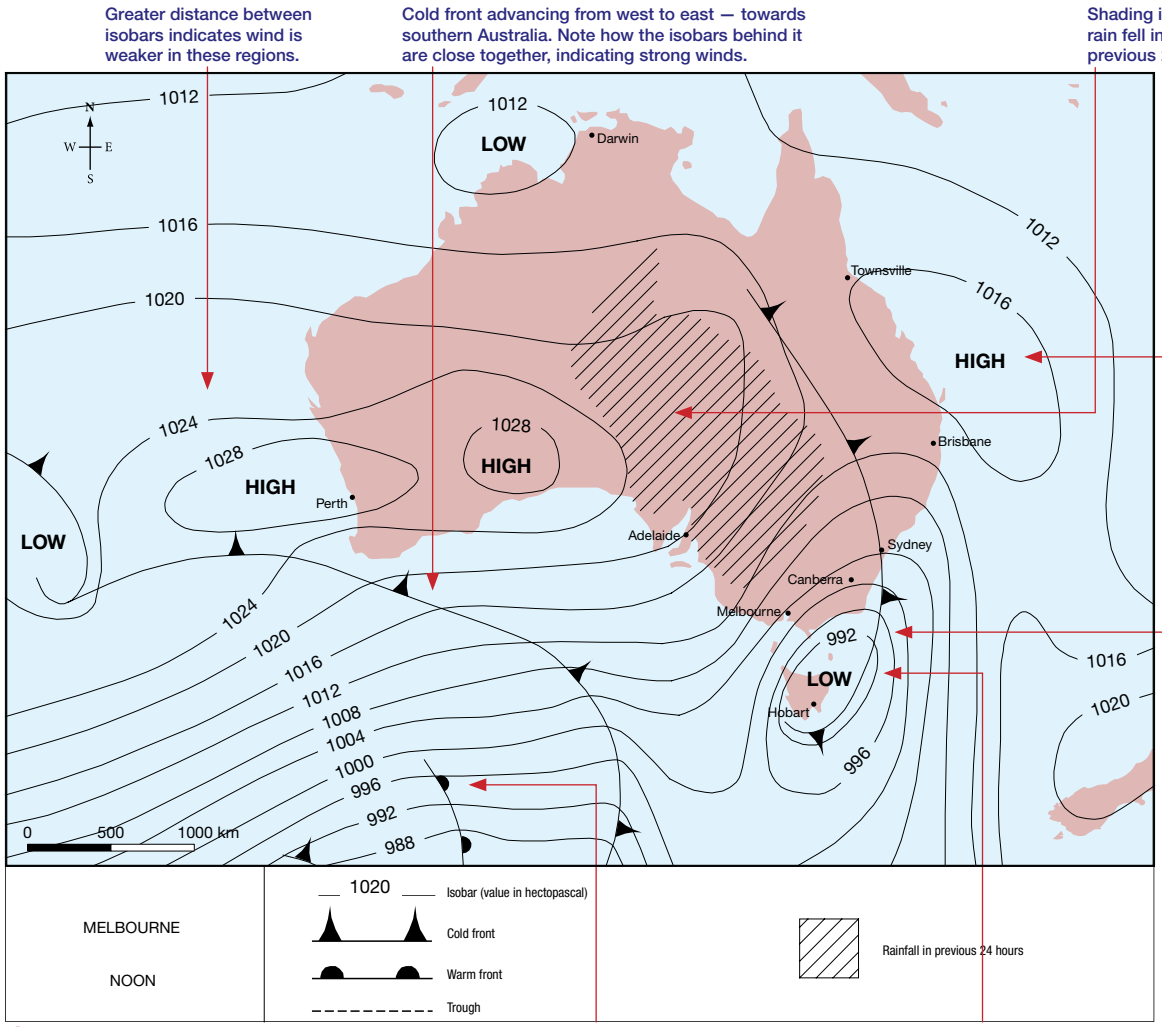
This SkillBuilder shows you how to read a weather map. Reading a weather map is part of the Analysing HASS skill.

9.6.1 Tell me

What are weather maps?

Weather maps or synoptic charts appear every day in newspapers and during the television news. They may look complex but, just as you learned to read letters and words, you can learn to read the symbols on weather maps. Weather maps use lines and symbols to show areas of low and high pressure, and weather events such as warm and cold fronts. The lines are called isobars. They join places with the same atmospheric pressure.

FIGURE 1 A typical weather map



Typical weather map

The main influences on Melbourne's weather are the low pressure system south of it, the high pressure system to the north-west, and the cold fronts to the west and east.

Source: MAPgraphics Pty Ltd, Brisbane

Atmospheric pressure is the weight of the air. This varies from place to place, depending on the air temperature. Meteorologists use sensitive instruments called barometers to measure atmospheric pressure.

How are weather maps useful?

Understanding weather is useful because it affects everyone's lives. Being able to read weather maps allows you to better understand what weather is expected (forecast) in the days ahead. Farmers use weather information to plan their work; tourists rely on forecasts to make decisions about travel plans; and emergency services use weather forecasts to broadcast warnings so that people can prepare for adverse conditions.

Today, meteorologists have more accurate ways of predicting weather than those used in the past. They use satellite images, radar-tracking weather balloons, automatic weather stations, ships and aircraft to help them predict the weather.

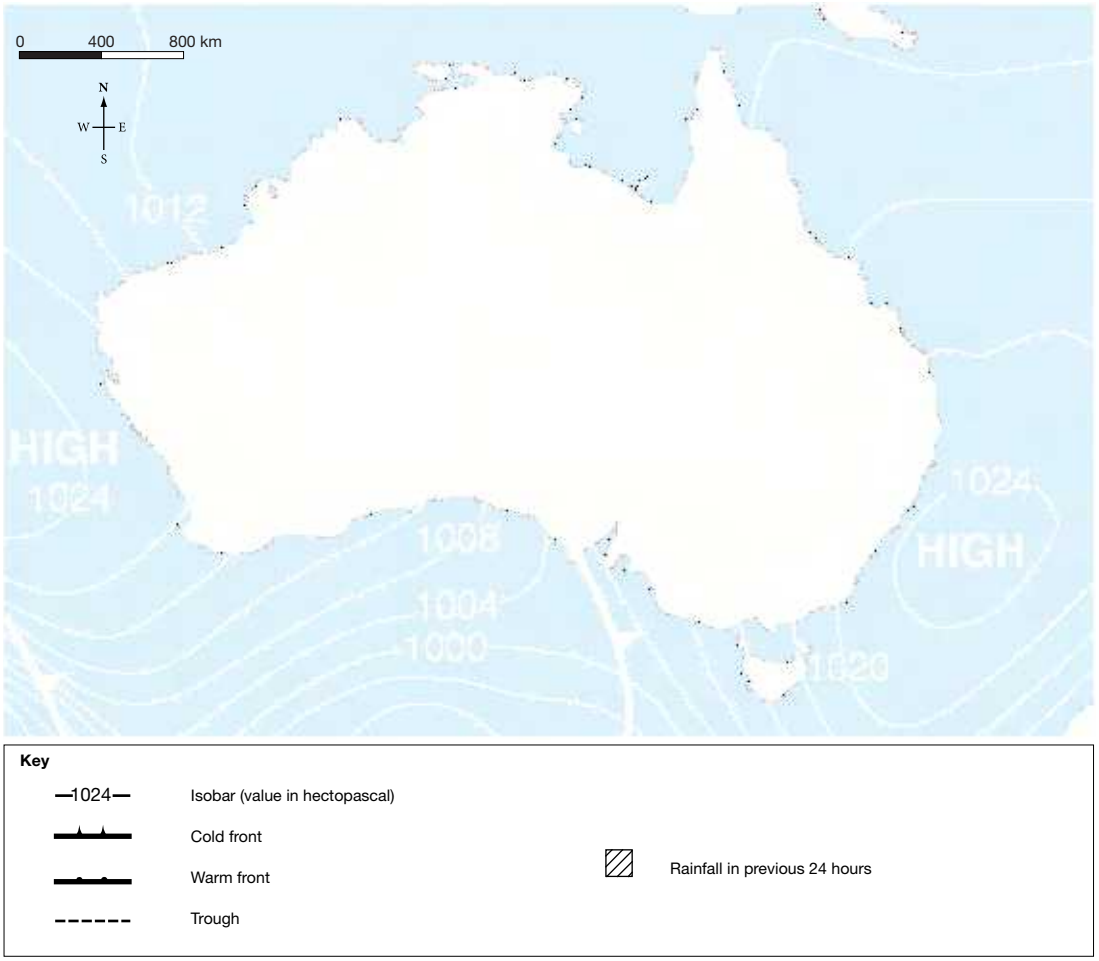
9.6.2 Show me

How to interpret a weather map

You will need:

- a weather map
- a key to interpret the weather map symbols.

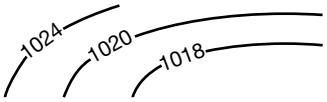
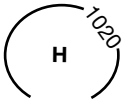
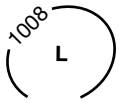
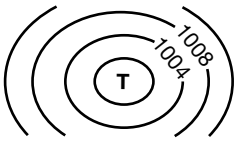
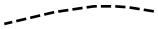
FIGURE 2 Weather map for 10 November



Source: MAPgraphics Pty Ltd, Brisbane

The average weight of air is 1013 hectopascals (hPa). Measurements higher than this (for example, 1020 hPa) indicate areas of high atmospheric pressure, where air is sinking. Measurements lower than this (for example, 985 hPa) indicate areas of low atmospheric pressure, where air is rising. You can use this code to read the weather map in **FIGURE 2**.

TABLE 1 Symbols on weather maps for the southern hemisphere

Symbol	Name	What does it mean?	Comment
	Isobars	Join places with the same air pressure	The closer together these lines, the stronger the wind.
	High pressure area	Sinking air	Generally fine weather. Winds rotate around these areas anticlockwise. 
	Low pressure area	Rising air	Generally cooler weather, rain. Winds rotate around these areas clockwise. 
	Tropical cyclone	Rapidly rising air	Strong winds, torrential rain
	Cold front	The ‘line’ along which an approaching mass of cold air meets warmer air	Fall in temperature, rain. Front moves in direction of arrowheads.
	Warm front	The ‘line’ along which an approaching mass of warm air meets colder air	Temperature rise, sometimes light rain. Uncommon in Australia
	Rain	Rain in the last 24 hours	Usually associated with low pressure areas and fronts
	Trough	A dip in isobars	An area associated with unsettled weather and precipitation

Procedure

Step 1

Pressure systems

Examine high-pressure systems (pressure above 1013 hPa) and low-pressure systems (pressure below 1013 hPa). Pressure systems generally move from west to east as they cross Australia and move around the world. In **FIGURE 2**, a high-pressure system is approaching south-west Western Australia, and this system is likely to bring fine weather to the region. The low-pressure system east of Broome brings cooler weather and rain.

Step 2

Air masses and fronts

Examine any air masses and fronts. **FIGURE 2** shows a cold front where cold air meets warmer air. This is likely to cause a fall in temperature and rain in South Australia.

Step 3

Precipitation

Examine precipitation patterns. Precipitation includes snow, hail and dew but the most common form of precipitation is rainfall. In **FIGURE 2**, we can see that more than half of Australia has received rain in the last 24 hours. This chart does not indicate how much rain has fallen.

Step 4

Wind

Wind is not depicted on this weather map. However, the closer together the isobars are, the stronger the winds will be. No significant areas of high wind are shown for Australia on 10 November.

Step 5

Troughs

The weather map in **FIGURE 2** shows a trough in central Australia. The trough line runs north from central South Australia towards the Gulf of Carpentaria. Troughs are usually associated with unsettled weather and precipitation.

on Resources

Video eLesson	Reading a weather map (eles-1637)
Interactivity	How to read a weather map (int-3133)

9.6.3 Let me do it

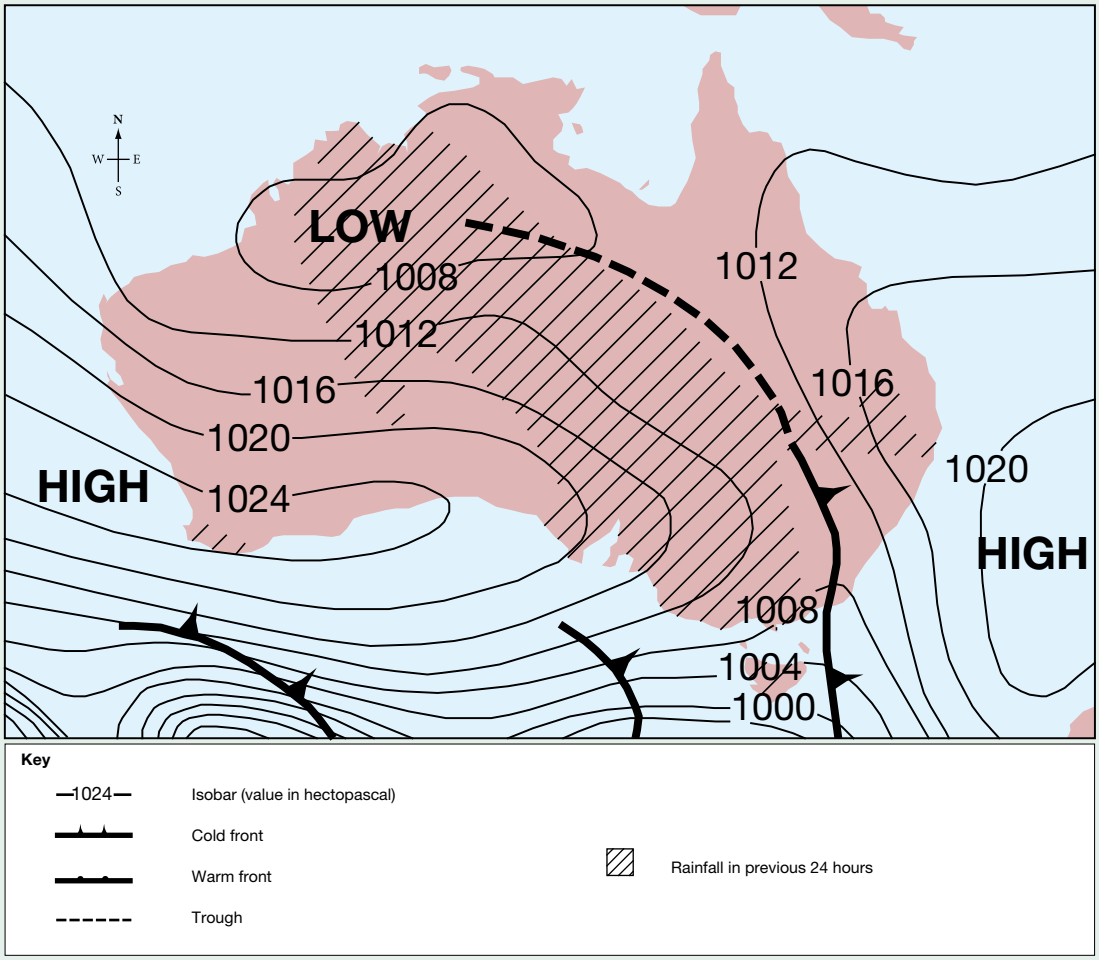
Complete the following activity to practise this skill.

9.6 ACTIVITY

The map in **FIGURE 3**, produced on 11 November, predicts the weather for 12 November. **FIGURE 4** shows what the weather was actually like that day. Based on the skills you have learned in this SkillBuilder, interpret the maps and answer the following questions. Use the checklist provided to ensure you cover all aspects of the task.

a. List what is different in **FIGURE 3** from the map showing actual weather for two days earlier (10 November), shown in **FIGURE 2**.
b. Compare the actual weather conditions in **FIGURE 4** with those predicted 24 hours earlier in **FIGURE 3**.
  i. How accurate was the predicted weather map?
  ii. How was it different?
c. Using **FIGURE 4**, describe Melbourne's weather on 12 November.

FIGURE 3 Weather map showing predicted weather for 12 November



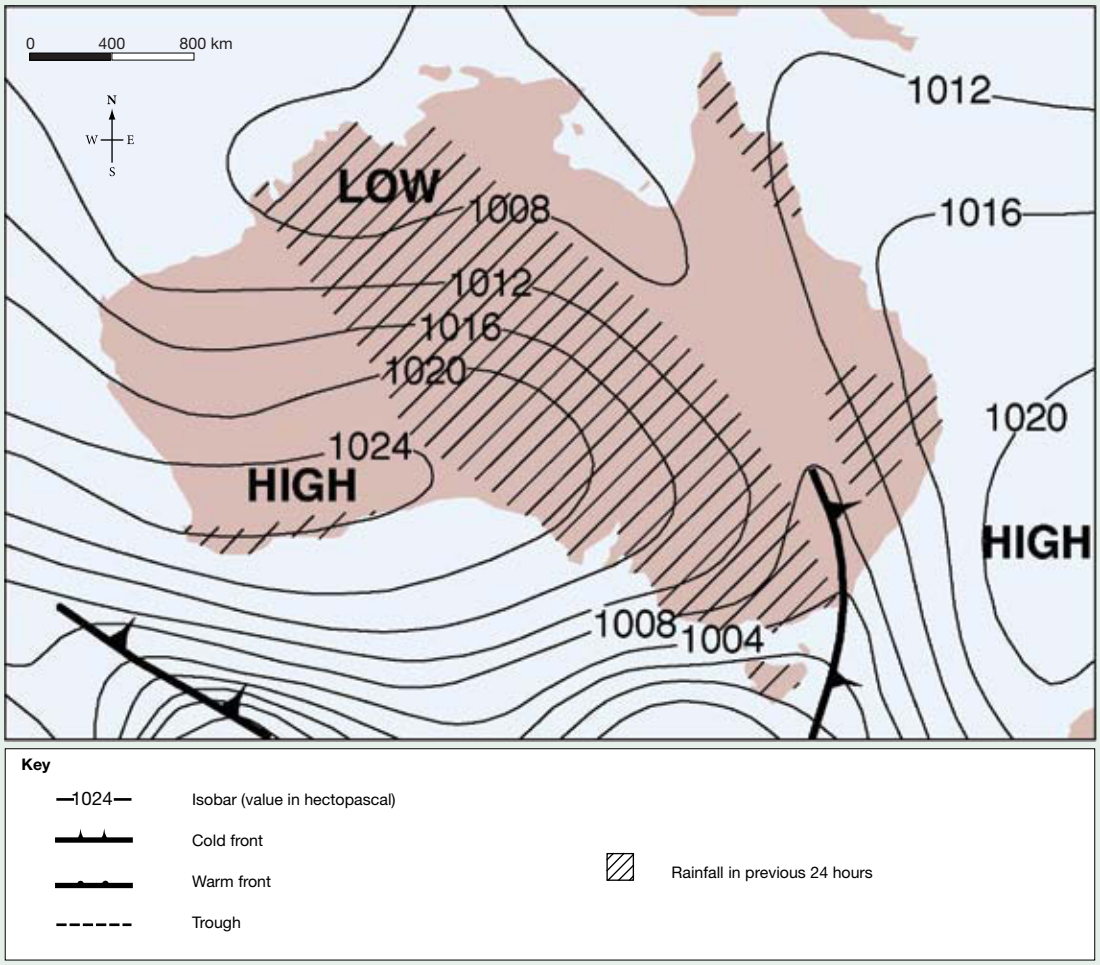
Source: MAPgraphics Pty Ltd, Brisbane

Checklist

I have:

- interpreted pressure systems, air masses and fronts, precipitation, wind and troughs
- written a detailed description.

FIGURE 4 Map showing actual weather for 12 November



Source: MAPgraphics Pty Ltd, Brisbane

9.10 Skillbuilder: Drawing a climate graph

LEARNING INTENTION

This SkillBuilder shows you how to draw a climate graph. Drawing a climate graph is part of the Questioning and researching HASS skill.

9.10.1 Tell me

What are climate graphs?

Climate graphs, or climographs, are graphs that show climate data for a particular place. They combine a column graph that shows average monthly precipitation (rainfall), and a line graph that shows average monthly temperature. The left axis represents temperature and the right axis represents rainfall, so you must take care to read from the correct scale when interpreting a climate graph. Temperature can be shown in one line, as mean monthly temperature; or it can be shown in two lines, representing mean maximum and mean minimum monthly temperatures.

Mount Isa is located around 1800 kilometres north-west of Brisbane, in the arid Gulf Country region of Queensland. It is one of the largest centres in outback Australia, being home to some 22 000 people. Most of these people are involved in the mining of the vast deposits of copper, silver and zinc found in the region. In the climate graphs for Mount Isa in **FIGURES 1** and **2**, you can see how one or two temperature lines can be used to give us an understanding of the climate.

FIGURE 1 Climate graph for Mount Isa, Queensland

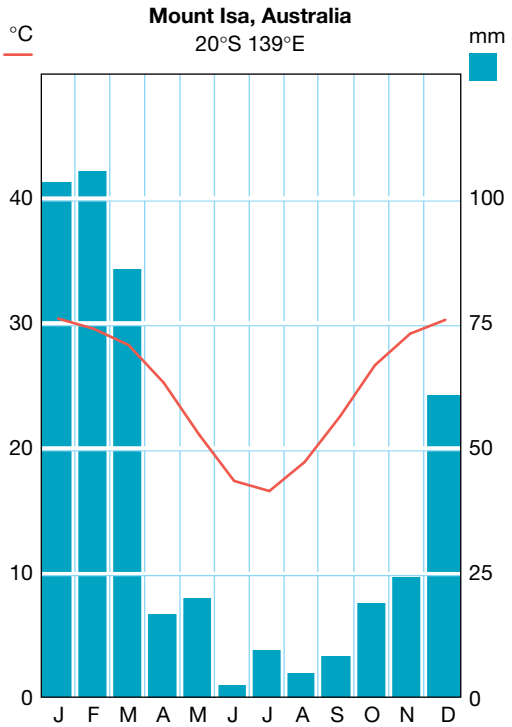
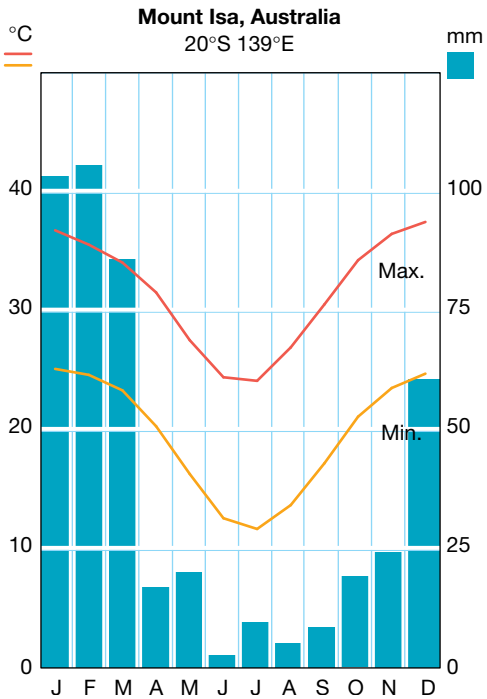


FIGURE 2 Climate graph for Mount Isa, showing average maximum and minimum temperatures



Why are climate graphs useful?

Climate graphs are used to show the climate of a place over a 12-month period. Because the red line on the graph shows temperature and the blue columns show rainfall, you can quickly understand the graph. It is much

easier to compare the climate of two places by looking at their climate graphs than by looking at tables of statistics, so drawing and using these graphs is an important geographical skill. It also makes it very easy to compare climate patterns for different areas when the graphs are drawn using the same conventions.

A good climate graph:

- is drawn in pencil first, and then coloured
- has ruled axes
- has labelled axes
- makes use of small dots before a line is drawn
- has a smooth curve for the temperature line in red
- has rainfall columns shaded in blue
- includes a title
- includes a source.

9.10.2 Show me

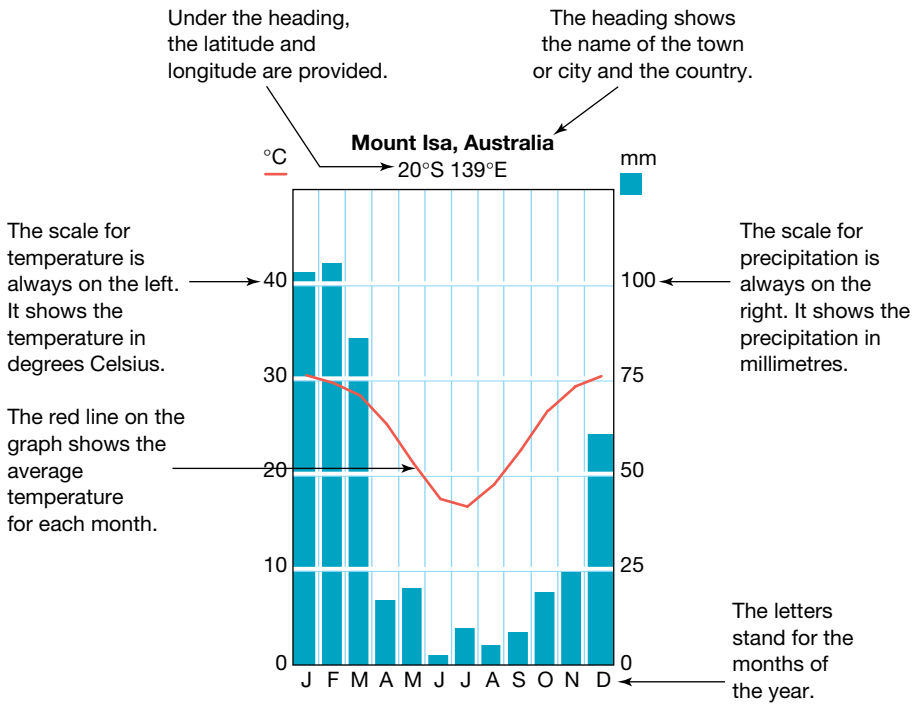
How to complete a climate graph

You will need:

- data to plot on your graph (see **TABLE 1**)
- graph paper
- a grey lead pencil
- a ruler
- a red pen and a blue pencil.

Model

FIGURE 3 Features of a climate graph



Procedure

Step 1

Look at the data in **TABLE 1**. Two sets of data are given: average monthly precipitation and average monthly temperature.

TABLE 1 New Delhi, 28°N 77°E, average monthly precipitation and average monthly temperature

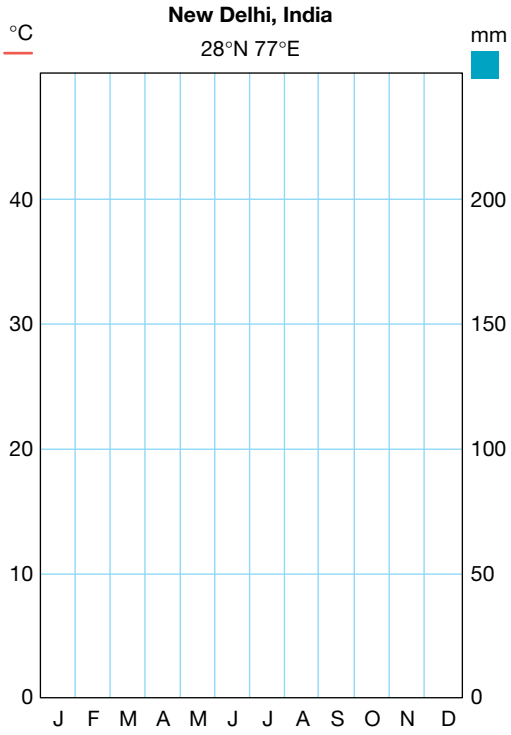
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
°C	14.1	16.9	22.4	28.6	32.8	33.8	31.0	29.8	29.2	26.0	20.3	15.4
mm	22.7	20.1	14.5	10.1	15.0	67.9	200.4	200.3	122.5	18.5	3.0	10.0

Source: www.worldclimate.com

Step 2

Consider the range of the data before you decide what scales will work for the vertical axes. For the right axis, find the wettest month. The precipitation scale begins at 0 and must extend far enough to include the wettest month. For the left axis, find the highest and lowest temperatures. A scale of 0 °C to 40 °C will suit most climate graphs. Try to use temperature and precipitation scales that prevent the line and column graphs from overlapping; however, this may not be possible if the place has a very high rainfall.

FIGURE 4 Set of axes for New Delhi climate graph



Step 3

Use a ruler and pencil to draw the axes on graph paper. Divide the horizontal axis into 12 equal sections to represent the months of the year. Label each month with its initial. Label the temperatures on the left vertical axis and precipitation on the right vertical axis.

Step 4

Construct a column graph showing the average monthly rainfall. Make sure you use the right vertical scale to plot your data. Rule a line across each column and colour the column blue.

Step 5

Construct a line graph showing the average monthly temperature. Plot the temperature by placing a dot in the centre of each month. Make sure that you use the left vertical scale. Use a red pen to join the dots with a smooth curve; don't use a ruler.

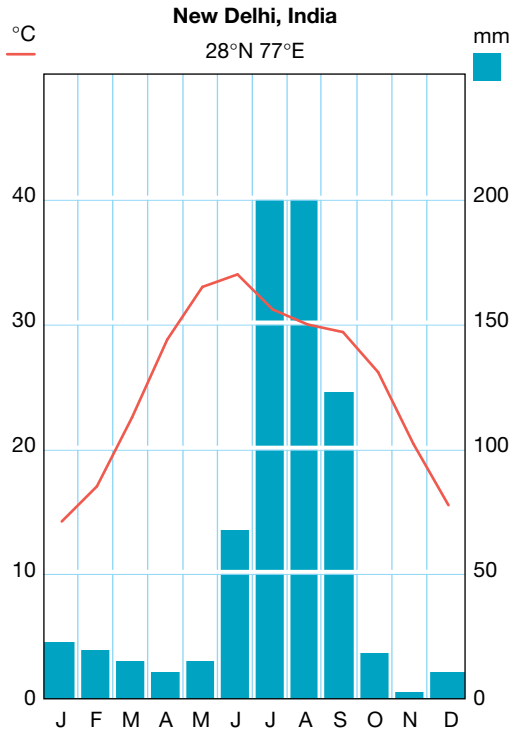
Step 6

Add a title, giving the name of the place, the country and the latitude and longitude. You can also indicate the elevation if you wish.

Step 7

Add the source details of the data used.

FIGURE 5 New Delhi climate graph



Resources

Video eLesson Drawing a climate graph (eles-1644)

Interactivity Drawing a climate graph (int-3140)

9.10.3 Let me do it

Complete the following activities to practise this skill.

9.10 ACTIVITIES

1. Mount Buller is a mountain in the Australian Alps. It is three hours' drive from Melbourne, and is the closest major mountain to Melbourne for skiing in winter. Use the data in **TABLE 2** to construct a climate graph for Mount Buller. Use the checklist provided to ensure you have covered all aspects of the task.

TABLE 2 Mount Buller, Victoria, 37.15°S, 146.44°E, elevation 1707 m, average monthly precipitation and average monthly temperature

	Jan.	Feb.	Mar	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
°C	17.2	16.5	14.4	10.0	6.2	3.0	1.4	2.0	4.9	8.2	11.8	14.3
mm	59.0	68.0	44.8	76.1	110.0	154.2	161.0	145.6	143.0	110.6	126.8	84.3

Source: Australian Bureau of Meteorology

2. Apply the skills you have developed in this SkillBuilder to answer the following questions.
   a. Which month is warmest in Mount Buller?
   b. Which month is coolest in Mount Buller?

c. Which month has the greatest precipitation in Mount Buller?
d. Which month has the least precipitation in Mount Buller?
e. Describe the climate of Mount Buller.

Checklist

I have:

- ruled the axes and labelled them
- drawn first in lead pencil and then used colour
- used small dots for the lines and then created a smooth curve with red pen
- shaded the columns in blue
- included a title and source.

9.11 SkillBuilder: Creating and analysing overlay maps

LEARNING INTENTION

This SkillBuilder shows you how to create and analyse an overlay map. Creating and analysing an overlay map is part of the Analysing HASS skill.

9.11.1 Tell me

What are overlay maps?

An overlay map usually consists of two or more maps of the same area. These maps are drawn at the same size or scale but show different information. The base map often shows information that does not change very much. Another transparent overlay, showing different information, is laid over the base map.

Why are overlay maps useful?

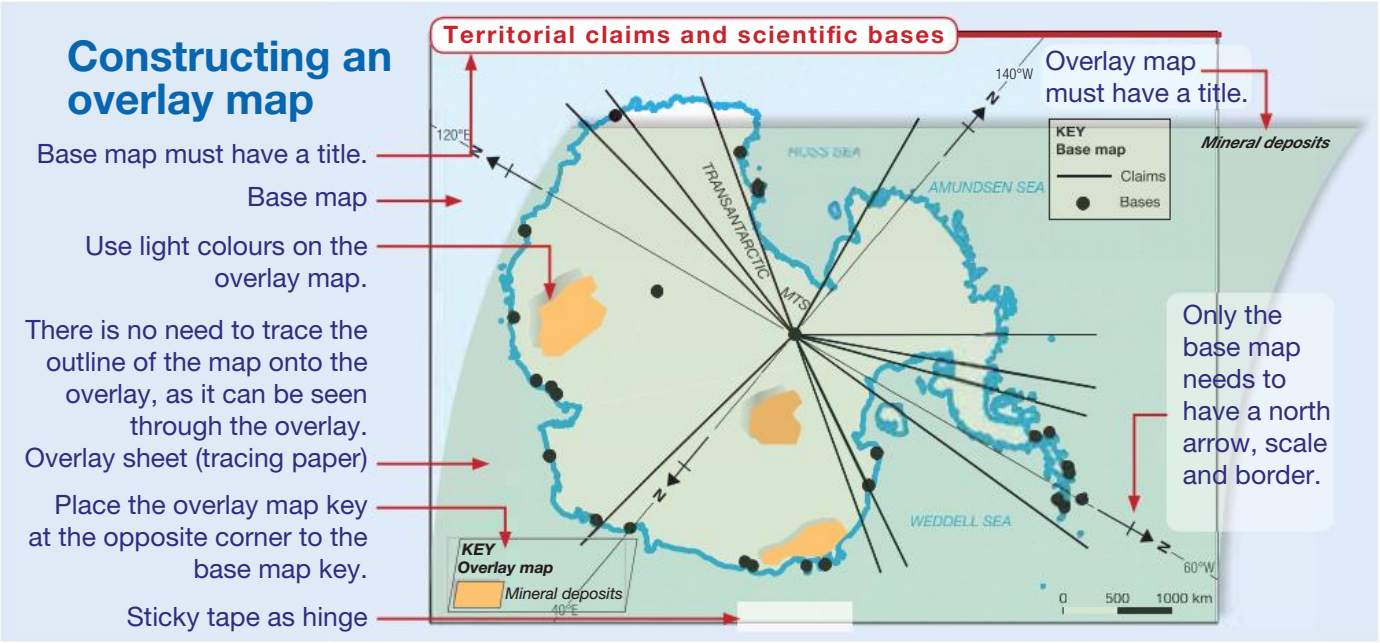
An overlay map is useful for comparing two different features on a map. It is really two maps in one – a base map drawn on paper and an overlay drawn on tracing paper to depict additional information.

Overlay maps allow map users to see the relationships between the information on two or more maps. They are useful when looking for patterns of spatial association – that is, features found in a similar distribution pattern.

Model

In the overlay map in **FIGURE 1**, the base map depicts the continent of Antarctica, territorial claims and scientific bases. The overlay illustrates mineral deposits.

FIGURE 1 Constructing an overlay map of mineral deposits in Antarctica



A good overlay map:

- is drawn in pencil first, with colour added later
- includes BOLTSS on the base map
- uses light colours on the overlay so the base map information remains visible
- includes a key for the element depicted on the overlay
- is hinged to the base map using sticky tape
- includes a title for the overlay.

9.11.2 Show me

How to complete an overlay map

You will need:

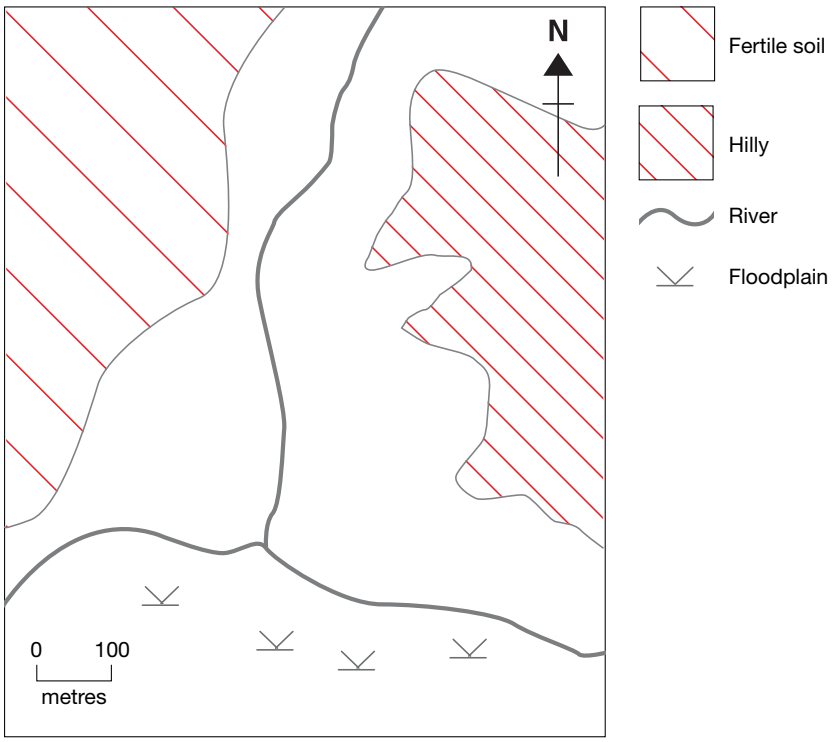
- two or more maps of the same area, drawn at the same scale, and showing different information
- tracing paper or clear transparency sheet
- cardboard (optional)
- clear adhesive tape
- a black lead pencil
- coloured pencils.

Procedure

Step 1

Create a base map of an area showing the distribution of features you want to display (see **FIGURE 2**). Base maps are drawn on clean white paper. To make a base map, find a map of the area that you want to show, and trace the features that are relevant to your purposes. Ensure you include BOLTSS.

FIGURE 2 The fictional Price Shire



Source: Price Shire Council

Step 2

Create an overlay of a second feature on the tracing paper (see **FIGURE 3**). (Make sure the second map is of exactly the same area and is drawn to the same scale and size as the base map.)

FIGURE 3 Land use in Price Shire



Source: Price Shire Council

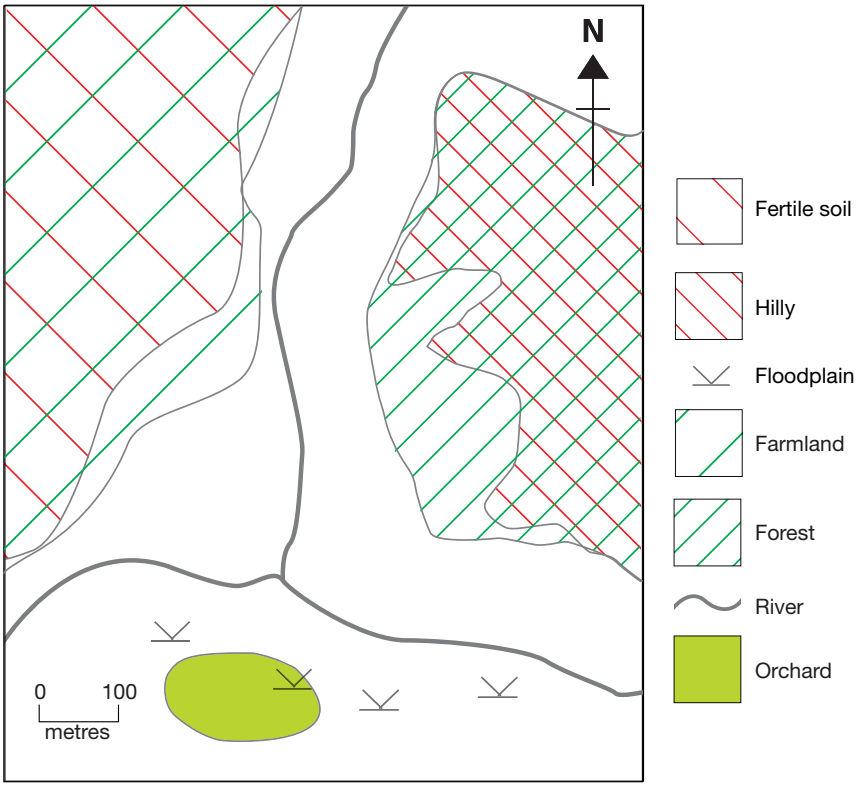
Step 3

Join the base map and the overlay together using adhesive tape (see **FIGURES 4** and **5**). Before doing so, check that key features such as coastlines and major roads line up on both maps. You may wish to attach your base map to some cardboard to make it more durable. You can create more than one overlay, each depicting a different feature. If you do this, you can hinge each overlay from a different side of the base map.

FIGURE 4 Place the overlay onto the base map.



FIGURE 5 This overlay map reveals that farmland tends to be found in areas with fertile soils, and that forest tends to be found in hilly areas.



Source: Price Shire Council

on Resources

Video eLesson	Creating and analysing overlay maps (eles-1645)
Interactivity	Creating and analysing overlay maps (int-3141)

9.11.3 Let me do it

Complete the following activities to practise this skill.

9.11 ACTIVITIES

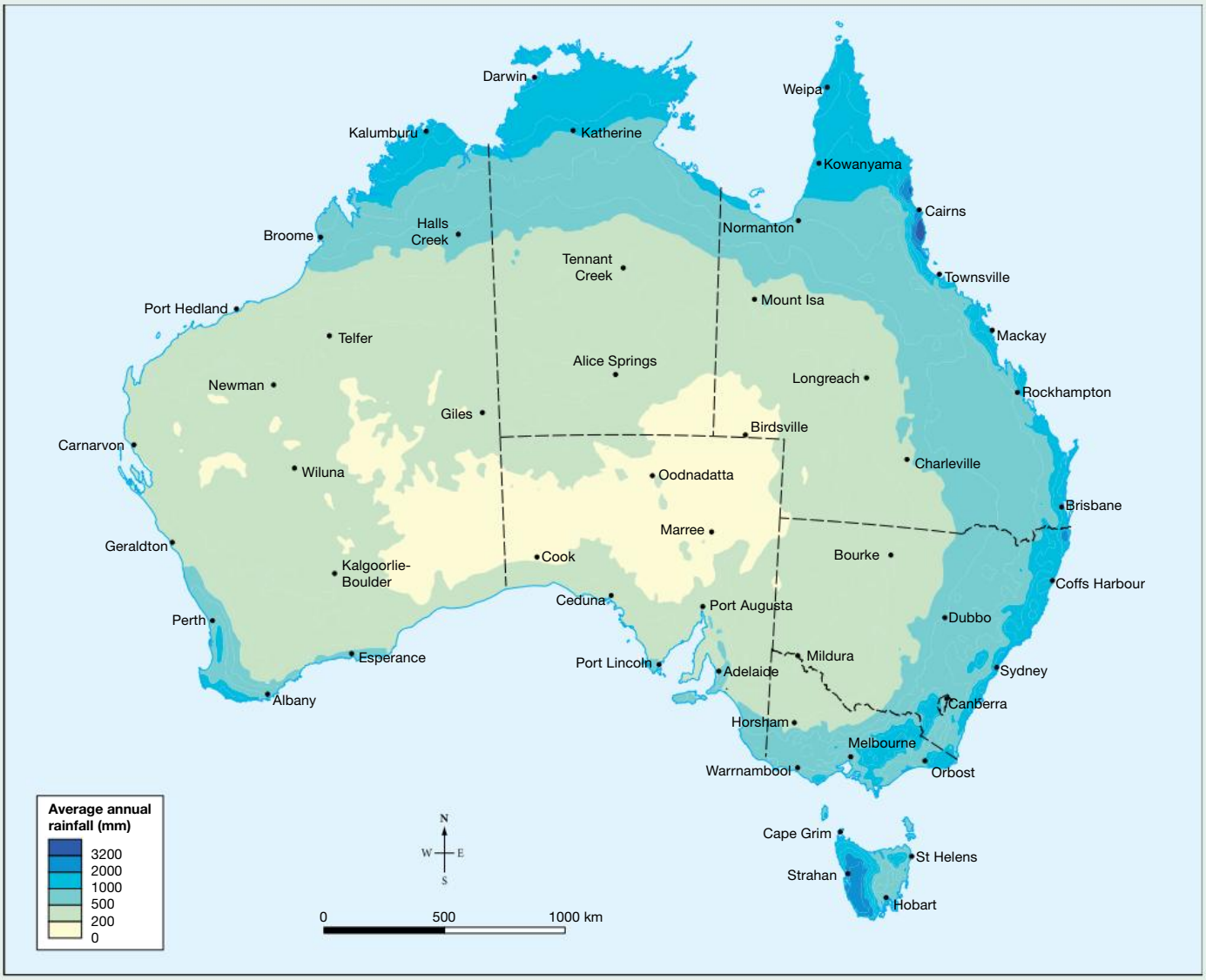
1. Create an overlay map to show the relationship between Australia's rainfall and population distribution. Use **FIGURE 6** to create a base map of rainfall patterns, and then use **FIGURE 7** to add the population overlay. Use the checklist provided to ensure you have covered all aspects of the task.
2. Once you have created your overlay map, using the skills you have developed in this SkillBuilder, answer the following questions.
   a. Look carefully at your base and overlay maps and hunt for patterns between them. Find examples where rainfall and population:
      i. mostly coincide with each other
      ii. sometimes coincide with each other
      iii. do not coincide at all with each other.
   b. Describe these areas, either by percentage or by amount of overlap.
   c. How strong is the **spatial** association (relationship) between the following?
      i. High rainfall and high population density
      ii. Low rainfall and a low population density

Checklist

I have:

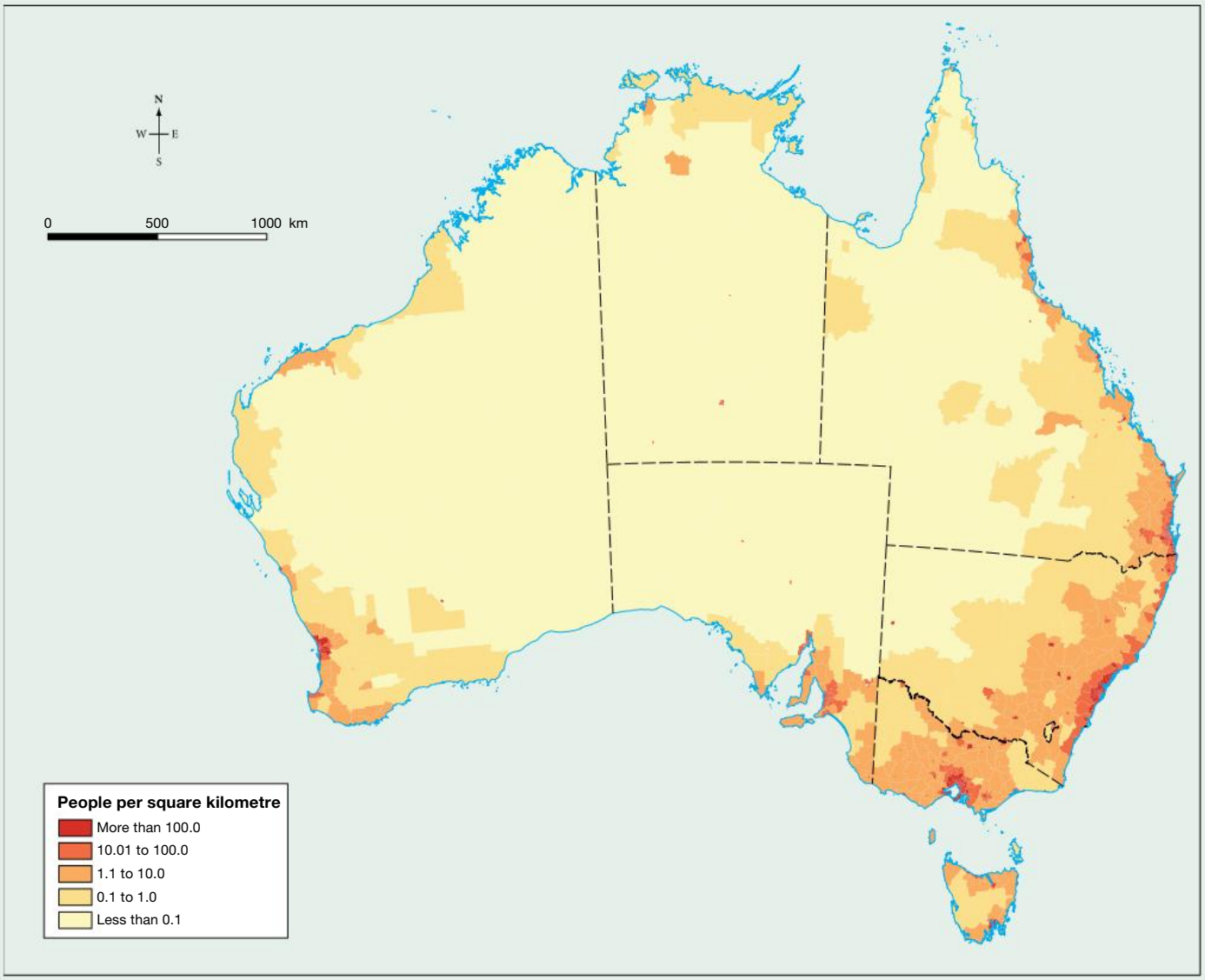
- drawn in pencil first and then added colour
- included BOLTSS on the base map
- used light colours on the overlay
- included a key on the overlay
- hinged the overlay to the base map using sticky tape
- included a title for the overlay.

FIGURE 6 Base map, Australian rainfall



Source: Bureau of Meteorology

FIGURE 7 Overlay map, Australian population density



Source: Australian Bureau of Statistics

9.12 SkillBuilder: Annotating a photograph

LEARNING INTENTION

This SkillBuilder shows you how to annotate a photograph. Annotating a photograph is part of the Analysing HASS skill.

9.12.1 Tell me

Using annotated photographs in Geography

Photographs are used to show aspects of a place, but they don't always give us all the information. Often people will notice different elements in the same photograph, depending on their particular interest and knowledge. Annotations are added to photographs to draw the reader's attention to what can be seen and deduced.

Look at **FIGURE 1** as an example. Because it is clearly shown in the photograph, we know the Campaspe River had water at the time the photograph was taken. However, we don't know what the water quality was like.

Moreover, photographs today are digital and can easily be resized and cropped, so it may be difficult to gain an accurate overview of the particular situation or environment depicted. It's also important to understand that the angle a photograph is taken from, and the time it is taken, can affect how easy it is to see some aspects in the photograph. You should consider the angle the photograph was taken from, and what might be outside the border of the photograph.

Why use annotated photographs?

Annotated photographs are useful in geographical inquiries as geographers are interested in analysing places, and photographs provide a snapshot at a point in time. The annotations are vital to fully understanding the photograph. When photographs are used to show spatial change over time, the same views are photographed at different times, and the annotations are used to highlight the changes.

A good annotated photograph includes:

- a clear title that includes the location of the photograph
- labels of the main features
- annotated processes if known
- date and time of when the photograph was taken
- the source of information – the photographer's name.

9.12.2 Show me

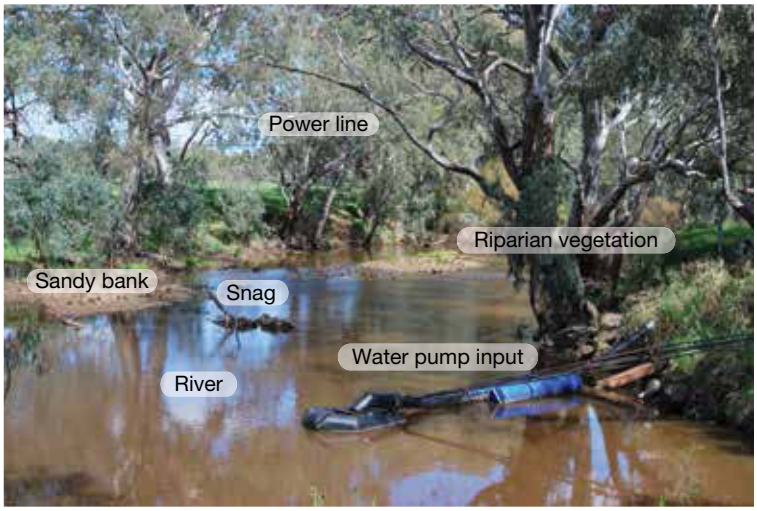
How to annotate a photograph

You will need

- a photograph
- a black fine-line felt-tipped pen
- a ruler.

Model

FIGURE 1 Campaspe River near Axedale, Victoria



Source: Taken by Mattinbgn, 17 March 2012. © Creative Commons

Procedure

Step 1

Examine the photograph in **FIGURE 2** carefully, looking for the key information it is showing you. You will notice that this particular image includes evidence that it was taken during a low flow period, because the water line is below the line of trees that mark a higher water level. Previous high flow or perhaps flood events of the river are shown by the large logs deposited in the currently dry bed of the river.

FIGURE 2 Annotating a photograph



Source: Taken by Paul Humphries, 5 February 2012. © Paul Humphries

Step 2

Check the date the photograph was taken. This photograph is tagged 5 February 2012. The photographer is Paul Humphries and the location is Campaspe River at Strathallen; therefore, a clear title might be *Campaspe River at Strathallen during summer low flow period*. It is important to provide the source underneath, because this provides the reader with information as to who took the photograph and the time of year at which it was taken. In this case, it is '*Source:* Taken by Paul Humphries, 5 February 2012.'

Step 3

Add labels to the image, focusing on the key aspects you wish the viewer to notice. These might include *River in low flow, Debris deposited in high flow* and *Gum trees*. It is often much easier to add labels if you took the photograph personally and made field notes while you were on site. For example, you could have determined if the river was flowing and in which direction. If, for the purpose of retaining clarity within the image, labels need to be placed outside the photograph, fine lines should be drawn from each annotation to the relevant feature.

on Resources

Video eLesson	Annotating a photograph (eles-1633)
Interactivity	Annotating a photograph (int-3129)

9.12.3 Let me do it

Complete the following activities to practise this skill.

9.12 ACTIVITIES

1. Annotate the following photograph. Label any physical processes that you can see. For example, the river is flowing towards the foreground of this photograph. Label the human activities that are shown. Use the checklist provided to ensure you cover all aspects of the task.

FIGURE 3 Yarra River, Melbourne, Australia



Source: Taken by Russell Moseley at 5 pm, 10 September 2012. © Russell Moseley http://www.free-things-to-do-melbourne.com

2. Once you have labelled your photograph, apply your skills to answer the following questions:
   a. Name two activities that you can see.
   b. What are the tall poles for?
   c. Where are boats stored? How do you know?
   d. What is the landing platform made of?
   e. Give evidence to support the idea that rivers such as this are an important resource for people.

Checklist

I have:

- a clear title that includes the location of the photograph
- labelled the main features
- included annotated processes, if known
- included the date and time of when the photograph was taken
- provided the source of the information.

9.14 SkillBuilder: Interpreting diagrams

LEARNING INTENTION

This SkillBuilder shows you how to interpret diagrams. Interpreting diagrams is part of the Analysing HASS skill.

9.14.1 Tell me

What are diagrams?

A diagram is a graphic representation of something. In Geography, it is often a simple way of showing the arrangement of elements in a landscape and the relationships between those elements. A common diagram that you are probably familiar with is the water cycle (see **FIGURE 1**). Diagrams also have annotations: labels that explain aspects of the illustration. Interpreting diagrams involves examining the visual and text elements provided to gain an understanding of all the information presented.

What causes rainfall? Where does the water come from and where does it go? The answers lie in the water cycle. Water evaporates from oceans, lakes and vegetation, and condenses into clouds. The rain, sleet, hail or snow that falls from clouds flows back into rivers, lakes and oceans and underground, where the water cycle process continues.

How are diagrams useful?

Diagrams are useful for representing ideas visually. They are often used to increase understanding of written information. They can be used to:

- illustrate a process
- simplify a concept
- show flows and movements
- illustrate relationships spatially.

The diagram in **FIGURE 2** shows how properties can be designed to manage floods in new development areas and existing development areas.

A good diagram:

- is large so it can be easily interpreted
- has understandable annotations or labels
- is clear and simple
- includes a precise title or caption
- states the source – where it came from or who created it.

9.14.2 Show me

How to interpret a diagram

You will need:

- a diagram (see **FIGURE 3**)
- any information that is related to the diagram.

Model

The amount and intensity of rainfall is the most important factor in causing a flood, but many other factors can contribute to flooding. When it rains in a catchment, the amount of rainwater that flows into the rivers depends on land uses. Some water can soak into soil unless the soil is already saturated from previous rainfall. Urban areas have many hard surfaces such as roads, so water is less able to soak into the soil and more water

flows into drains and creeks. Heavy vegetation can slow the movement of water to rivers. Dams can be used to control the amount of water released downstream. The shape of the land is also an important factor, because more water usually runs off steep slopes.

Procedure

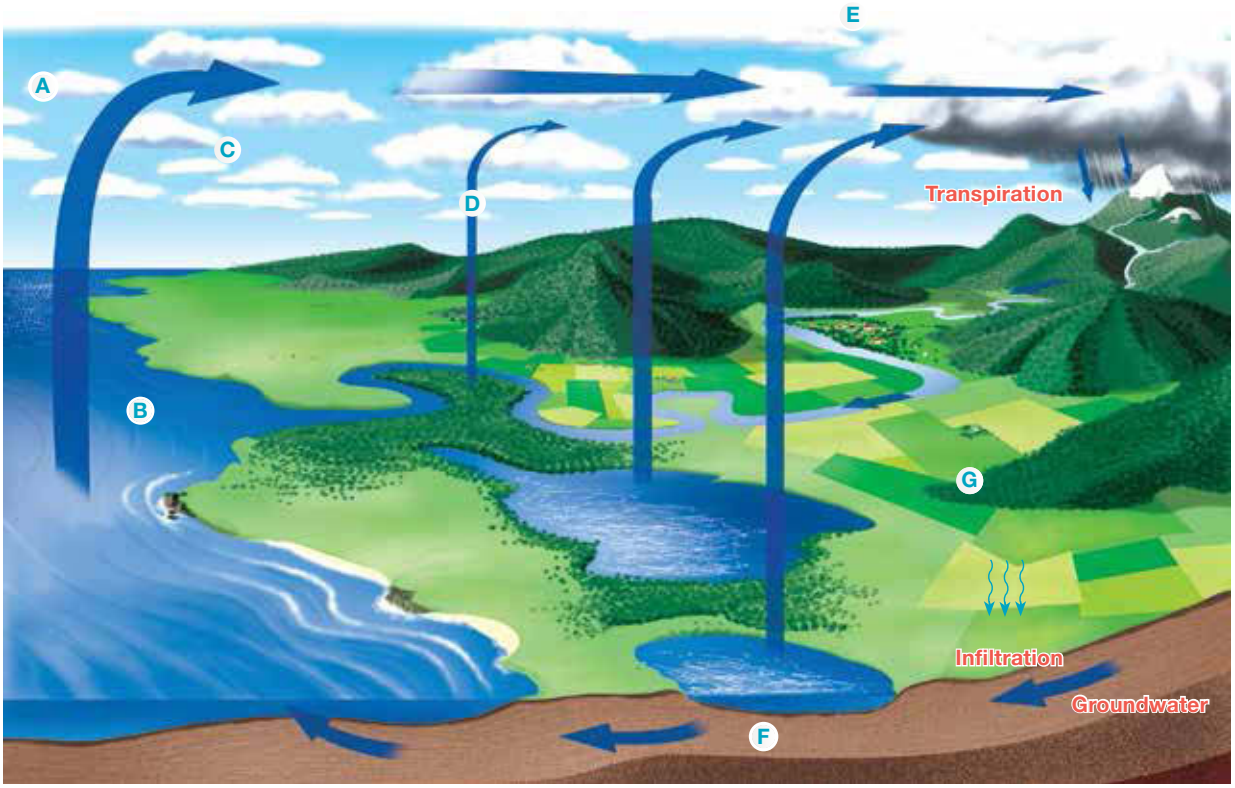
Step 1

Identify and carefully read the title of the diagram, because it helps you to understand the diagram's purpose. The diagram in **FIGURE 3** is illustrating factors that can affect flooding, and it is designed to be read with the explanatory text.

Step 2

Examine the diagram to identify all the elements being illustrated and the annotations. Look at each part of the diagram. You will notice that various factors are identified, including rainfall, run-off, vegetation, size of waterways, soil type, slope and land use.

FIGURE 1 The water cycle



- **A.** The sun's heat provides the energy for the water cycle process.
- **B.** The sun evaporates water from oceans, damp soil, leaves and people's skin, turning it into water vapour.
- **C.** The warm air that absorbs evaporated moisture expands and rises into the atmosphere.
- **D.** As warm, moist air rises, it cools. Water vapour that cannot be held in the air condenses into tiny water droplets or ice crystals. As more of these form, clouds appear. This process is known as condensation.
- **E.** When the droplets or crystals in the cloud become too heavy to overcome the pull of gravity, they fall to Earth as precipitation.
- **F.** Run-off from land returns to the sea via rivers and underground channels.
- **G.** Infiltration occurs when water seeps into the soil.

FIGURE 2 Managing flood risks

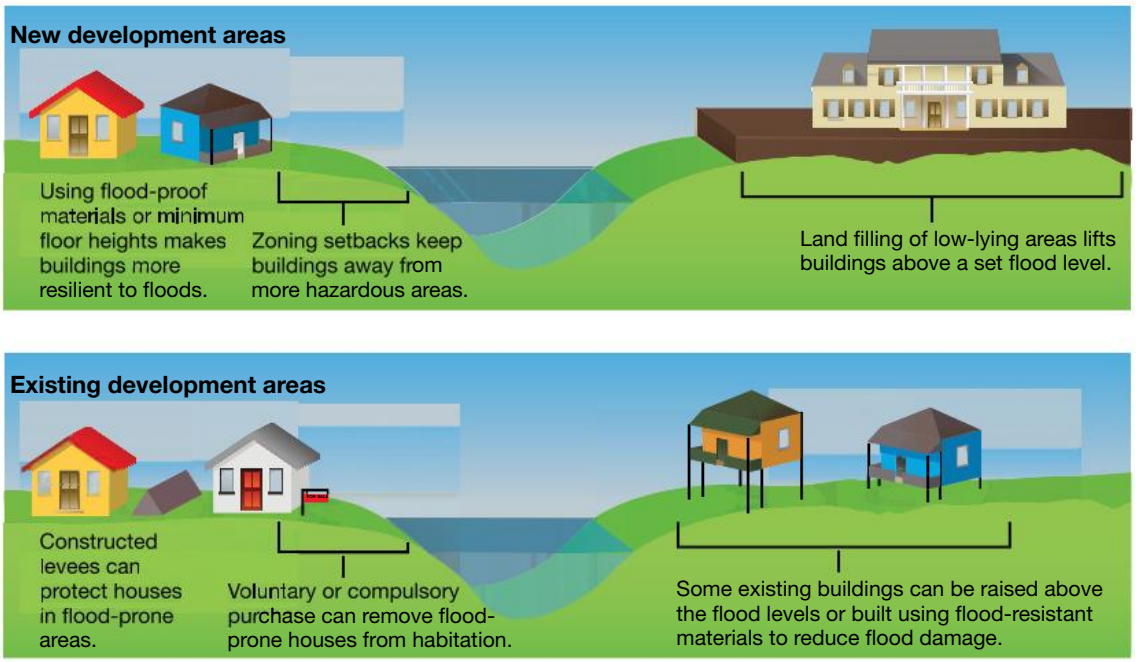
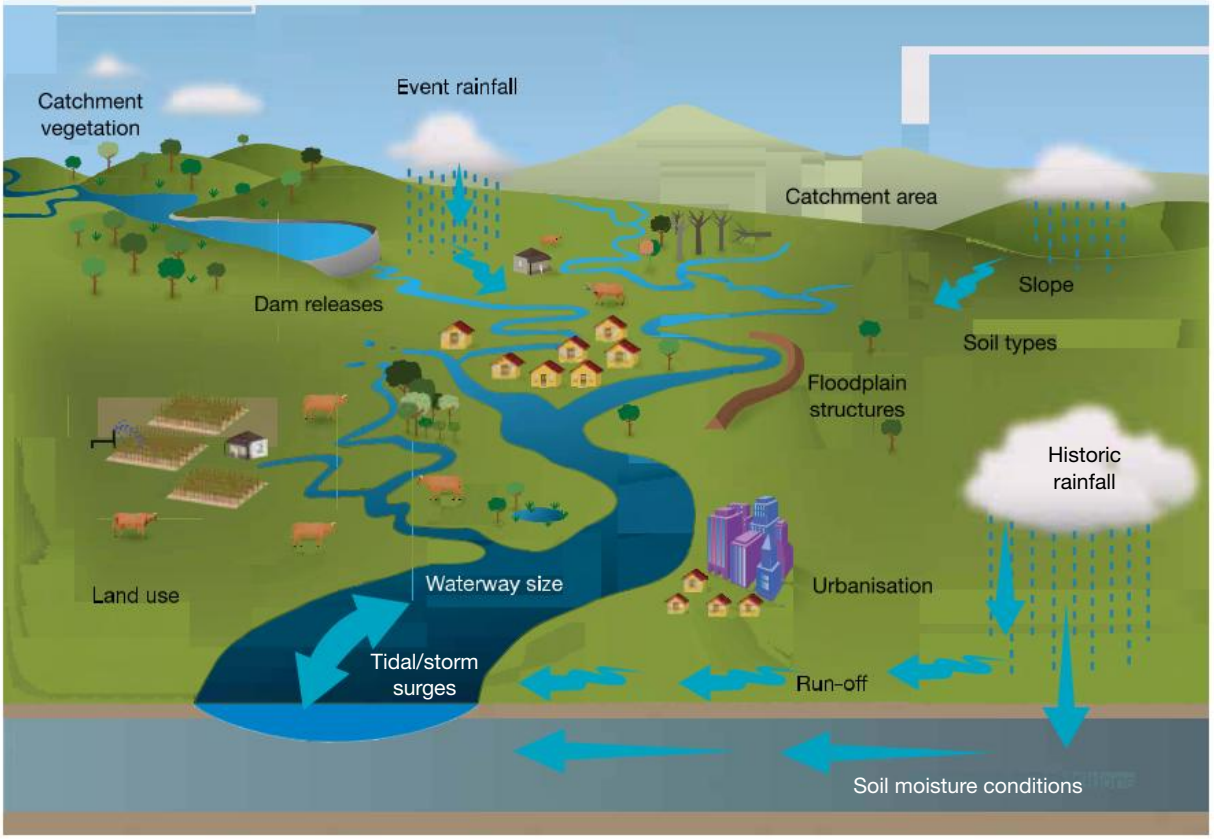


FIGURE 3 Factors that can affect flooding



Source: www.chiefscientist.qld.gov.au/publications/understanding-floods/what-is-a-flood.

Step 3

Now consider the diagram as a whole. Studying the diagram helps you conclude that many factors affect flooding. It is more complicated than simply how much rain falls and how quickly.

Resources

Video eLesson Interpreting diagrams (eles-1636)
Interactivity Interpreting diagrams (int-3132)

9.14.3 Let me do it

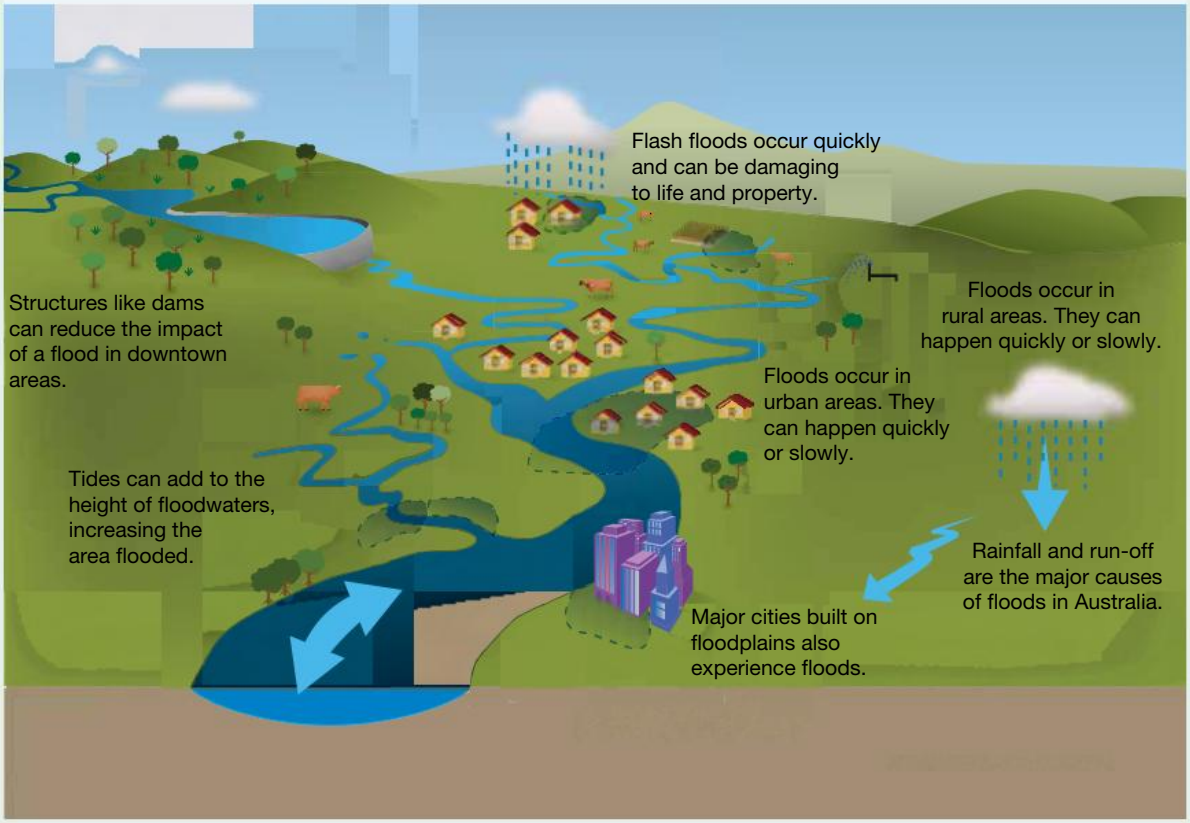
Complete the following activity to practise this skill.

9.14 ACTIVITY

Rainfall is the main cause of flooding in Australia. Floods can happen quickly (flash flooding) or slowly, and they are difficult to predict. Cities and farms are often built on floodplains (land that is subject to occasional flooding) because they provide access to water and good quality soil. In coastal areas, tides can add to flooding.

1. Apply your skills to interpret **FIGURE 4** and answer the following questions.
   a. How might a dam affect flood events?
   b. What is run-off?
   c. What effect can high tides have during flooding in coastal areas?
   d. Why are cities sometimes built on floodplains?
   e. What are some effects of floods?

FIGURE 4 Characteristics of floods



Checklist

I have:

- understood the title
- examined all parts of the diagram — the illustrations, annotations and any accompanying text
- considered the diagram as a whole.

9.15 SkillBuilder: Cardinal points and wind roses

LEARNING INTENTION

This SkillBuilder shows you how to interpret wind roses. Interpreting wind roses is part of the Analysing HASS skill.

9.15.1 Tell me

What is a wind rose?

A wind rose is a diagram that shows the direction, speed and frequency of wind. We name wind direction according to the direction from which the wind is blowing. For example, a wind described as 'a southerly' is coming from the south. Wind direction can be described using 8 or 16 compass directions.

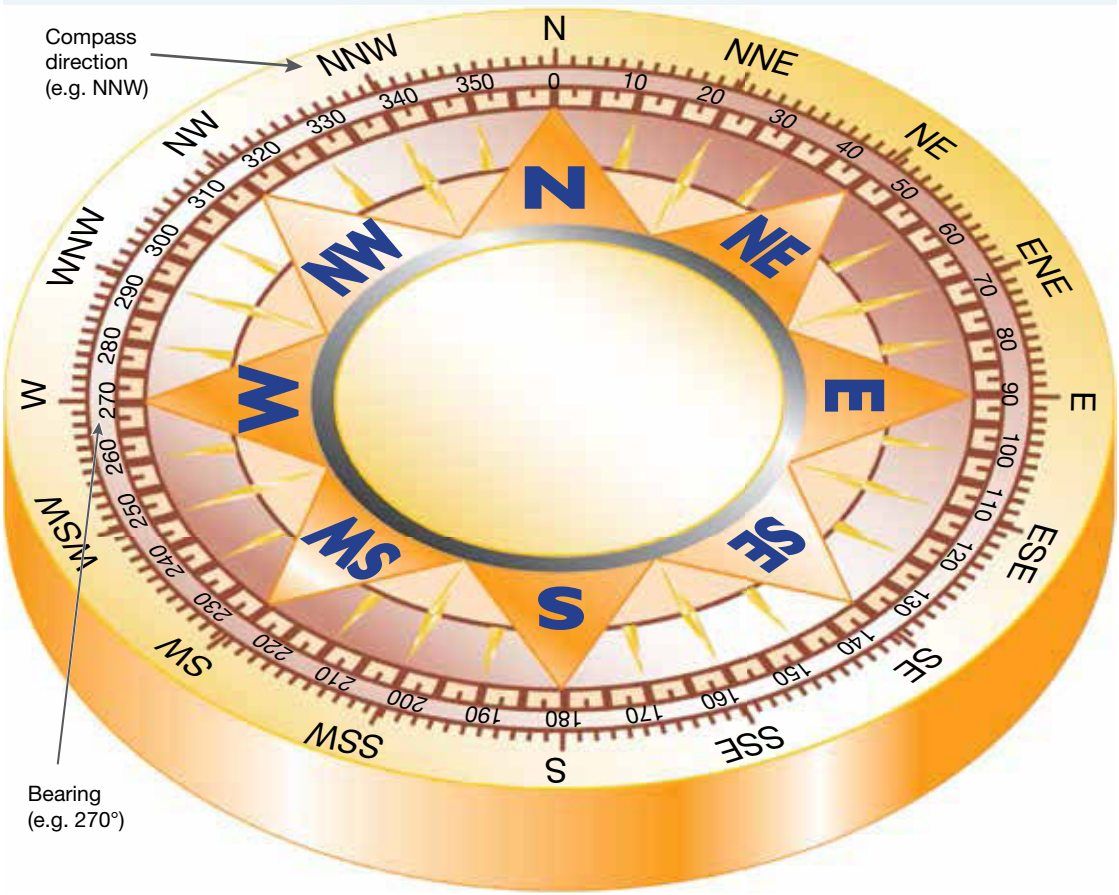
To understand a wind rose, you must know your cardinal points. Let's quickly revisit these.

What are cardinal points?

A compass has four main (or cardinal) points: north, east, south and west. These four cardinal points are used to describe direction. For example, if you are facing north, south is behind you, east is to your right and west is to your left.

To give more accurate directions, the four cardinal points can be divided into inter-cardinal points: north-east, south-east, south-west and north-west. For even finer definition, we can further divide the inter-cardinal points

FIGURE 1 A compass



(see **FIGURE 1**). For example, between north and north-west, is north-north-west (NNW); between north-west and west is west-north-west (WNW), and so on. Cardinal and inter-cardinal points are used in wind roses.

Why are wind roses useful?

Wind roses are useful because they allow us to quickly see patterns in relation to wind direction, speed and frequency.

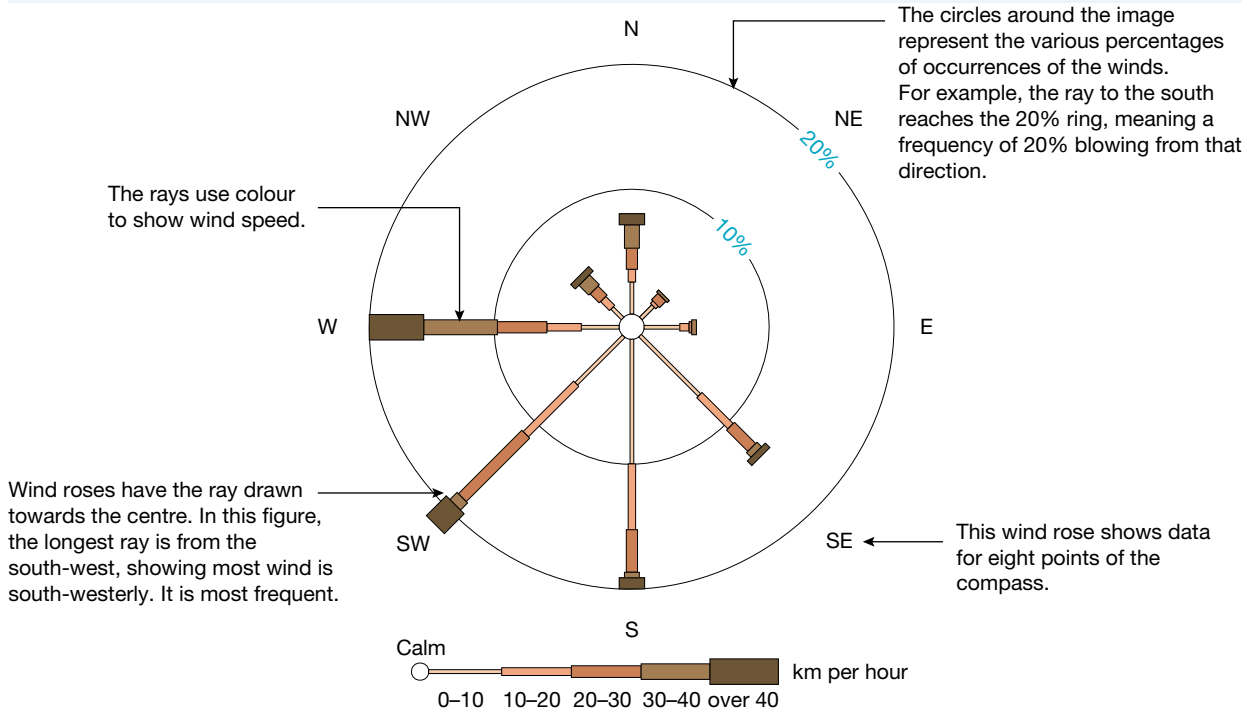
Interpreting a wind rose

To interpret a wind rose, remember the following points:

- Wind roses have the rays drawn towards the centre. In **FIGURE 2** the longest ray is from the south-west, which shows that most of the wind is south-westerly. It is most *frequent*.
- The circles around the image represent the various percentages of occurrences of the winds. For example, if the ray to the south just reaches the 20 per cent ring, it means a frequency of 20 per cent blowing from that direction.
- The rays use symbols and colour to show wind *speed*.

The **FIGURE 2** wind rose shows data for eight points of the compass.

FIGURE 2 A wind rose



9.15.2 Show me

How to read a wind rose

You will need:

- a wind rose (see **FIGURE 3**)
- a ruler.

Procedure

To describe wind patterns using a wind rose you need to examine the direction, length and width of the rays. We will use **FIGURE 3** to explore this process.

Step 1

Determine the direction of wind with the greatest frequency by finding the longest ray. In **FIGURE 3**, the longest ray is from the south, so we can say that the predominant average wind direction in Melbourne at 3 pm is a southerly.

Step 2

Determine the direction of wind with the highest speed by finding the widest ray. In **FIGURE 3**, we can see that the highest average speeds were reached by winds coming from the north (northerlies).

Step 3

Work out the general pattern and main features of wind direction and strength. The **FIGURE 3** wind rose shows us that in Melbourne at 3 pm, the predominant average winds are southerlies, occurring more than 30 per cent of the time. The next most frequent wind at 3 pm is a northerly, which blows more than 20 per cent of the time. Winds blow from the west only around 10 per cent of the time, and easterlies are very infrequent.

on Resources

Video eLesson	Cardinal points: wind rose (eles-1638)
Interactivity	Cardinal points: wind rose (int-3134)

9.15.3 Let me do it

Complete the following activity to practise this skill.

9.15 ACTIVITY

Interpret the wind roses in **FIGURES 3** and **4** to answer the following questions. Use the checklist provided to ensure you cover all aspects of the task.

1. In which direction are the highest frequency winds for Melbourne, 9 am?
2. In which direction are the highest speed winds for Melbourne, 9 am?
3. In which direction are the lowest frequency winds for Melbourne, 9 am?
4. In which direction are the lowest frequency winds for Melbourne, 3 pm?
5. Compare and contrast the wind direction patterns for Melbourne at 9 am and at 3 pm.

Checklist

I have:

- found the longest ray to determine the direction of wind with the highest frequency
- found the widest ray to determine the direction of wind with the highest speed
- worked out the general pattern and main features of wind direction and strength.

FIGURE 3 Wind rose for Melbourne, annual average at 3 pm

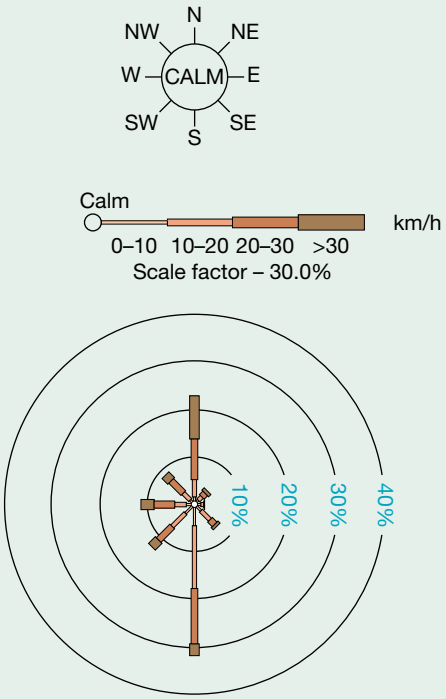
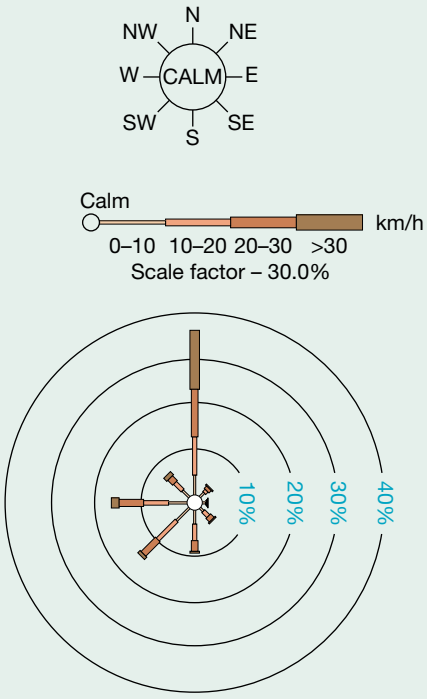


FIGURE 4 Wind rose for Melbourne, annual average at 9 am



9.16 SkillBuilder: Creating a concept diagram

LEARNING INTENTION

This SkillBuilder shows you how to create a concept diagram. Creating a concept diagram is part of the Communicating and reflecting HASS skill.

9.16.1 Tell me

What is a concept diagram?

A concept diagram, sometimes mistakenly called a concept map, is a graphical tool that shows links between ideas, or concepts. Concept diagrams organise links into different levels.

Why are concept diagrams useful?

Concept diagrams enable you to organise your ideas and communicate them to others. They also help you to clarify and represent your knowledge of a topic or issue. They highlight the ways your thoughts and ideas relate to each other. They are useful for when you are reflecting on a topic or issue, especially towards the end of studying a topic, because they help you see connections between ideas and information. They can also be useful when brainstorming, and can help you in the further research of a topic.

A good concept diagram should:

- include a clear title
- be presented neatly and clearly
- explain what each colour represents
- be easy for another person to understand.

9.16.2 Show me

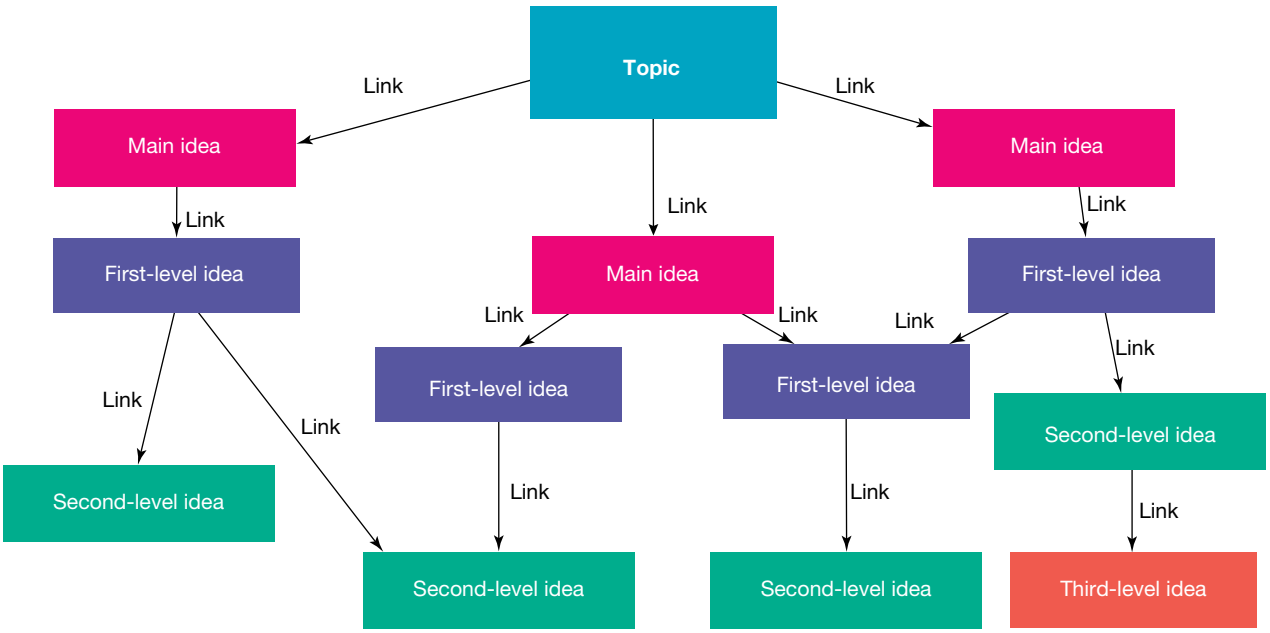
How to create a concept diagram

You will need:

- a blank sheet of paper
- a ruler
- colour pencils
- an eraser
- a black lead pencil.

Model

FIGURE 1 Example of a concept diagram

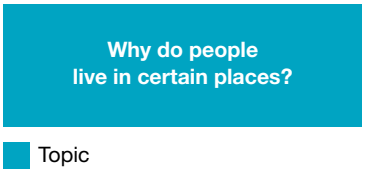


Procedure

Step 1

First, start with a topic. Place this in the middle of a blank sheet of paper. Rule a box or draw a circle around it.

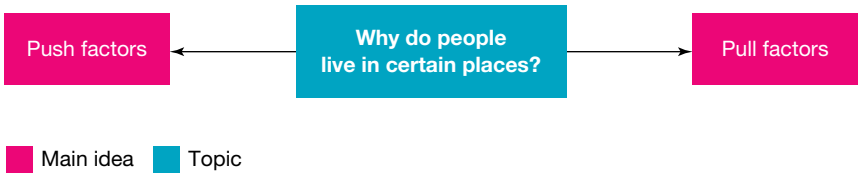
FIGURE 2 Start with the topic.



Step 2

Use your ruler to draw lines out from this box or circle and add key words about the topic or issue. This level is called the main ideas level.

FIGURE 3 Add your main ideas.



Step 3

Add other lines to each of the main ideas and add words that relate to each of them. This level is called first-level ideas.

Step 4

Add new lines and words, so that the diagram develops into something that resembles a spider web. This level is called second-level ideas. If you like, you can add extra information on some of the connecting lines. You may also choose to add colours to represent different levels or connections. Add a clear title.

FIGURE 4 Add your first-level ideas.

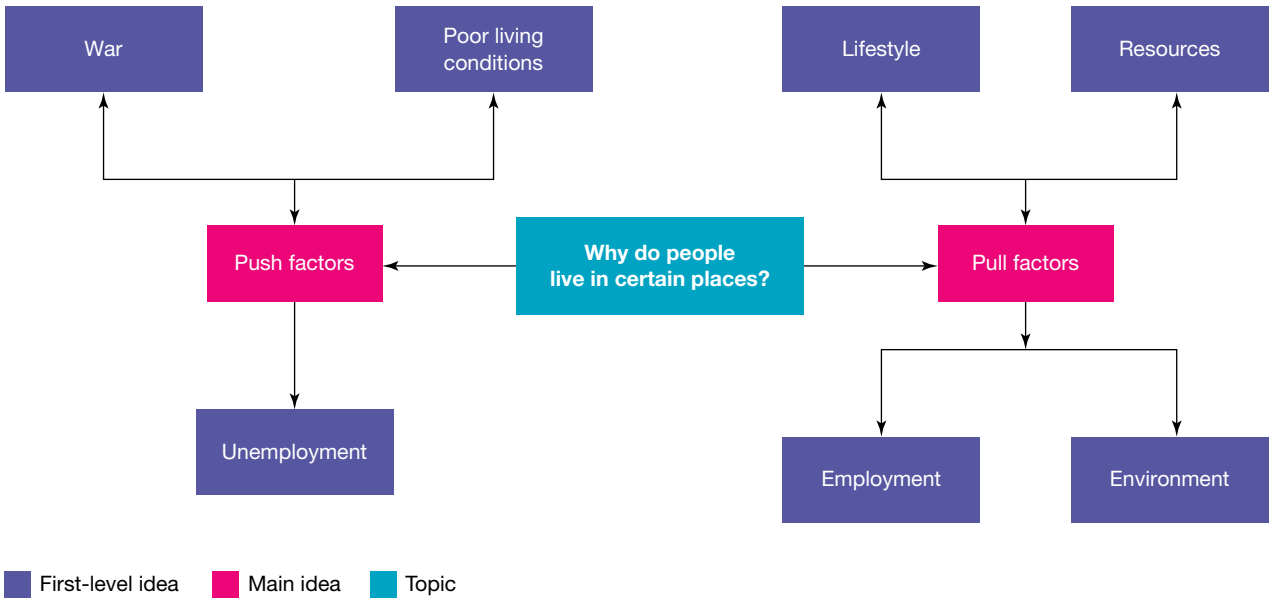
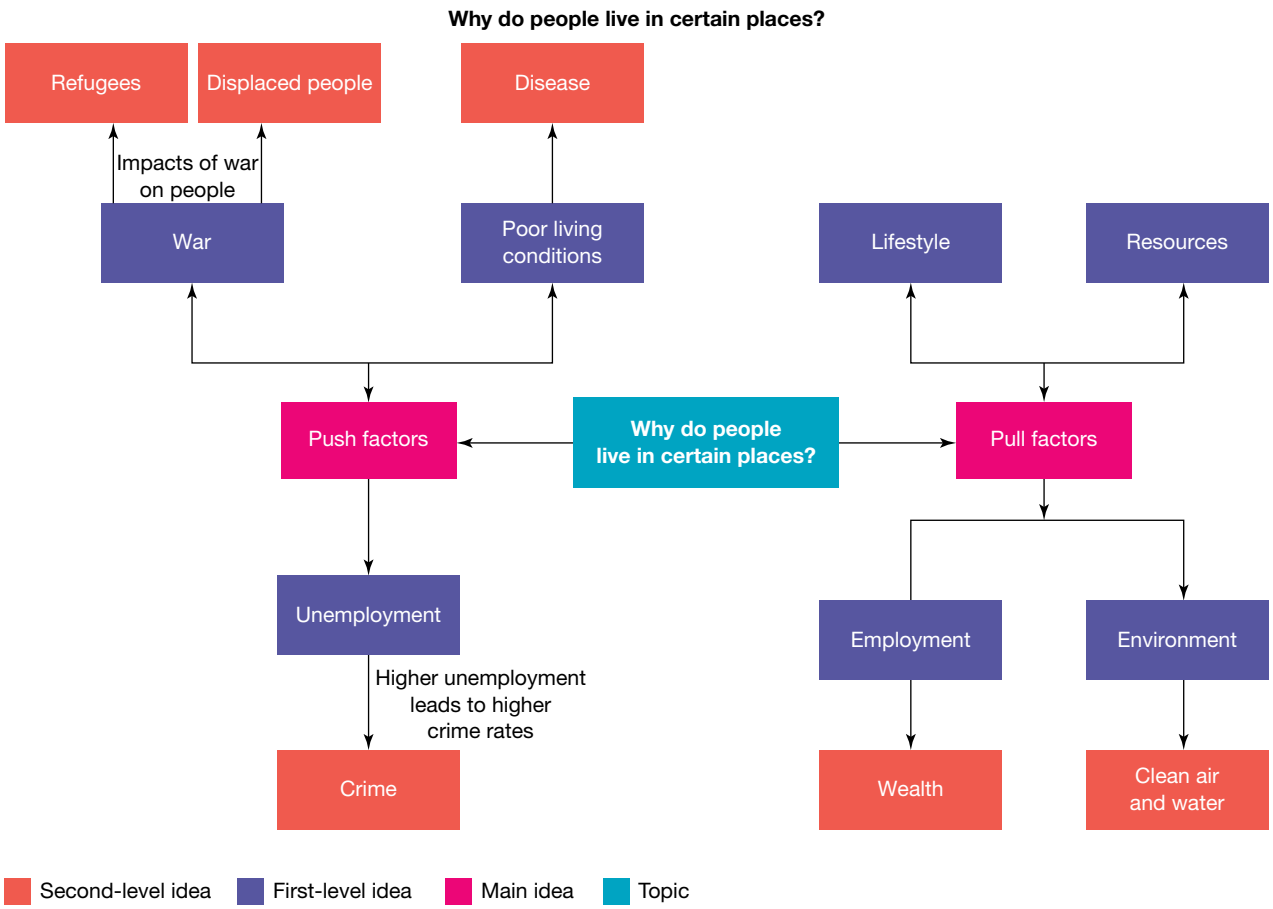


FIGURE 5 Add second-level ideas and give your concept diagram a title.



Resources

Video eLesson	Creating a concept diagram (eles-1640)
Interactivity	Creating a concept diagram (int-3136)

9.16.3 Let me do it

Complete the following activity to practise this skill.

9.16 ACTIVITY

Apply what you have learned in this SkillBuilder to create a concept diagram of the reasons Australians live where they do.

You may want to structure your concept diagram using some of the following aspects:

- natural features or built features that attract people to live in certain places
- push and pull factors
- your own family's reasons for living where they do, or your classmates' families' reasons for living where they do
- reasons remote areas are settled
- lifestyle choices.

Checklist

I have:

- included a title
- neatly constructed and presented the information
- explained what each colour represents
- ensured the finished diagram is easy for another person to understand.

9.17 SkillBuilder: Interpreting topological maps

LEARNING INTENTION

This SkillBuilder shows you how to interpret a topological map. Interpreting a topological map is part of the Analysing HASS skill.

9.17.1 Tell me

What is a topological map?

Topological maps are very simple maps, with only the most vital information included. These maps generally:

- use pictures to identify places
- are not drawn to scale
- provide no sense of distance
- provide general directions
- exaggerate the size of certain places
- do not show exact routes.

However, everything is correct in its interconnection to other points.

How is a topological map useful?

A topological map is useful as a mental map to help you locate important features. Large areas can be drawn to show the viewer the important points. You could use these in class as summary maps of a topic, or as quick sketch maps to illustrate a point or to clarify something for another student.

They are also useful for:

- giving tourists a snapshot of where features are located
- quickly showing how to get to a place
- showing very large transport routes such as bus and train routes across a city
- planning international flights.

A good interpretation of a topological map:

- identifies and communicates key features
- clearly represents and communicates the data.

9.17.2 Show me

How to use a topological map

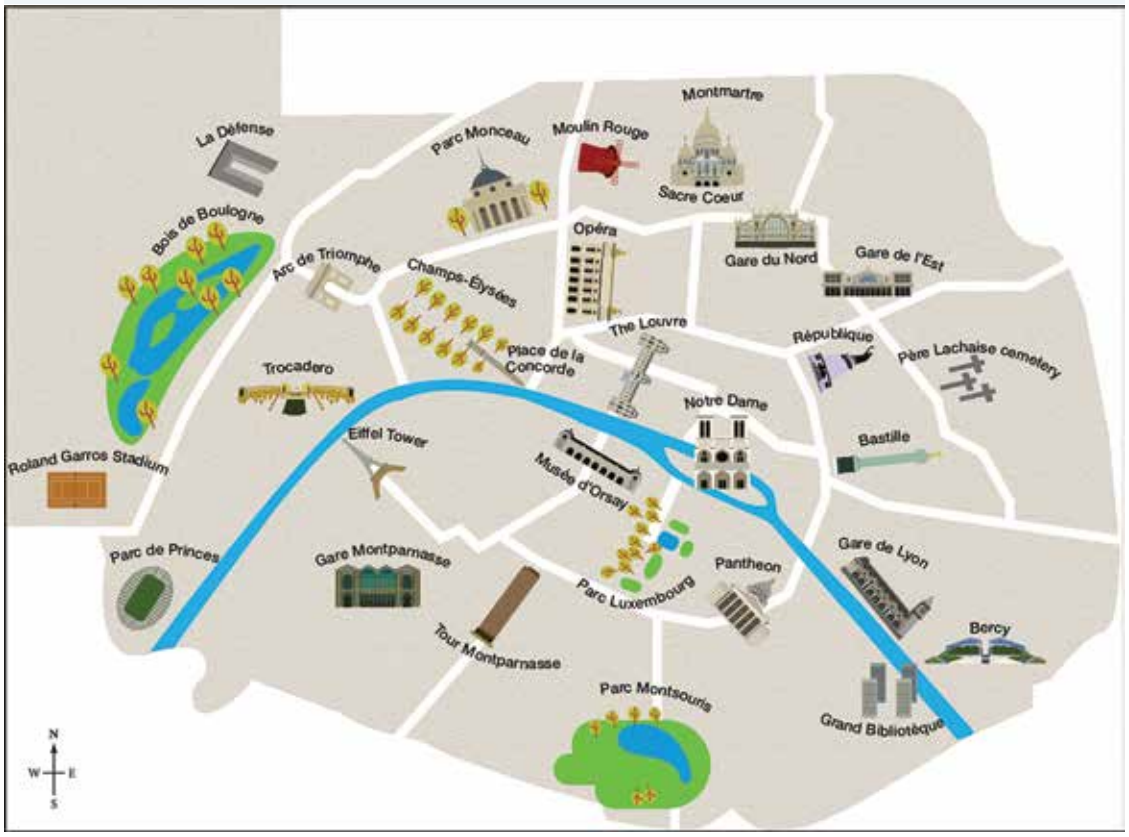
You will need:

- a topological map (see **FIGURE 1**).

Model

The topological map of central Paris shown in **FIGURE 1** is designed for people moving around Paris as tourists. It provides an indication of the major sites that tourists ought to visit, and allows them to see on which side of the river different monuments are found. For example, you would expect to find the Champs-Élysées and the Louvre on the same side of the river and quite close to each other. Major routes are given between monuments but these routes may not be the shortest distance, because no scale is provided with the map. This means judging the best way to get from the Eiffel Tower to Notre Dame Cathedral, for example, is difficult. The actual direction from one monument to the other is unlikely to be exact, because the lack of scale causes features to become distorted. This type of map, however, might help tourists plan their sightseeing, because it gives the user a general idea of where things are located. If going from the Eiffel Tower to the Arc de Triomphe, is it better to stroll along the river and up a major route?

FIGURE 1 A tourist map of Paris and its monuments



Procedure

Step 1

Look all around the topological map and identify the key features being shown. In **FIGURE 1**, almost 30 major tourist attractions of Paris are shown as drawings of each place. Some drawings are larger than others to show the significance and the popularity of these places with tourists.

Step 2

Think about the interconnection between features. On the map in **FIGURE 1**, the interconnection between the places is that each one is a Paris tourist attraction. Roads are shown, but these may not be the optimum route to travel. This pathway represents just one way to connect between the places.

Step 3

Since no scale is provided, could a tourist walk between all these places? Think about possible distances. Consider the distance from the Gare du Nord railway station to the city centre. A tourist may well have travelled this route and be able to give the map a sense of scale. Could you see all these monuments in a day? The answer to both questions is no. Interpreting a topological map gives a first impression, but it is not an accurate map. It may be useful for moving around an area, but it lacks detail.

on Resources

Video eLesson Interpreting topological maps (eles-1736)
Interactivity Interpreting topological maps (int-3354)

9.17.3 Let me do it

Complete the following activities to practise this skill.

9.17 ACTIVITIES

1. Using the child's map shown in **FIGURE 2**, describe the route the child takes from home to school. Use the checklist to ensure you cover all aspects of the task.

FIGURE 2 Drawing by a child who walks to school



2. Use your skill in understanding and interpreting topological maps to answer the following questions.
   a. What is the purpose of this topological map?
   b. Describe the pattern of houses along the route.
   c. What symbols have been used to show the sporting area of the school grounds?
   d. Why do you think this child drew the road at such a size and included the road markings?
   e. Describe the ***environment*** along the route from home to school.

Checklist

I have:

- identified and communicated key features on the topological map
- clearly represented and communicated the information in the description.

10 Water as a resource

10.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Earth provides us with more than a place to live. What resources do we take from it to survive?

10.1.1 Introduction

Have you ever stopped to think about the resources you need to survive every day? Fortunately, the Earth supplies us with the natural resources we need for our food, shelter, clothing, and energy for our homes and factories. These resources include water, fossil fuels and mineral deposits. However, access to these supplies is not distributed equally around the planet, and attitudes towards them may differ or change over time. As the global population increases, great damage is being done to the environment as a result of using these resources. Moreover, we need to carefully manage our use of them to ensure that these resources are available for use in the future.

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-4286)
Video eLesson	Water: A vital resource (eles-1615)

FIGURE 1 Our use of water and other natural resources has an effect on many aspects of life on Earth.



10.2 Environmental resources

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- define the term 'resource'
- distinguish between the terms 'renewable' and 'non-renewable resources'
- classify resources as renewable or non-renewable
- identify Australia's natural resources.

10.2.1 Why do we need resources?

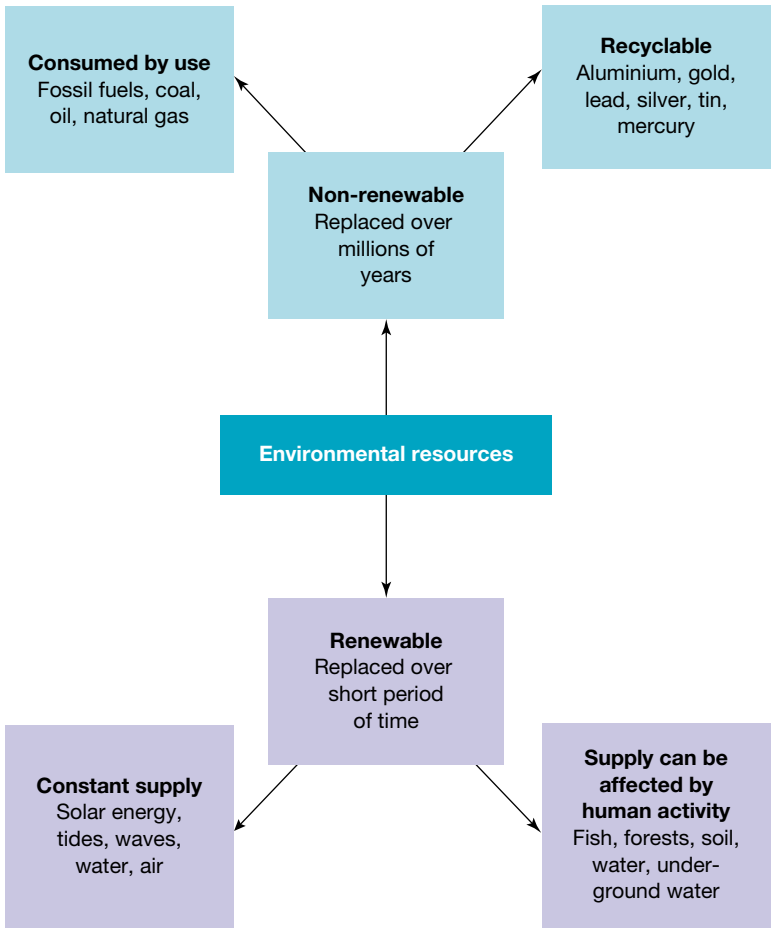
We depend on environmental resources to survive. We need water to drink, soil to produce our food, and forests and mines to supply other materials. Environmental resources (also called natural resources) are raw materials that occur in the environment and which are necessary or useful to people. They include soil, water, mineral deposits, **fossil fuels**, plants and animals.

FIGURE 1 Many resources are required to provide a family with breakfast.



int-7766

FIGURE 2 Environmental resources — renewable and non-renewable



fossil fuels fuels that come from the breakdown of living materials, and which are formed in the ground over millions of years. Examples include coal, oil and natural gas.

Think about all the resources you have used today from the time you woke up until the time you reached the school gate. How many of these used or involved the use of water, one of our most valuable natural resources? Perhaps you used water to shower, brush your teeth, wash the dishes or as a refreshing drink? Have you ever considered the water uses that are involved in providing the ingredients for your breakfast, the packaging they came in, the table you sat at? Finally, how did you get to school? If you used a form of transport, there is a good chance a resource powered it and that water played a role in extracting, refining, delivering or using this resource.

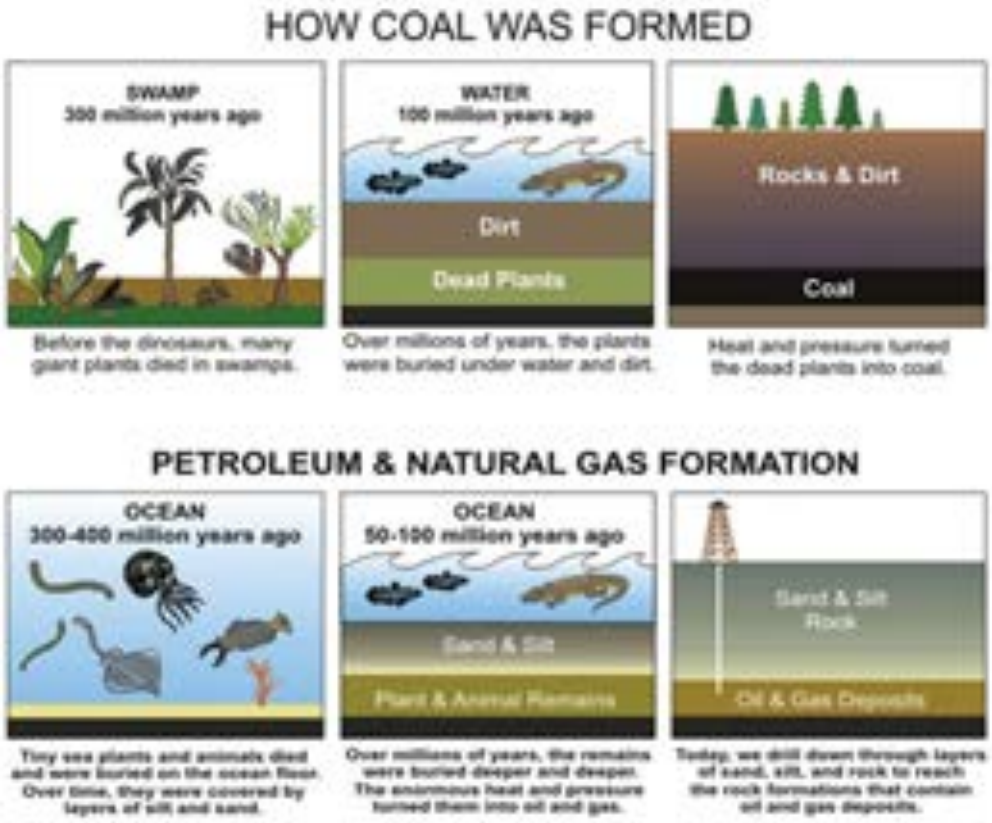
There are two types of environmental resources: renewable and non-renewable. Renewable resources are those that can be replaced in a short time, whereas non-renewable resources cannot, and they can take thousands or even millions of years to be regenerated.

Australia has more natural resources per head of population than any other country in the world. The main reason for this is that we have a small population in a very large country.

10.2.2 Non-renewable resources and their uses

Non-renewable resources are those that cannot be easily replaced; they take an extremely long time to form and are used by humans at a rate that is significantly higher than the resource's ability to regenerate. For example, fossil fuels such as oil, coal and natural gas are non-renewable, as they take hundreds, thousands, and even millions of years to form. We cannot make more non-renewable resources; they are limited and will eventually run out.

FIGURE 3 Diagram depicting the formation of oil and coal



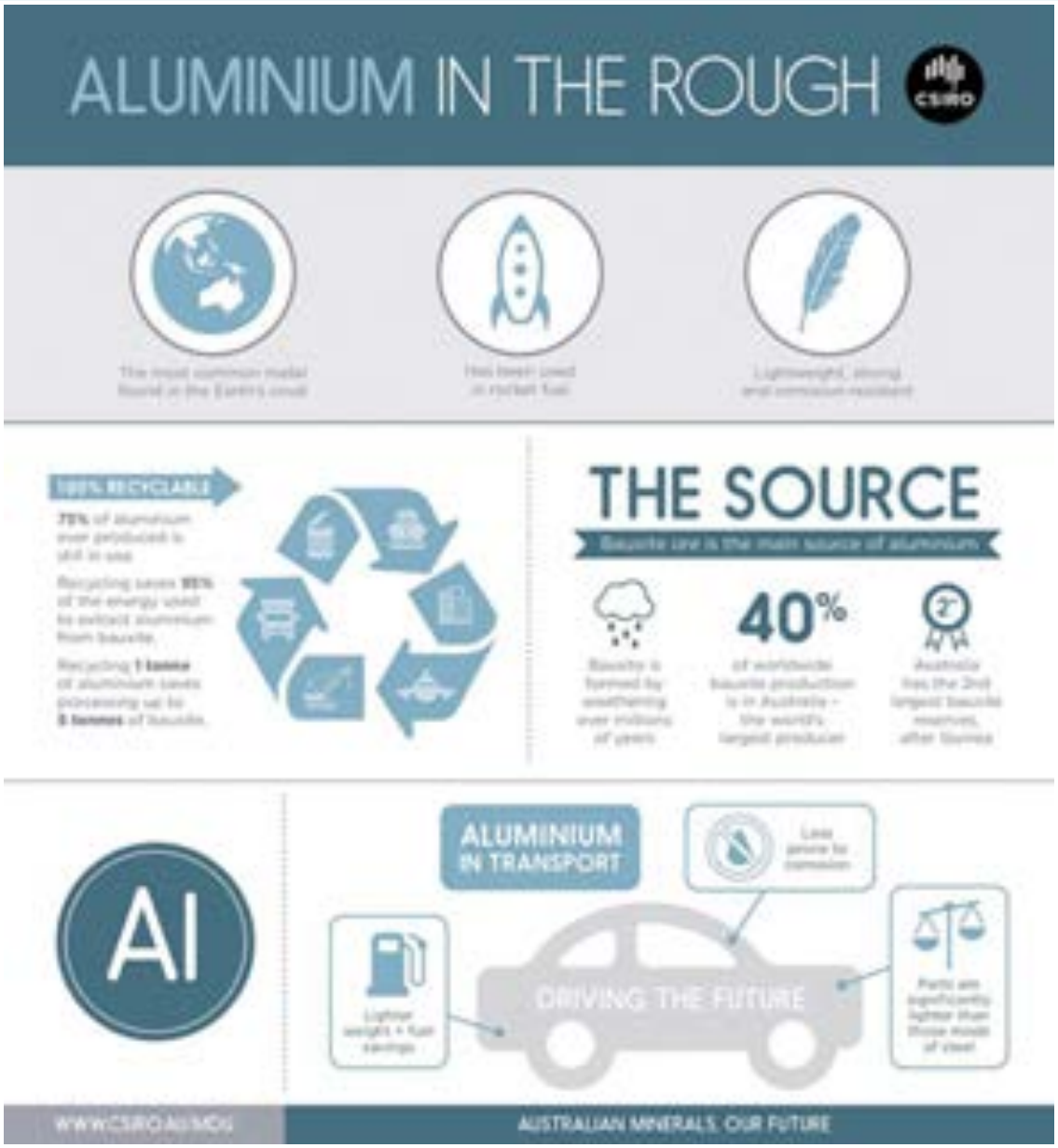
Australia has large reserves of non-renewable resources, such as coal, natural gas, oil and **uranium**, and these are used to produce the energy we all rely on. In addition, Australia is rich in mineral resources. The Pilbara region in Western Australia, for example, has some of the largest reserves of iron ore in the world. Australia also produces many other minerals, including silver, copper, nickel and tin. Australia is the world's:

- largest exporter of iron ore, bauxite, lead, diamonds, zinc ores and mineral sands
- second-largest exporter of alumina (processed from bauxite and then turned into aluminium)
- third-largest exporter of gold.

Many of these resources can be recycled. Like fossil fuels, they take a long time to form and therefore cannot be replaced, but they can be repurposed. For example, aluminum can be melted down and used to create new items, as can gold and silver.

uranium radioactive metal used as a fuel in nuclear reactors

FIGURE 4 luminium is the most common element found in the Earth's crust. It is also 100% recyclable.



Source: © Copyright CSIRO Australia

10.2.3 CASE STUDY: The Pilbara

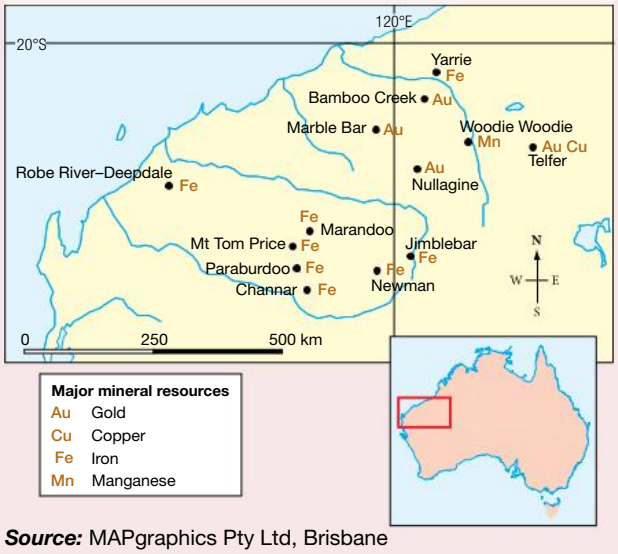
Most of Australia's iron ore reserves are found in the Pilbara region in north-west Western Australia. The Pilbara accounts for 98 per cent of the country's iron ore production and 96 per cent of its exports. Iron ore is the raw material from which iron is made. Although iron in its cast form has many uses, its main use is in steelmaking. Steel is the main structural metal in engineering, building, ship building, cars and machinery.

Two of the largest companies operating in the Pilbara are BHP and Rio Tinto. There are many mines in the Pilbara, including those at Mount Tom Price, Marandoo, Channar, Newman and Robe River.

The iron ore in the Pilbara is relatively easy to mine. It is also high quality, so there is strong demand for it from many countries, including Japan, China and South Korea.

int-7767

FIGURE 5 Mineral deposits in the Pilbara region



Source: MAPgraphics Pty Ltd, Brisbane

FIGURE 6 The Mount Tom Price iron ore mine in the Pilbara



10.2.4 Renewable resources and their uses

Renewable resources are those that can be replaced within a short period of time. Some renewable resources are constant, meaning that humans can use them frequently and in large quantities, and they will never run out. For example, solar energy is a renewable resource that can be used for heating water or generating electricity. It is never used up and is constantly being replaced by the sun.

However, other renewable environmental resources can be impacted by human actions, and this can affect their quality and quantity. They can be replaced over time, but only if they are carefully managed. Forests, soils and fresh water are renewable, but need to be protected from actions that may threaten them. For example, the human activity of agriculture depends directly on natural resources, such as soil. In developing countries, traditional forms of agriculture such as

FIGURE 7 Solar energy is becoming a popular option for an increasing number of people. Can you think of any reasons why?

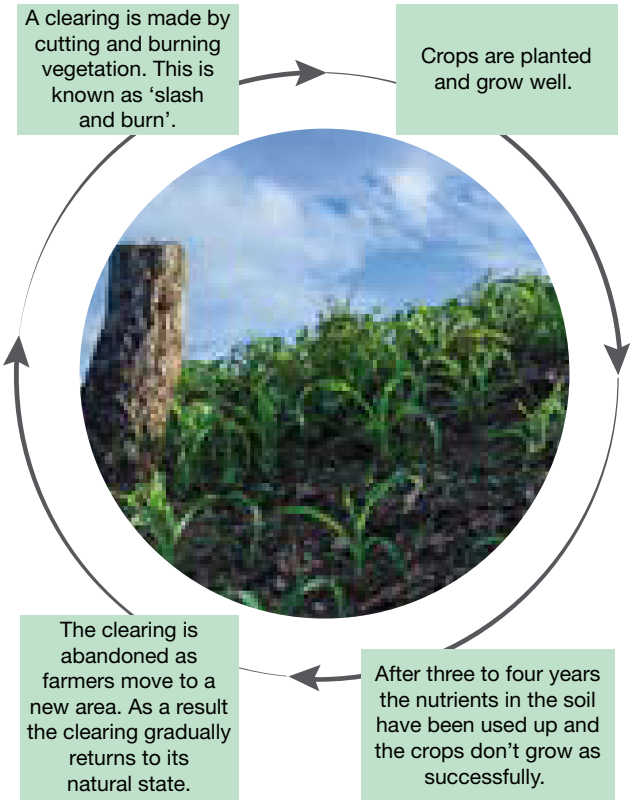


subsistence farming and nomadic herding are still common. These activities are sustainable if farmers move on when an area becomes unproductive, allowing the land and the soil to recover. However, poverty and population growth mean that many people now clear forests for farms and overgraze or over-crop small plots of land, resulting in deforestation and land degradation. This reduces the quality of the soil as a renewable resource.

Due to Australia's large agricultural industry, soil is an important natural resource; however, Australia has generally poor soils, especially when compared with those found in other continents such as North America and Europe. Most Australian soils are low in nutrients, and in some parts of the continent, particularly the more arid areas, high salt content is also a problem. Most parts of Australia are suitable only for sheep and cattle grazing, rather than **intensive agriculture**, owing to low rainfall and poor soils. There are regions of good soil scattered throughout Australia. These include soils formed from volcanic rock, such as those on the Darling Downs in Queensland and around Orange in New South Wales, and **alluvial soils** (found in river valleys).

The use of fertilisers can help improve the nutrient composition of soils and irrigation can add much-needed water, thereby helping plants to grow; however, the use of these agricultural practices can bring additional problems. When fertilisers end up in rivers and oceans as run-off, they cause algal blooms and damage coral reefs. Over-irrigation can raise the water table, bringing salt to the surface. This is known as salinity and can damage crops. Therefore, soil is a renewable resource that needs to be carefully looked after.

FIGURE 8 The process of shifting cultivation means that farmers move on when an area becomes unproductive, allowing the land to recover.



subsistence farming a form of agriculture that provides food for the needs of only the farmer's family, leaving little or none to sell

intensive agriculture any method of farming that requires concentrated inputs of money and labour on relatively small areas of land; for example, battery hens and rice cultivation

alluvial soil a fine-grained fertile soil brought down by a river and deposited on its bed, or on the floodplain or delta

FIGURE 9 Soil salinity



FIGURE 10 Algal bloom



on Resources

Google Earth Mt Tom Price mine

10.2 ACTIVITIES

1. Refer to **FIGURE 8**. Use the internet to research who uses shifting cultivation around the world. Choose one case study and report back to the class about their way of life. Examples of these may include tribes from ***places*** such as the Amazon, Congo Basin or Papua New Guinea. Compare your chosen tribe's way of life with your way of life, and explain how it differs when it comes to using resources and accessing food. Upon completion of the presentations, discuss as a class why you think Australian farmers do not use shifting cultivation as their method of agricultural production.
   HASS skills: Evaluating
   Geography concepts: Place, Environment
2. Create a table that lists ten renewable and ten non-renewable resources used by your family. Be specific; for example, list timber used in your furniture. From your list, note some of the waste and pollution that may be created in the use or creation of these resources. How could this be reduced to improve environmental ***sustainability***? As a class develop a five-point plan of how you could all be more proactive in being more ***environmentally sustainable*** every day.
   HASS skills: Questioning and researching
   Geography concepts: Sustainability, Environment
3. In groups of two or three, research the issues facing the Murray–Darling Basin. Each group should investigate a different area, such as salinity, blackwater, bushfire contamination or algal blooms. Present your group's research to the class and accompany your presentation with a PowerPoint or other graphic presentation so your peers can see the **changes** that have occurred within this **environment** over time.
   HASS skills: Communicating and reflecting
   Geography concepts: Change, Environment

10.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 7	Questions 3, 8, 9	Questions 2, 5, 6, 10

Check your understanding

1. What is an ***environmental*** resource?
2. Outline the difference between renewable and non-renewable resources.
3. Which renewable resources are most affected by human activity? Why?
4. List the main mineral resources produced in Australia.
5. Explain why many Australian soils are suitable only for grazing.
6. Identify two agricultural practices that can be used to improve soil quality.

Apply your understanding

7. What does the ***sustainable*** use of ***environmental*** resources mean?
8. Refer to the case study on the Pilbara.
   a. Where does Australia's main iron ore production take place?
   b. What is the main use of iron ore?

c. Why is there strong demand overseas for Australian iron ore?
d. List three ***places*** in the Pilbara where there are deposits of iron ore.

9. What are examples of fossil fuels that you use in order to maintain your lifestyle?
10. Refer to **FIGURE 5**. If you are at the Mount Tom Price mine, in which direction and how far are the following ***places***?
    a. Yarrie
    b. Robe River–Deepdale
    c. Telfer
    d. Channar

    What is mined at each location?

For sample responses to every question, go to www.jacplus.com.au.

10.3 Fossil fuels and energy

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- identify global and Australian energy needs and supplies
- identify the forms of renewable energy that can be produced and used in Australia
- explain why renewable energy is not used in many countries.

10.3.1 Australia's energy use

Over the past 30 years, Australia's energy consumption has increased by over 200 per cent. Most of the energy we use comes from non-renewable sources, particularly coal, which is used for steel manufacturing and 73 per cent of electricity generation. Other non-renewable energy sources used in Australia include natural gas, oil and uranium.

Each year, over half of Australia's energy products are exported. Australia is the world's fourth largest producer of coal. In the past five years, coal has made up approximately 15 per cent of Australia's exports. Demand for

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FIGURE 1 The biggest buyers in the Australian coal market, 2018

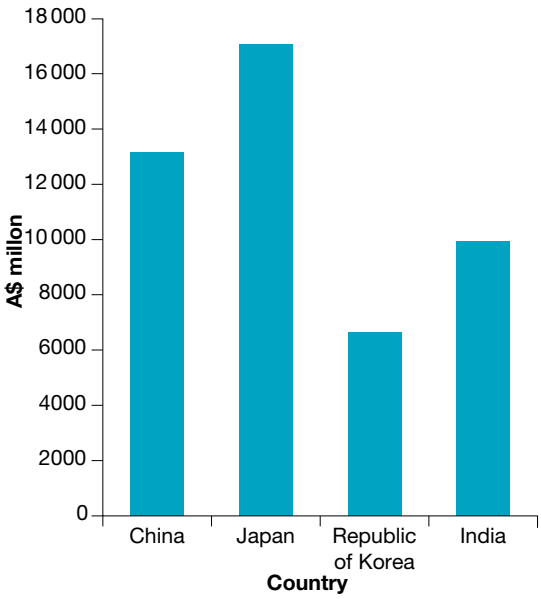


FIGURE 2 Extraction of coal carries a high environmental cost.



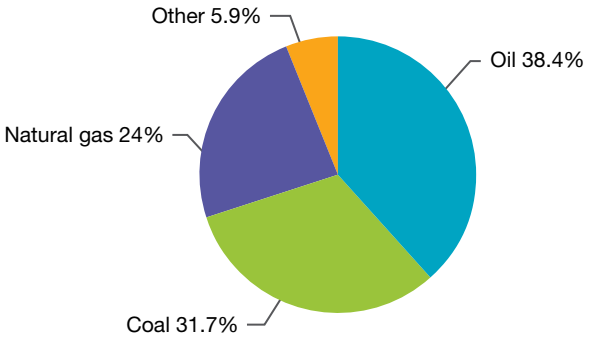
coal from Asia has increased over the past ten years. Japan is our largest market, claiming 45 per cent of Australian coal. The next biggest importer of Australian coal is China, which takes 23 per cent of the market. There is the possibility that demand for Australian coal from South-East Asia will triple in the next 25 years.

FIGURE 3 Millions of tonnes of coal are moved around Australia annually.



FIGURE 4 Australian non-renewable energy consumption by fuel

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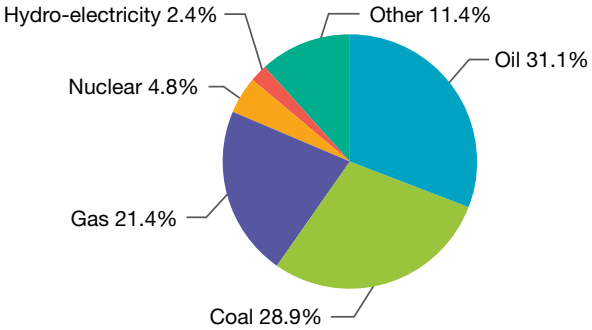
10.3.2 Global use

The world relies heavily on energy for transport, heating and manufacturing. The amount of energy used varies widely around the world. The world's most commonly used energy sources are oil, coal and gas (all fossil fuels), hydro-electricity and nuclear power.

Internationally, there is more trade in oil than any other product. Oil is unevenly distributed, with most reserves located in the Middle East. As a result, other nations need to buy their oil from this region.

FIGURE 5 World energy production

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Oil is a fossil fuel and a non-renewable resource. It is believed that oil reserves will eventually run out, probably within 40 to 80 years. Between half and two-thirds of oil production is used in transport. It is also used to produce energy and to **manufacture** products such as plastic, nail polish, lipstick, synthetic textiles and whitegoods.

Every day, 92 million barrels of oil are used around the world; the United States uses 19 million barrels per day while the second highest consumer of oil, China, uses 11 million barrels per day. Australia consumes almost 1 million (or 998 thousand) barrels per day. Oil is exported to countries that can afford to pay for it. For example, even though the United States has only 5 per cent of the world's population, it consumes around 20 per cent of global supplies. Some countries import oil because they use more than they produce.

10.3.3 Fossil fuel winners and losers

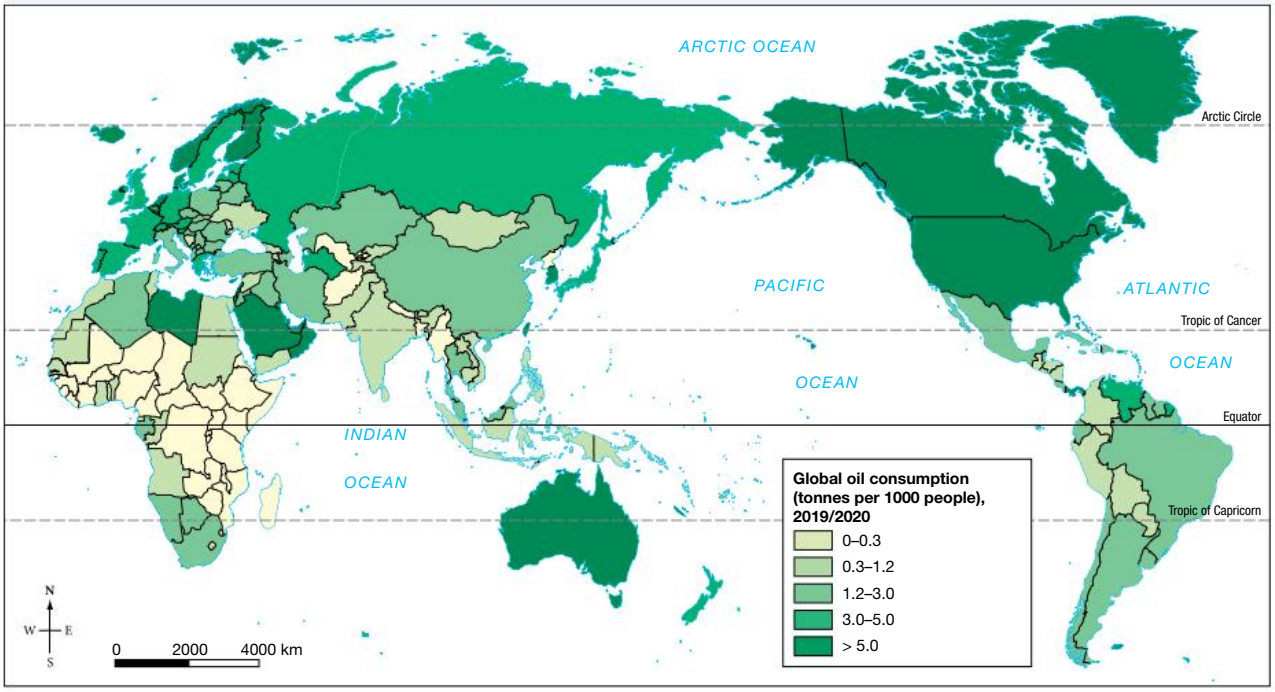
Governments, oil companies and individuals make billions of dollars from oil. For example, Saudi Arabia's Crown Prince and the Sultan of Brunei are oil billionaires, and large oil companies are some of the most profitable companies in the world.

Oil generates economic growth and can improve people's living standards in producer countries. However, while oil may bring wealth to governments and corporations, wealth does not always trickle down to local populations. Venezuela is one of the world's top ten oil producers, yet 32 per cent of its population lives below the poverty line.

manufacture to make products on a large scale

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FIGURE 6 Global oil consumption



Source: Spatial Vision

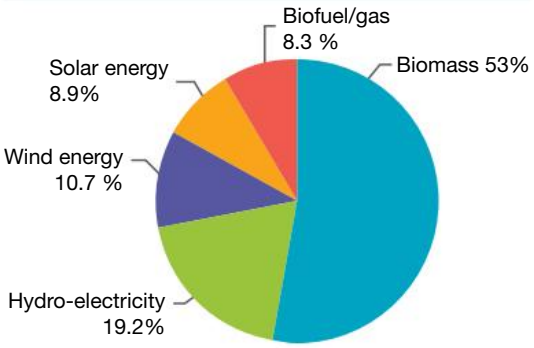
Source: Based on data from Central Intelligence Agency. Refined petroleum products — consumption. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/fields/266rank.html [online resource]. Map drawn by Spatial Vision.

10.3.4 Australia's renewable energy

Australia has many potential renewable energy sources: hydro-electric, wind, solar, tidal, geothermal and **biomass** energy. Although the use of these is increasing, renewables provide us with only about 6 per cent of our energy needs. In 2015, the Australian government reviewed its Renewable Energy Target and set the goal that by 2020 at least 33 000 gigawatt-hours, or 23.5 per cent of Australia's electricity, would come from renewable sources. This would be enough electricity to power approximately five million homes for a year. Other benefits may include billions of dollars of investment, the creation of over 15 000 jobs and, in the long term, it could even save every Australian household $140 off their electricity bill annually. In September 2019, the Clean Energy Regulator of Australia announced that this target had been met.

FIGURE 7 Australia's renewable energy consumption, by fuel type

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Australia is a large country with a number of different environments that are suited to supplying renewable energy. There has been an increase in public and government concern over global warming and climate change, so more research into and development of renewable energy resources may help to minimise these concerns.

biomass organic (once living) matter used as fuel

DISCUSS

Hydro-electricity is a form of renewable energy. Should Australian states and territories be encouraged to build more dams on major rivers to develop renewable hydro-electric power generation? Conduct a class discussion from various viewpoints including:

- Aboriginal peoples who own land being flooded
- the government
- hydro-electrical engineers
- environmentalists.

General capablity: Personal and social capability

10.3.5 Different types of energy

Some types of renewable energy that could be sustainable in Australia include the following.

- *Geothermal energy*. Australia has huge underground energy resources known as 'hot rocks'. Water can be heated by pumping it underground through these hot rocks. The resulting steam then drives a **turbine** to generate electricity.
- *Wind power*. A typical wind turbine can meet the energy needs of up to 1000 homes.
- *Tidal power*. Waves can drive turbines to produce electricity. Tidal power is especially suitable for powering **desalination** plants, though Australia does not use this system.
- *Biomass energy*. This is produced from the combustion of organic matter, such as sugar cane and corn crops. Biomass can be used to produce electricity as well as liquid fuels like ethanol and biodiesel.
- *Solar power*. Solar energy technologies harness the sun's heat and light to provide heating, lighting and electricity. Two types of solar technologies are currently under development in Australia.
  - Photovoltaic cells convert solar energy directly into electricity. These can be placed on roofs in order to collect direct sunlight.
  - Solar thermal systems use the sun's heat to generate electricity by first heating a fluid such as water to create steam, which drives a turbine to generate electricity. Australia has abundant solar radiation, and therefore great potential for the development of solar energy. Germany is currently the highest consumer of solar electricity in the world.
- *Hydro-electric power*. Most of Australia's hydro-electric power is generated in Tasmania and by the Snowy Mountains Hydro-Electric Scheme in New South Wales. Around 6 per cent of Australia's electricity comes from hydro-electric power, but there are limited opportunities for increasing this because of the lack of water resources, and because building dams can be controversial.

The use of sustainable energy is still in its early stages but is growing rapidly in China, the United States and Europe. Fossil fuels are currently cheaper and more convenient to produce than renewable energy sources. The reason for this is that we do not pay the real cost of their use — we do not pay for the huge cost of releasing waste products into the **atmosphere**. In future, a carbon tax or restrictions on the use of fossil fuels would increase their cost, perhaps making renewable energy a more attractive option for consumers.

turbine a machine for producing power, in which a wheel or rotor is made to revolve by a fast-moving flow of water, steam or air

desalination a process that removes salt from sea water

atmosphere the layer of gases surrounding the Earth

on Resources

Weblinks Gulf of Mexico, NOAA, Treehugger, National Geographic Education — Coal, Geoscience Australia, Top 10 profitable companies

FIGURE 8 Some sources of renewable energy: (a) solar, (b) biomass, (c) wind, (d) hydro-electric (e) geothermal, (f) tidal













Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigate additional topics > Energy > **World energy**
- Investigate additional topics > Energy > **Energy in Australia**

10.3 ACTIVITIES

1. The extraction of fossil fuels can have negative impacts on the ***environment***. Using the internet, research the 2010 BP oil disaster in the Gulf of Mexico, also known as the Deepwater Horizon disaster. Create a poster that illustrates the causes of the event and its effects, and explains the clean-up methods used to try to contain the damage. Ensure your presentation is visually appealing by using a variety of maps, photos and graphs.
   HASS skills: Communicating and reflecting
   Geography concept: Environment
2. Investigate the different methods used to extract coal. Find an example image to illustrate each method and annotate the image with details as to how the method works. Ensure that you pay special attention to noting down the environmental impacts of these processes.
   HASS skills: Questioning and researching
   Geography concept: Environment
3. Conduct some research into the world's most profitable companies (the top ten or twenty will be sufficient). Calculate how many of these are involved in the extraction or processing of fossil fuels. Categorise the remaining companies into logical groupings. Present your findings as a graph or pie chart.
   HASS skills: Communicating and reflecting
   Geography concept: Environment

10.3 EXERCISES

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Questions
1, 3, 6	4, 7, 9	2, 5, 8, 10

Check your understanding

1. Refer to **FIGURE 1**.
   a. In which geographic region are these nations located?
   b. How many more per cent of coal does China import than Taiwan?
2. Other than energy, what other products are manufactured from oil?
3. Why doesn't the money made from the sale of fossil fuels, such as oil, always benefit the local people in the country that sells the product?
4. In which renewable energy resources is Australia (a) rich and (b) poor?
5. Define the term 'renewable energy'. List the main forms of renewable energy.

Apply your understanding

6. Why is renewable energy not widely used in many countries?
7. What will happen to Australian coal reserves if demand from other countries continues to grow? What could be some of the impacts of this? Does this raise any ethical dilemmas?
8. Refer to the pie graph in **FIGURE 7**. What type of renewable resource provides the greatest source of energy in Australia?
9. Australia is a sunny country, so why does only 8.9 per cent of our country's renewable energy come from the sun?
10. List some of the likely positive and negative consequences if Australia stopped using non-renewable energy resources altogether and replaced them with renewable energy sources.

For sample responses to every question, go to www.jacplus.com.au.

10.4 Water as a resource

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- explain why water is the most important resource on Earth
- define key terms related to the water cycle
- describe the movement and interconnection of water in the water cycle.

10.4.1 Is water a renewable resource?

The amount of water on Earth has not changed since the beginning of time; there is only a finite, or fixed, amount. The water used by ancient and extinct animals and plants millions of years ago is the same water that today falls as rain. The amount of water cannot be increased or decreased. It is cycled and recycled, and constantly changes its state from gas, to liquid, to solid, and back.

FIGURE 1 A riverine environment



Water is a resource. Like any other resource, it has no value in itself, but has great value when a use is found for it. Environments where water is found are also a resource. A river can be the site of a settlement that provides transport as well as food. A **riverine environment** that includes fish, birds, wildlife, wetlands, plants and micro-organisms is also valuable as a living system and can therefore be regarded as a resource.

Water is available in different forms and sources. Green water is described as water from precipitation that is stored in the root zone of the soil and transpired or used by plants. Green water is used in many forms of agriculture, horticulture and forestry that rely on precipitation to grow products.

Blue water is water that has been sourced from surface or groundwater. It is either evaporated, incorporated into a product or taken from one body of water (e.g. a river) and returned to another (e.g. an irrigation channel). Irrigated agriculture, industry and domestic water use blue water.

10.4.2 The water cycle

All the water on Earth moves through a cycle that is powered by the sun. This cycle is called the water cycle, or **hydrologic cycle**. Water is constantly changing its location (through constant movement) and its form (from gas, to liquid, to solid). Evaporation, condensation and freezing of water occur during the cycle.

It is estimated that up to 70 per cent of the Earth's water is locked in ice sheets in the Arctic, Greenland and Antarctica. This water is therefore a potential resource — it exists in a location and in a form in which it cannot be immediately used. Water is also a potential resource when it exists as a gas (water vapour), as salt water or as waste water.

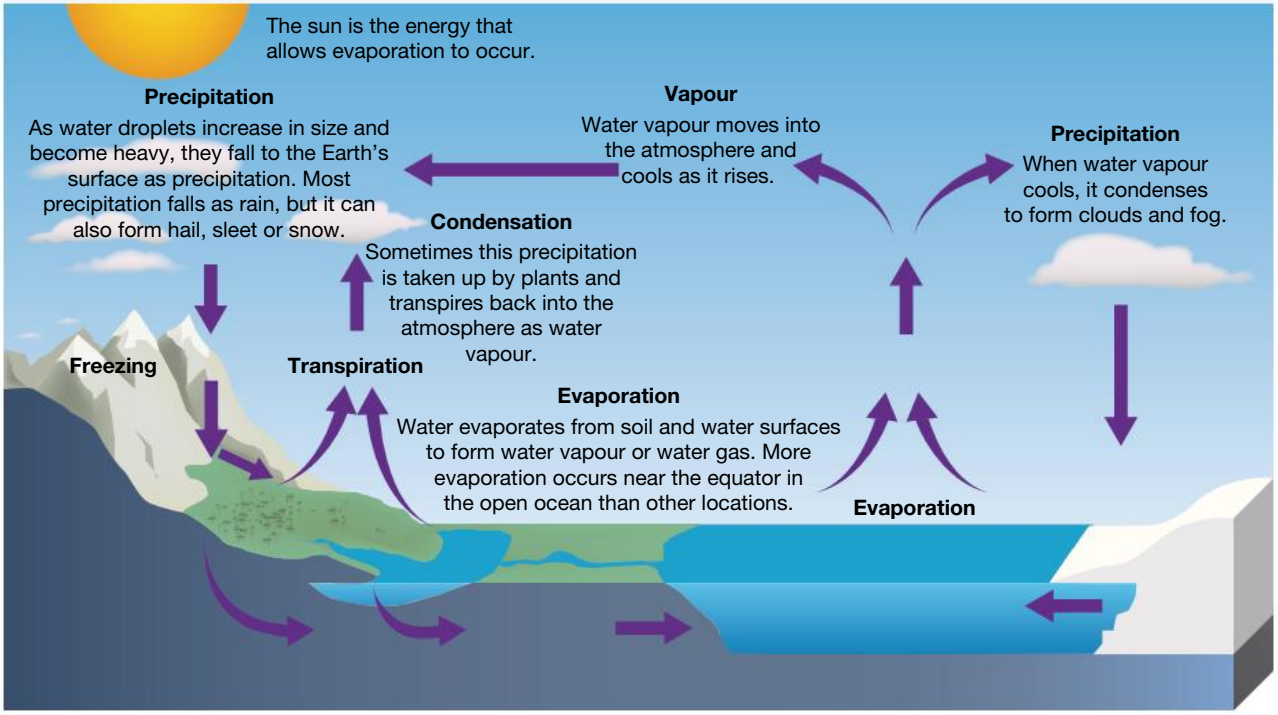
The water cycle shows how water connects places. Water flows through the environment in different forms. Because it is such an essential resource for life, places are closely connected to water and water supply. Many places are settled on rivers and lakes with access to water. Rivers connect places and agriculture is connected to water supply (surface or groundwater).

riverine environment the environment around a river or river bank

hydrologic cycle another term for the water cycle

int-5614

FIGURE 2 The water cycle



10.4.3 How long does water stay in the one place?

Water can stay in the one place very briefly or it can stay for many thousands of years. It has been calculated that water stays in the atmosphere for an average of nine days before it falls to Earth again as precipitation. Water stays in soil for between one and two months. If you live in an area that has experienced drought or a very long summer without rain, you may have noticed that the soil dries out and forms cracks. Once the seasons change and it begins to rain, the soil absorbs water again and the cracks disappear.

FIGURE 3 A scientist working with ice core samples in Antarctica. Some of the longest records of our climate have come from large ice sheets over three kilometres thick in Greenland and Antarctica. They produce records going back several hundred thousand years.



Water spends between two and six months in snow and rivers but a lot longer in large lakes, glaciers, oceans and **groundwater**. The longest time water stays in one place is in the Antarctic ice sheets. Some ice core samples in Antarctica contain water that is 800 000 years old, but the average is about 20 000 years. The length of time water spends as groundwater can be an average of 10 000 years if it is very deep, but it can stay much longer.

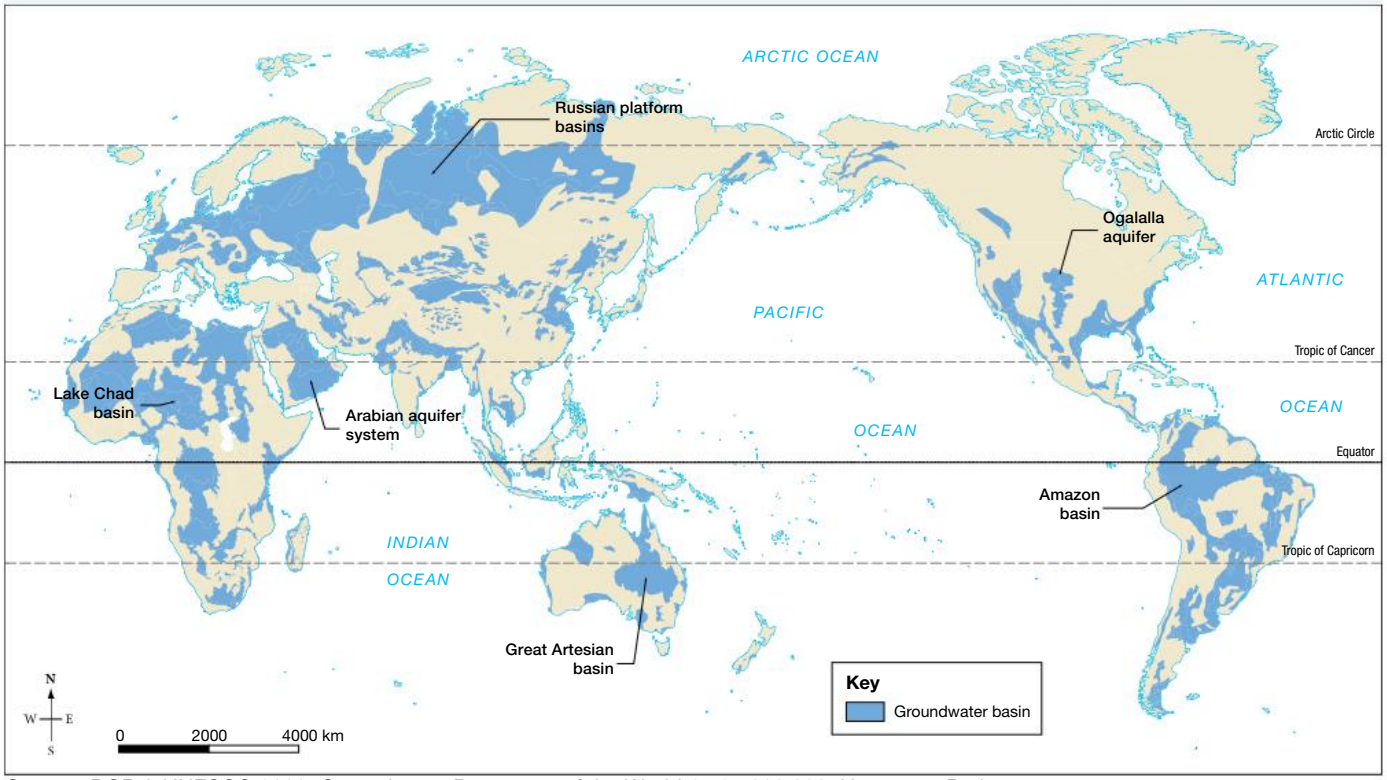
10.4.4 What is groundwater?

An important part of the water cycle, groundwater is the water that is found under the Earth's surface. Many settlements — especially those in arid and semi-arid areas — rely on groundwater for their water supply.

When rain falls to the ground, some flows over the surface into waterways and some seeps into the ground. Any seeping water moves down through soil and rocks that are permeable; that is, they have pores that allow water to pass through them. Imagine pouring water into a jar of sand or pebbles; the water would settle into the spaces between the sand or stones.

Groundwater is water held within water-bearing rocks, or **aquifers**, in the ground. These work like sponges. They hold water in the tiny holes between the rock particles.

FIGURE 4 The world's major groundwater basins



Source: BGR & UNESCO 2008: Groundwater Resources of the World 1 : 25 000 000. Hannover, Paris.

10.4.5 Artesian water

An **artesian aquifer** occurs between impermeable rocks, and this creates great pressure. When a well is bored into an artesian aquifer, water often gushes out onto the surface. This flow will not stop unless the water pressure is reduced or the bore is capped (sealed).

Groundwater and surface water are interconnected — they depend on each other. Groundwater is only replenished when surface water seeps into aquifers. This is called groundwater recharge, and it is affected by whether there is a lot of rain or a drought is occurring.

groundwater water held within water-bearing rocks, or aquifers, in the ground

aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater. Water can move along an aquifer.

artesian aquifer an aquifer confined between impermeable layers of rock. The water in it is under pressure and will flow upward through a well or bore.

Groundwater is vital for drinking, irrigation and industry use. Some industries bottle and sell spring and mineral water, and make soft drinks and beer. Bore water is used to water suburban gardens and parks, golf courses and crops. Groundwater is also important to the natural environment in wetlands and in supporting unique plants and animals. Groundwater keeps many of our rivers flowing, even when there are long periods without rain.

10.4.6 How do Aboriginal and Torres Strait Islander peoples use groundwater?

Aboriginal and Torres Strait Islander peoples have lived in the Australian landscape for many tens of thousands of years and developed detailed knowledge of how to survive many environmental changes and challenges. In order to obtain water in the country's dry regions, particularly in Australia's deserts, they have needed to know where to find groundwater.

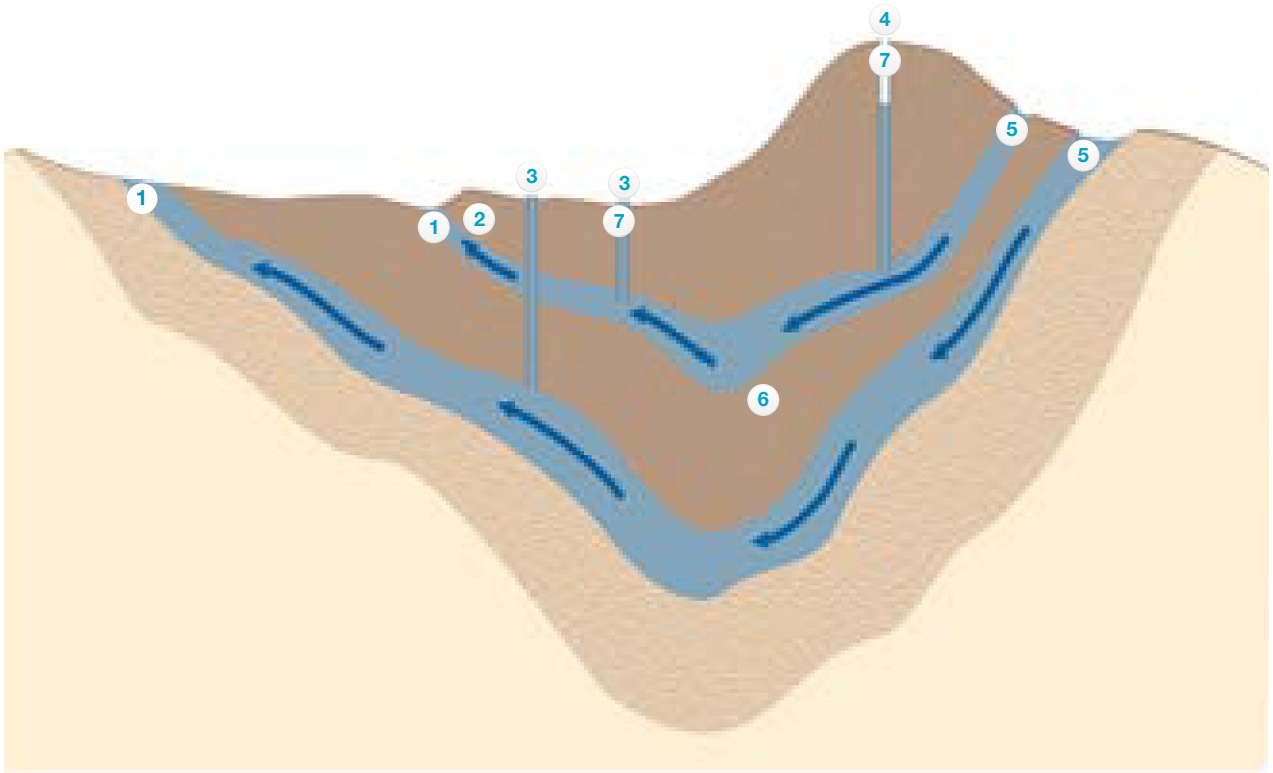
There are many groundwater sources throughout Australia that have long been used by Aboriginal and Torres Strait Islander peoples. One of these sources is **soaks**: groundwater that comes to the surface, often near rivers and dry creek beds, and which can be identified by certain types of vegetation. Another source is **mound springs**: mounds of built-up minerals and sediments brought up by water discharging from an aquifer.

soak place where groundwater moves up to the surface

mound spring mound formation with water at its centre, which is formed by minerals and sediments brought up by water from artesian basins

int-7775

FIGURE 5 An artesian aquifer



1. A spring is a place where water naturally seeps or gushes from the ground.
2. The watertable is a level under the land surface below which is saturated with water. This table rises and falls each year depending on surface rainfall and amount of water taken from the ground.
3. Artesian bores are bores where the pressure of the water raises it above the land surface.
4. Subartesian bores are those where the water does not reach the surface and needs to be pumped out.
5. The aquifer is the saturated rock, usually made of sandstone, limestone or granite, where water is trapped between impermeable layers of rock.
6. Impermeable material rock layers do not allow to flow through them.
7. Water flows freely from bores (wells) trapped in the aquifer.

Mound springs of the Oodnadatta Track

The Oodnadatta Track is located in the north-east of South Australia. The track follows the edge of the Great Artesian Basin and the south-western edge of Kati Thanda–Lake Eyre and, along its route, groundwater makes its way to the surface in several locations.

The Oodnadatta Track crosses the Country of three Aboriginal nations. In the south, between Lake Torrens and Kati Thanda–Lake Eyre, is the land of the Kuyani people; most of the west of Kati Thanda–Lake Eyre is the land of the Arabana people; and to the north is the land of the Arrernte people.

Many springs have cultural significance for Aboriginal peoples, whose ancestors relied on the springs as water sources but many are also sacred sites for important ceremonies. Knowledge of the springs in this region has been passed down over many generations through **Dreaming** stories.

This knowledge was also passed on to some explorers and colonisers. John McDouall Stuart followed this track to complete the first crossing of Australia's interior from south to north in 1862; the overland telegraph was constructed along its pathway; and the Great Northern Railway, which made the land of the Northern Territory accessible for European occupation, followed the same route.

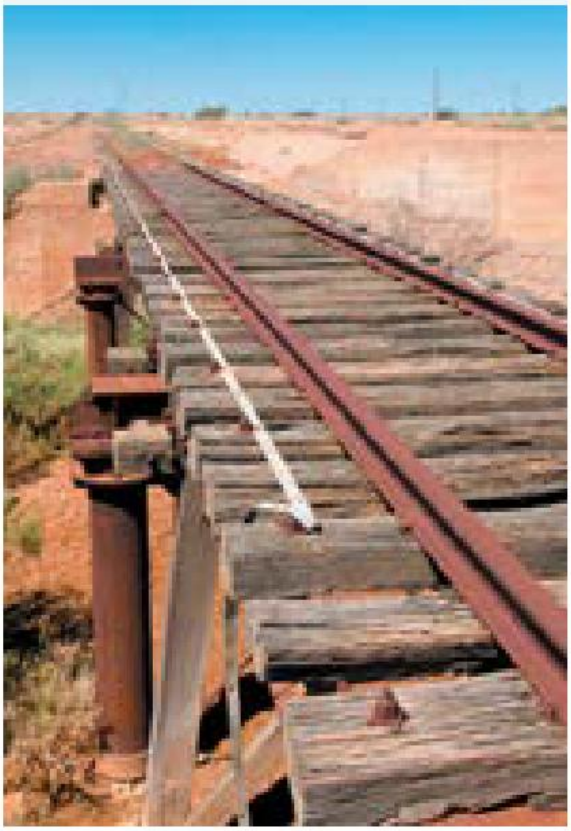
Mound springs were very important for Aboriginal peoples. They could use springs as reliable sources of water in a very harsh, dry environment. Old campsites and animal remains provide evidence that people stayed close to springs for varying time periods. However, because the plant and animal life around these regions is quite sparse, people had to move regularly and travel away from the springs when rainfall allowed that to occur.

Dreaming the English word used to label the systems of beliefs about life, culture and spirituality of Australian First Nations peoples.

FIGURE 6 Location of the Oodnadatta Track and Great Artesian Basin, one of the world's largest groundwater basins



FIGURE 7 The Oodnadatta Track passes close to the Old Ghan, the Great Northern Railway.



Because the springs were strung out over hundreds of kilometres, they were also part of an important network of trading and communication routes across Australia for Aboriginal nations. This interconnection allowed them to trade resources such as ochre, stone and wooden tools, bailer shells and pituri. Pituri is a spindly shrub used by during ceremonies and to spike waterholes to catch animals for food.

FIGURE 8 Cross-section of a typical mound spring

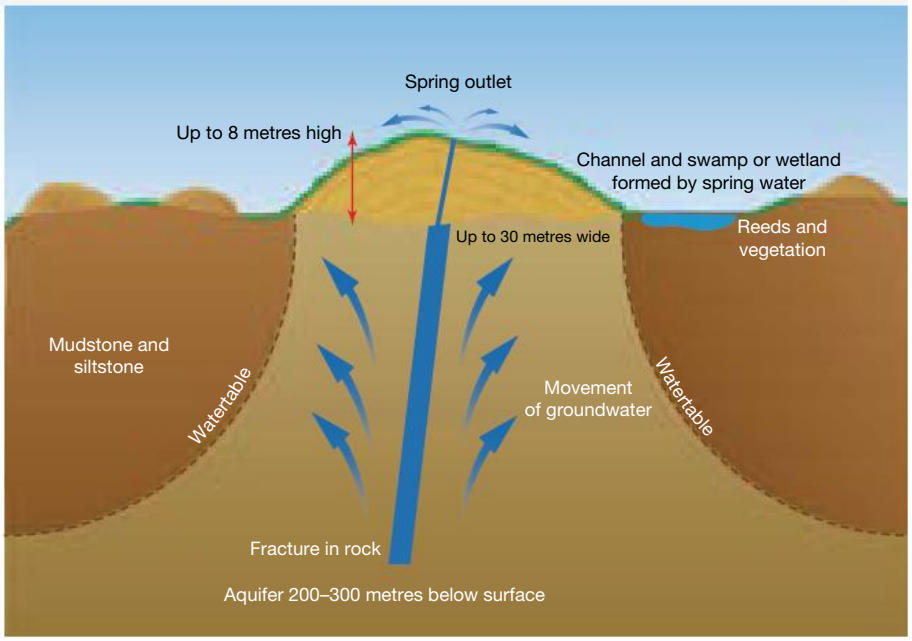
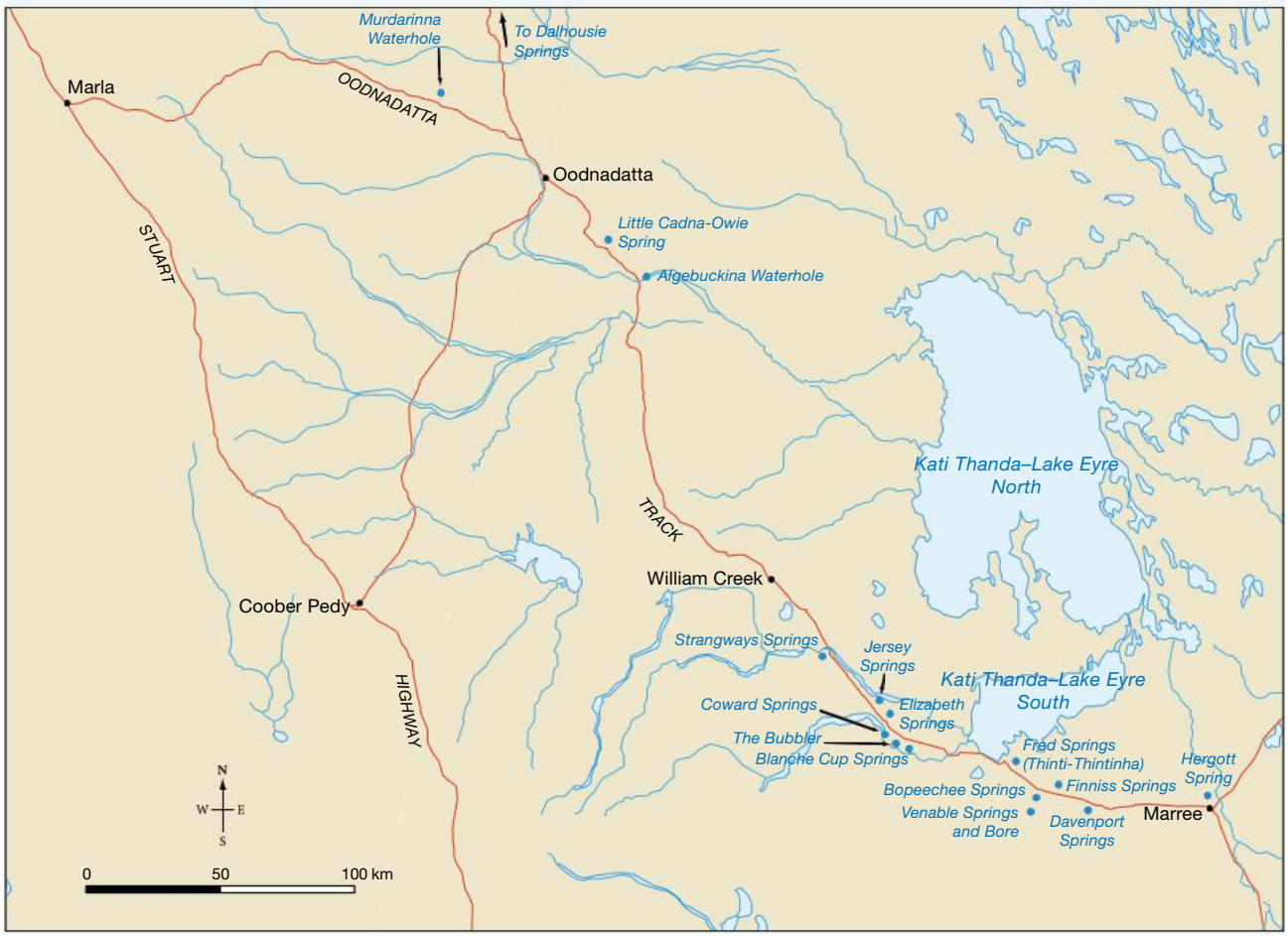


FIGURE 9 Groundwater springs along the Oodnadatta Track



Source: Redrawn with permission from the SA Arid Lands Natural Resources Management Board / © Copyright Commonwealth of Australia Geoscience Australia 2006

10.4.7 CASE STUDY: Locating water

Stories help map the location of water

Aboriginal and Torres Strait Islander knowledge of the land and how to survive in it has been passed from generation to generation through Dreaming stories. During the dry seasons and periods of drought, people congregated at the mound springs. These springs were linked by songs and Dreaming stories, and are often connected to rain-making rituals.

FIGURE 10 The Old Bubbler on the Oodnadatta Track



FIGURE 11 Fed by the thermal waters of the Great Artesian Basin, the temperature of the water in Dalhousie Springs is between 34 and 38°C.



Dreaming stories

1. **Thutirla Pula (Two Boys Dreaming)**
   This is one of the most important stories of the Wangkangurru and other peoples of Central Australia. Thutirla Pula is how the spirits of the Dreaming first crossed the desert they call Munga-Thirri (land of sandhills). From the Kingfisher Dreaming is the story of the Two Boys. It is one of the most important song lines. The story tells of two boys crossing the Simpson Desert and contains information on every waterhole or soak that was known in the desert. Following this song line meant you could cross the Simpson Desert using available water along the way, taking 600 kilometres off the usual journey south of the Simpson Desert to Kati Thanda–Lake Eyre, then back north along the Diamantina River.
2. **Bidalinha (or the Bubbler)**
   The Kuyani ancestor Kakakutanha followed the trail of the rainbow serpent Kanmari to Bidalinha (or the Bubbler) where he killed it. He then threw away the snake's head, which is represented by Hamilton Hill, and cooked the body in a dirga, or oven, which is now Blanche Cup. Kakakutanha's wife, angry at missing out on the best meat from the snake, cursed her husband, and he went on to meet a gruesome death at Kudnangampa (Curdimurka). The bubbling water represents the movements of the dying serpent.
3. **Thinti-Thintinha Spring (Fred Springs)**
   The willy wagtail (or thunti-thuntinha) danced his circular dance to create this spring and the surrounding soils, which are easily airborne in windy conditions.The moral to the story is that while it is easy to catch the skilful little willy wagtail, you must never do so because of the terrible dust storms that may follow.
4. **Kewson Hill: The Camp of the Mankarra-kari — the Seven Sisters**
   The Seven Sisters came down here to dig for bush onions (yalkapakanha). As they peeled the onions, they tossed the skins to one side, creating the dark-coloured extinct mound spring on the south-west side of the track. The peeled bulbs created the light-coloured hill (yalka-parlumarna) to the north-east, also an extinct mound spring.
5. **Dalhousie Springs**
   Dalhousie Springs is a popular oasis in the arid desert region of the northernmost part of South Australia.

on Resources

Interactivities Water works (int-3077)
Water beneath us (int-3078)
Oodnadatta Track (int-3079)

Weblinks Interactive map of important Noongar sites
Noongar spirituality
Swan River Stories

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigating Australian Curriculum topics > Year 7: Water in the world > **Salisbury Council – Aquifer storage, transfer and recovery**

10.4 ACTIVITIES

1. Using the information about the water cycle, write and present *'The incredible journey of water'.* Focus on various ***interconnections*** between water and the ***environment***. Include diagrams and photographs, and present your story electronically, as a poster, a written piece, a drama piece or a song.
   HASS skills: Communicating and reflecting
   Geography concepts: Interconnection, Environment
2. The Gnangara Mound is a groundwater source that stretches across the Swan Coastal Plain and is a modern-day source of drinking water for Perth. The Nyungar (or Noongar) people relied not only on the Swan and Canning Rivers as water sources, but also on the underground springs and waterholes connected to the Gnangara Mound. Investigate the importance of water to the Nyungar (or Noongar) people of the Swan Coastal Plain, identifying key locations and connecting them to the Dreaming story of Waugal (or Waarkal) — the Rainbow Serpent. Present your findings as an annotated map.
   HASS skills: Questioning and researching
   Geography concept: Place
3. Use Google Earth and enter the search terms *Oodnadatta* or *William Creek* to locate the Oodnadatta Track. Describe the landscape you see. Why is finding groundwater so important in this ***environment***?
   HASS skills: Questioning and researching
   Geography concept: Environment
4. Investigate the consequences of countries overusing fossil groundwater (groundwater regarded as a finite resource). Make a consequence chart and write 'Overuse of fossil groundwater' in the largest circle. Next, write the consequences of this — you can add as many circles at the second and subsequent levels as you need. Continue to add as many consequences as you can. Now use a different coloured pen to suggest solutions to each of the consequences. Outline your final proposal to this issue once you have completed your consequence chart.
   HASS skills: Evaluating
   Geography concept: Environment

10.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 3, 7	Questions 1, 5, 9	Questions 4, 6, 8, 10

to your learnON title at www.jacplus.com.au.

Check your understanding

1. Is water a renewable or a non-renewable resource?
2. List all the ways that water can be used as a resource.
3. Explain how the hydrologic cycle moves water across the Earth.
4. Describe conditions that might result in a watertable rising or falling.
5. Why were Dreaming stories important to Aboriginal peoples in the Oodnadatta region? How do Dreaming stories help map the groundwater in this region?

Apply your understanding

6. How is water vapour related to the process of evaporation?
7. How do Dreaming stories help identify the cultural value placed on these water ***environments***?
8. Outline how groundwater and surface water are ***interconnected***.
9. Draw a diagram to show how surface water reaches the watertable to become groundwater.
10. Refer to **FIGURE 4** to describe the location of the world's groundwater regions.

10.5 Water in the world

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- identify the amount of water that is available for human use
- describe the distribution of water across the world
- explain the impact of climate change on water distribution.

10.5.1 Introduction

Viewed from space, the Earth is a sphere of blue. Water covers most of our planet. We depend on water for life; in fact, no life is possible without it. Water is a precious and finite resource, yet most of the Earth's water is too salty for humans, animals or plants to use. The amount of available fresh water on Earth needs to be shared among an ever-growing global population. Access to water is a basic human right. It is a resource that must be used carefully so that current and future populations can have adequate supplies. The image shows what all of Earth's water would look like if it was contained in a sphere, in comparison with the size of the Earth. The blue sphere representing all of Earth's water has a diameter of 1385 kilometres.

FIGURE 1 This diagram shows the volume of the Earth's water if it were contained in a sphere.



10.5.2 The world's water

Water is vital to our survival and essential to most human activities. Although Earth seems blue in space, not much of the water we see is available for use. And of the useable fresh water that can be seen, access to it is unequal across the globe.

Water covers about 75 per cent of the Earth's surface. Yet, as **FIGURE 2** shows, almost all this water (97.5 per cent) is salt water and not available for human consumption. Only 2.5 per cent of the world's water is fresh, but most of this is also unavailable for use by people. More than two-thirds (69.5 per cent) of this fresh water is locked up in glaciers, snow, ice and permafrost. Of the remaining amount, 30.1 per cent is found in groundwater. Only 0.4 per cent is left — found in rivers, lakes, wetlands and soil as well as in the bodies of animals and plants.

FIGURE 2 The distribution of water on Earth

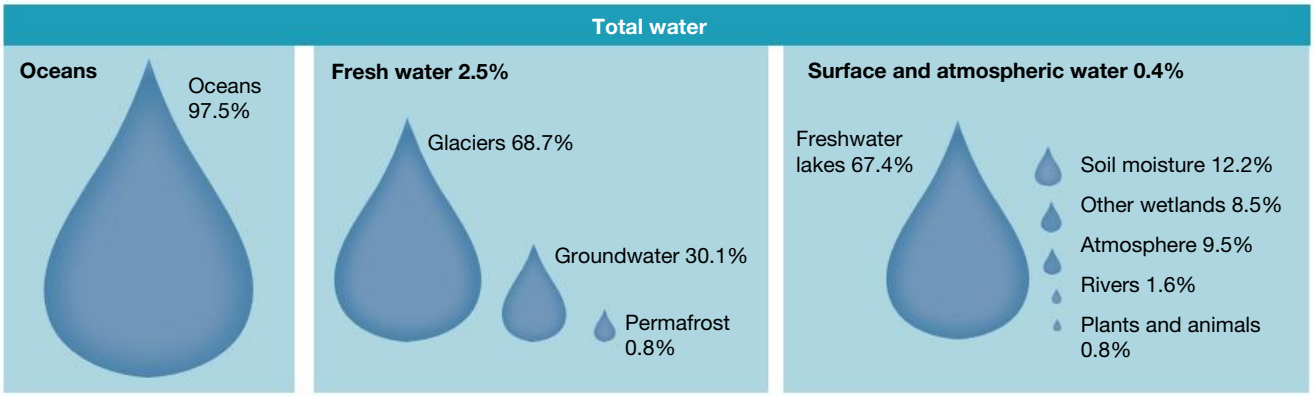
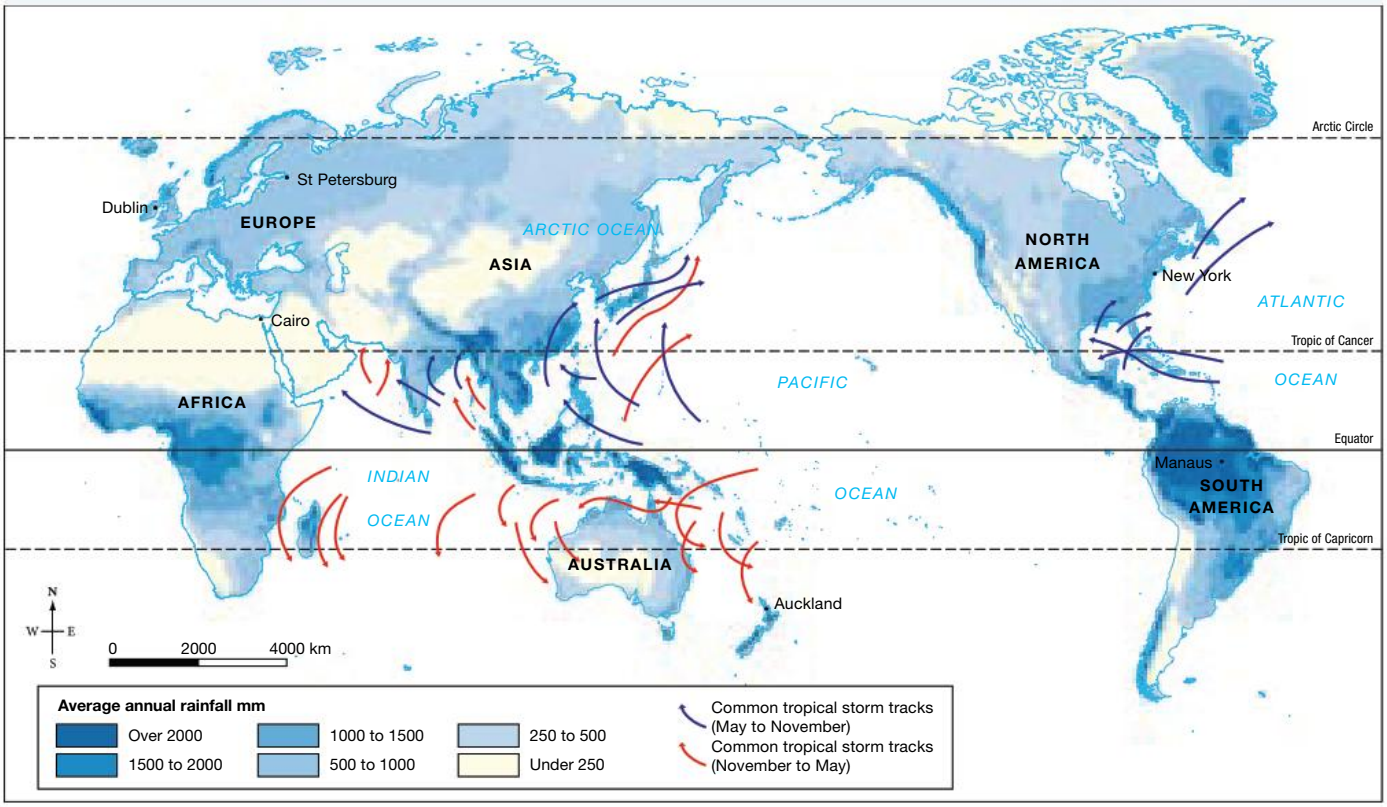


FIGURE 3 The distribution of global rainfall



Source: WorldClim

Global rainfall

The Earth's water is constantly moving. Rainfall patterns show which world regions receive more rain than others. The amount of rainfall, or **precipitation**, is related to the amount of water available for people to use. **FIGURE 3** shows the distribution of global rainfall, and comparisons can be made between Australia and other continents and regions.

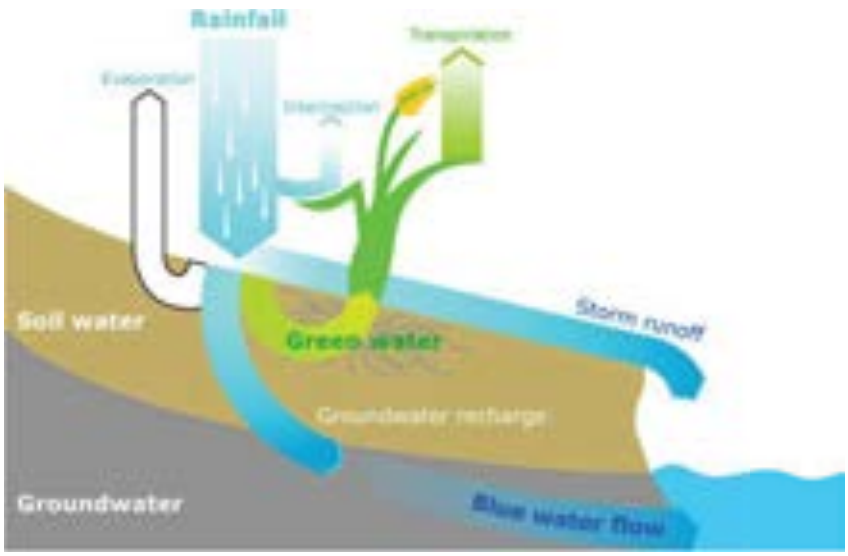
Green and blue water

The key to our survival is being able to use the water that falls on land and into rivers and streams. Water is sometimes categorised as either **blue water** or **green water**.

Green water is the water that does not run into streams or recharge groundwater but is stored in the soil or stays on top of the soil or vegetation. This water eventually evaporates or transpires through plants (see **FIGURE 4**). Green water is used by crops, forests, grasslands and savannas.

The amount of blue and green water available changes throughout the year, from year to year, and according to changes in the environment.

FIGURE 4 Green water can be lost through evaporation or transpiration.



10.5.3 Global groundwater resources

Approximately 2 per cent of the Earth's water occurs as groundwater, compared with 0.1 per cent as rivers and lakes and 94 per cent as oceans.

About 1.5 billion people in the world rely on groundwater for their survival. Some groundwater is fresh and can be used for drinking. Other groundwater can be brackish or even saltier than the sea.

Troubled waters

For many years now, more and more water has been taken out of the ground. People believed it was unlimited, but it is in danger of running out in some areas, owing to the large number of wells pumping water. This can also destabilise surrounding areas as land subsidence occurs. This is when the soil sinks downward to fill in the space left by the water. Jakarta, the capital of Indonesia, and Mexico City, the capital of Mexico, are both sinking at an alarming rate due to groundwater depletion.

If people use more groundwater than is being recharged, aquifers may dry up. Groundwater is very slow-moving and can take many years to move into deep aquifers. For this reason, groundwater is a finite and non-renewable resource, and is often referred to as *fossil water*.

precipitation rainfall, a form of water from the atmosphere

blue water water that has been sourced from surface or groundwater. It is either evaporated, incorporated into a product or taken from one body of water (e.g. a river) and returned to another (e.g. an irrigation channel)

green water water from precipitation that is stored in the root zone of the soil and transpired or used by plants

10.5.4 Climate change and impact on rainfall and run-off

The majority of climate scientists believe that **climate change** will have an impact on rainfall patterns and **run-off**. Climate models have shown that areas in the northern latitudes are likely to experience more rain, and areas closer to the equator and mid-latitudes will receive less rain. Some regions will experience droughts, while others will experience high rainfall and even flooding.

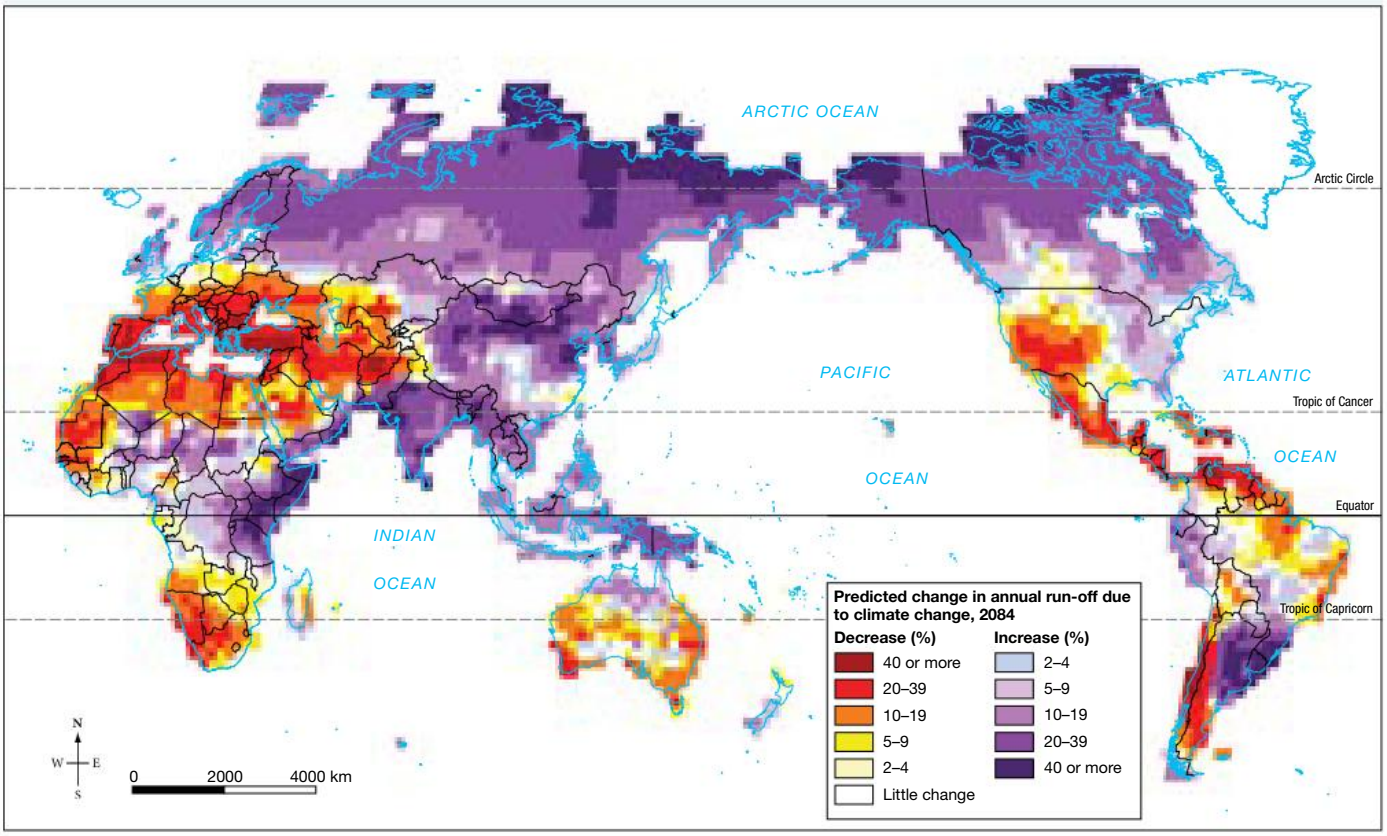
Already, in the last 100 years, global rainfall patterns have changed. In some areas such as North America, South America, northern Europe, and northern and central Asia, rainfall has increased significantly. In other areas such as the Sahel, the Mediterranean, southern Africa and parts of Asia, rainfall has decreased.

climate change any change in climate over time, whether due to natural processes or human activities

run-off precipitation not absorbed by soil, which runs over the land and into streams

int-5298

FIGURE 5 Predicted change in annual run-off due to climate change, 2084



Source: Geophysical Fluid Dynamics Labratory, National Oceanic and Atmospheric Administration

10.5 ACTIVITIES

1. Work in groups of three to list what might happen to people and the ***environment*** in regions that:
   a. will receive more rainfall than they do now
   b. will receive less rainfall than they do now.
   Complete a consequence chart for each ***change***.
   HASS skills: Evaluating
   Geography concepts: Environment, Change
2. Conduct some research to find the following information: the ***place*** in the world where the most rain fell in a single 24-hour period; the ***place*** in Australia that has the record for the wettest year; the wettest town in Australia. Compare each of these with where you live.
   HASS skills: Questioning and researching
   Geography concept: Place

3. In small groups, explore the **Pumped dry** weblink and select ONE case study to focus on. Create a visual summary of the issue facing groundwater supplies in this area. Categorise the impacts of the groundwater depletion into environmental, economic and social effects.
HASS skills: Evaluating
Geography concepts: Environment, Change

on Resources

Weblinks Planet Earth, fresh water
Introduction to water
Pumped dry

10.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 7	Questions 3, 5, 8	Questions 2, 6, 9

Check your understanding

1. What percentage of the world's water is:
   a. salty
   b. available for use by people?
2. How will climate change affect rainfall patterns?
3. Use the text to outline the difference between blue and green water. List two things that might ***change*** the amount of blue and green water available.
4. What percentage of the world's freshwater is locked up in glaciers?

Apply your understanding

5. Write a statement about the ***interconnection*** between high rainfall and location at the equator and mid-latitudes. Name two ***places*** that do not fit this pattern.
6. If farmers use irrigation, what type of water would they rely on? What about farmers who do not have access to irrigation?
7. Study **FIGURES 3** and **5** to answer the following questions.
   a. Describe how much rain falls in North Africa and West Asia (the Middle East). How does this compare with Australia?
   b. What is predicted to happen to annual run-off in these regions as a result of climate change? What impact might this have on people and the ***environment***?
8. Study **FIGURE 5** and an atlas.
   a. Name three ***places*** that are predicted to receive more run-off due to climate change.
   b. Name three ***places*** that are predicted to receive less run-off due to climate change.
   c. Compare these six ***places*** with the global rainfall map, **FIGURE 3**. Which of the following statements is true?
      - Most ***places*** with very low rainfall have lower run-off.
      - All ***places*** with very high rainfall experience increased run-off.
      - The ***places*** with the greatest ***change*** in run-off will be northern Russia and northern Canada.
      - Rewrite any false statements to make them true.
9. Suggest the possible consequences of continued groundwater extraction in Indonesia and Mexico on each of the following: the population, the economy, the built environment and the natural environment.

For sample responses to every question, go to www.jacplus.com.au.

10.6 Australia's climate and how it affects water availability

LEARNING INTENTION

By the end of this subtopic, you will be able to explain how Australia's climate affects water availability and describe how Australia's different climate areas affect water availability.

10.6.1 Dry, variable and evaporated

Australia is the driest inhabited continent (only Antarctica is drier), and there is very little fresh water available for our use. Rain falls unevenly across the country and from season to season.

The driest part of Australia is around the Lake Eyre Basin, and the wettest locations are places in north-east Queensland and western Tasmania.

10.6.2 Variability

Rainfall variability is the way rainfall totals in a given area vary from year to year. For example, if an area has low rainfall variability, it means rainfall will tend to be fairly consistent from one year to the next. Many coastal areas show this kind of rainfall pattern. In contrast, high rainfall variability means rainfall is likely to be irregular from one year to the next; there may be heavy rainfall in some years and little or no rainfall in others. Desert areas in central Australia tend to have low rainfall and high rainfall variability.

10.6.3 Evaporation

Another problem for Australia is that most of its rainfall does not end up in rivers; much of it evaporates. Of all the water carried by the world's rivers, Australian rivers contain only 1 per cent of that total — even though Australia has 5 per cent of the world's land area. On average, only 10 per cent of our rainfall runs off into rivers and streams or is stored as groundwater. This figure drops to 3 per cent in dry areas and rises to 24 per cent in wetter places. The rest evaporates, is used by plants, or is stored in lakes, wetlands or underground storages. Areas in central Australia are very dry and, as a result, have high **evaporation** rates.

Relative humidity is a measure of the air's moisture content expressed as a percentage of the maximum moisture the air can contain at a certain temperature. Warm air can contain more moisture than cool air.

Relative humidity does not measure the exact amount of moisture in the air because that depends on air temperature. For example, if Brisbane has a day of 30 °C and Melbourne has a day of 15 °C, and the relative humidity in both places is 60 per cent, there will be much more moisture in the air in Brisbane than in Melbourne.

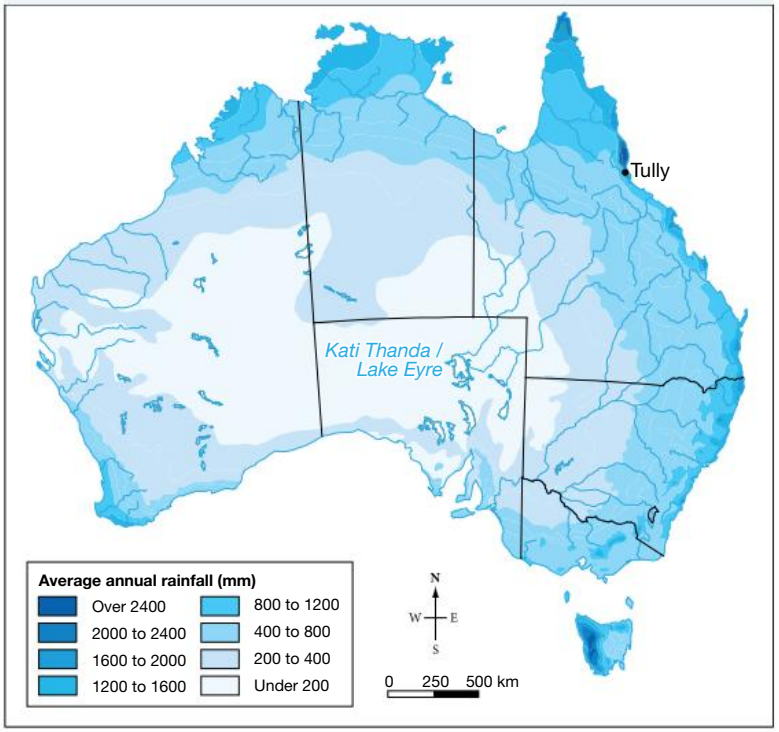
Relative humidity tends to be higher in coastal regions, as is rainfall, because areas with a lot of surface water have high evaporation. It is also higher in the parts of Australia that have very high rainfall, such as north Queensland and western Tasmania.

rainfall variability the change from year to year in the amount of rainfall in a given location

evaporation the process by which water is converted from a liquid to a gas and thereby moves from land and surface water into the atmosphere

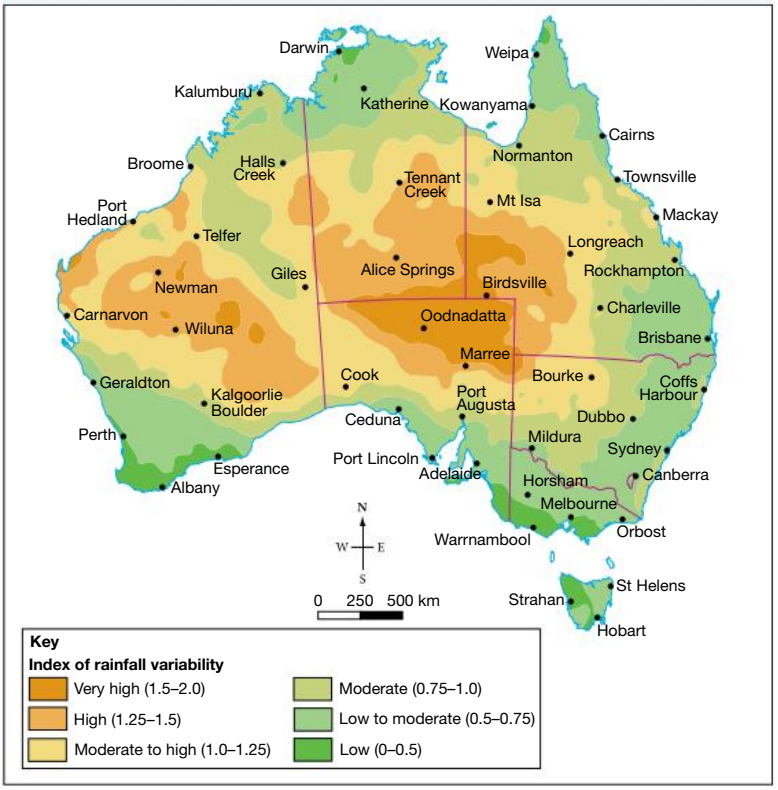
relative humidity the amount of moisture in the air

FIGURE 1 Australia's average annual rainfall



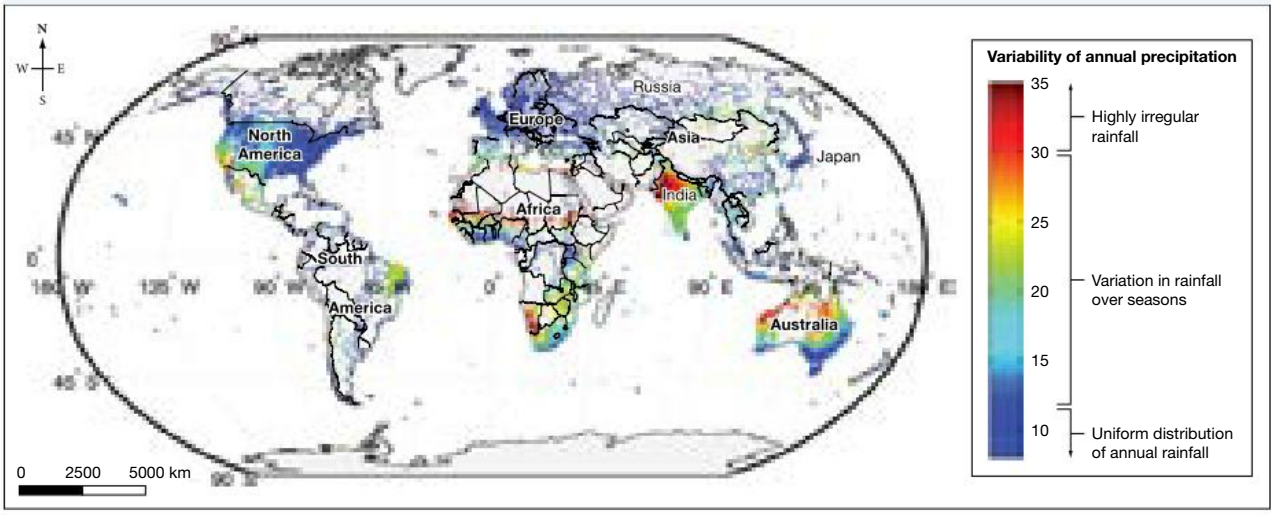
Source: Bureau of Meteorology 2003, on the Australian Water Map, Earth Systems Pty Ltd

FIGURE 2 Australia's annual rainfall variability



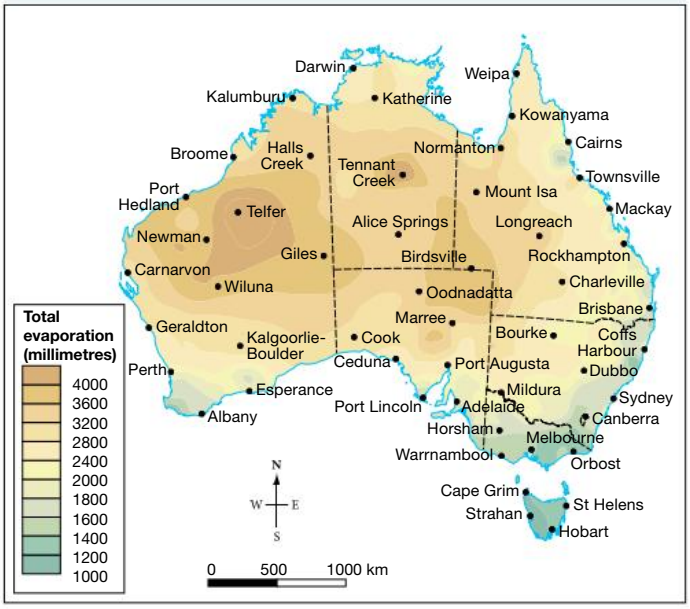
Source: MAPgraphics Pty Ltd, Brisbane

FIGURE 3 Global rainfall variability



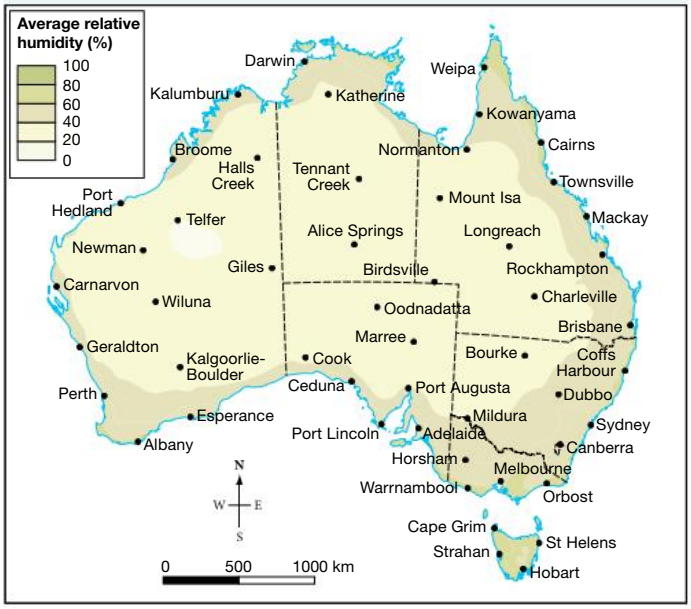
Source: Fatichi (2012)

FIGURE 4 Average annual evaporation, Australia



Source: Bureau of Meteorology

FIGURE 5 Average relative humidity across Australia



Source: Bureau of Meteorology

on Resources

Interactivity Hot and dry (int-3081)

Explore more with myWorld Atlas

Deepen your understanding of this topic with related case studies and questions.

- Australia > **Australia: weather and climate**

10.6 ACTIVITIES

1. Find the ***place*** where you live on the map of Australia. Study the four maps in this subtopic and complete a table like the one below. Compare where you live with another ***place*** in your state or territory and a ***place*** a long way from where you live.

Average rainfall	Rainfall variability	Average evaporation	Relative humidity
Where I live: _____ _____			
Another place in mystate/ territory: _____ _____			
A place far from where I live: _____ _____			

HASS skills: Questioning and researching
Geography concept: Place

2. Australia has high evaporation rates and high rainfall variability. List all the ways that this ***environment*** makes water delivery to people a challenge.
HASS skills: Questioning and researching
Geography concept: Environment

3. Find out the average rainfall for Kati Thanda–Lake Eyre and the wettest locations and heaviest rainfalls in north-east Queensland and western Tasmania. Record the rainfall variability, evaporation and relative humidity. What differences are there between these locations?
HASS skills: Questioning and researching
Geography concept: Environment

10.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 6	Questions 1, 5, 8	Questions 3, 7, 9, 10

Check your understanding

1. What is rainfall variability?
2. Which two regions receive the most rainfall in Australia?
3. Which region has the most variable rainfall?
4. What is relative humidity?
5. Why does Australia have high evaporation rates?

Apply your understanding

6. Study **FIGURE 3**.
   a. Name three countries or regions that have the highest rainfall irregularity (variability) in the world.
   b. Name three regions that have the most uniform or reliable rainfall.
7. Study the rainfall, humidity and evaporation maps (**FIGURES 1–5**). Fill in the missing word in the following statements in order to describe the ***interconnections*** between these features of our climate.
   - Areas with low rainfall and low humidity tend to have a _____ evaporation rate.
   - Areas with high rainfall and high humidity tend to have a _____ evaporation rate.
8. Use **FIGURES 1**, **4** and **5** to record the following statistics for Tennant Creek in the NT.
   a. Total evaporation
   b. Average relative humidity
   c. Average rainfall
9. Use **FIGURES 1**, **4** and **5** to record the following statistics for Strahan in Tasmania.
   a. Total evaporation
   b. Average relative humidity
   c. Average rainfall
10. Where is the driest part of Australia located?

For sample responses to every question, go to www.jacplus.com.au.

10.7 Water use

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- identify and explain the three main uses of water by people
- describe how the distribution of water changes with a growing population
- identify what virtual water is and describe how it affects water consumption
- describe the interconnection between Aboriginal and Torres Strait Islander peoples and water.

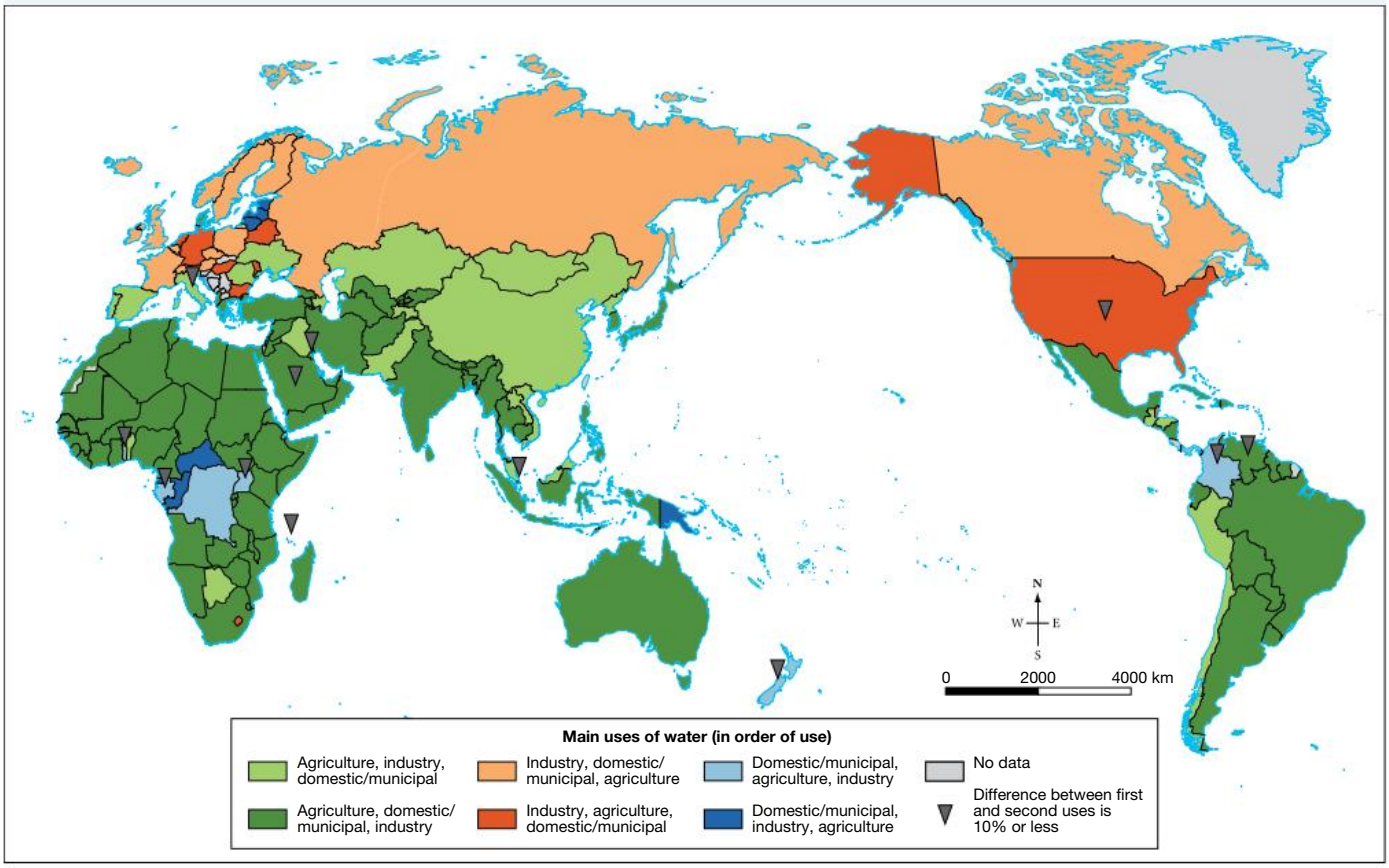
10.7.1 What is water used for?

There are three main ways that all people use water: growing food, producing goods and electricity, and using it in the home. The amount of water consumed for each of these uses differs from one place to another. The problem remains that while the total amount of fresh water is fixed, the amount used per person is increasing.

It is interesting to look at water consumption on a global scale. With the global average at 1240 cubic metres per person, per year, some countries consume more water than others. Examples of countries that consume nearly twice as much as the global average are the United States and Thailand. Some countries that consume the least amount of water per person are Peru, Somalia and China.

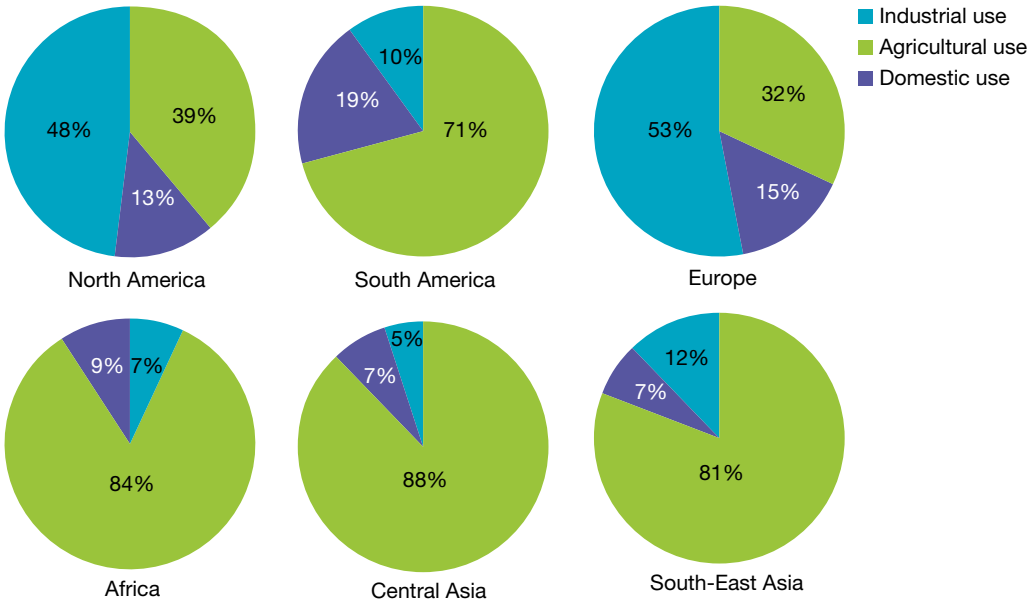
FIGURE 1 shows that most of the world's water is used in agriculture, to grow food for the world's increasing population. This is especially the case in the drier parts of the world where there is not enough rainfall to grow crops or grass for animals. There is a strong interconnection between the amount of rainfall in a region and the amount of water used in agriculture.

FIGURE 1 Countries in the world differ in their use of water.



Source: Mekonnen, M.M. and Hoekstra, A.Y. 2011, 'National water footprint accounts: the green, blue and grey water footprint of production and consumption', *Value of Water Research Report Series No. 50,* UNESCO-IHE, Delft, the Netherlands.

FIGURE 2 Regional use of water for different purposes



It is interesting to see how this pattern varies in different countries. In some countries, the water used in agriculture and industry is greater than the amount of water used in homes for domestic use. In other places, people consume more water for domestic use than for either agriculture or industry.

TABLE 1 Fresh water use in Australia

Types of use of fresh water	%
Agriculture • (pasture 35%) • (crops 27%) • (rural and domestic stock 8%)	70
Urban	12
Horticulture	10
Industry	3
Mining	2
Services	2
Hydro-electricity	1

10.7.2 How is water used in Australia?

Agriculture is an important industry in Australia, and it is our thirstiest industry. It produces most of our food requirements and contributes enormously to Australia's export earnings.

Around 70 per cent of Australia's fresh water is used as irrigation for farming. Many crops are grown in dry areas where up to half the available water evaporates from the soil surface or seeps down too low into the ground for plant roots to reach it. Therefore, more water is applied than is actually needed by plants. In manufacturing industries, most water is used to produce food, beverages and paper.

In many areas in Australia where rainfall is limited or highly seasonal, farmers irrigate their crops with water stored in dams, with groundwater or with water from major rivers. Irrigation is a very important use of water in Australia. Most large-scale farming could not provide food for Australia's population without using water from rivers, lakes, reservoirs and wells.

There is high demand for irrigation water during summer when river flows are low, and low demand for irrigation water during winter when river flows are high. This reverses the natural pattern of river flow.

FIGURE 3 Australia is one of the most irrigated countries in the world.



TABLE 2 Fresh water used to irrigate different crops in Australia

Crop type	Water (gigalitres)	%
Livestock, pasture, grains and other agriculture	8795	56
Cotton	1841	12
Rice	1643	11
Sugar	1236	8
Fruit	704	5
Grapes	649	4
Vegetables	635	4

Note: One gigalitre = 1 000 000 000 litres or one thousand million litres or 400 Olympic-sized swimming pools

10.7.3 What is virtual water?

The water we consume is not just what we use in cooking, drinking, washing, flushing the toilet or in the garden. Water is used to manufacture everything we use: mobile phones, toys, cars and newspapers. This **virtual water** needs to be considered in our **water footprint**.

virtual water all the hidden water used to produce goods and services

water footprint the total volume of fresh water that is used to produce the goods and services consumed by the individual or country

Virtual water is also known as embedded water, embodied water or hidden water. It includes all the water used to produce goods and services. Food production uses more water than any other production.

Hidden in a cup of coffee are 140 litres of water used to grow, produce, package and ship the beans. That is roughly the same amount of water used by an average person daily in Australia for drinking and household needs. There is a lot of water hidden in a hamburger too: 2400 litres. This includes the water needed to grow the feed for the cattle over a number of years, to grow wheat for the bread roll, to grow all the other ingredients in the hamburger, and to process all the food.

Virtual water varies from food to food. For example, it takes about 3400 litres of water to grow one kilogram of rice, whereas it takes 200 litres to grow one kilogram of cabbage. Regions that are water stressed and that export food and other products (such as Australia and some countries in Africa and Asia) are also effectively exporting their precious water in these goods.

A country that imports rice, rather than growing it locally, therefore saves 3400 litres of water for every kilogram it imports. Some countries (such as Japan) have very little land on which to grow food; other countries have very few cubic metres of renewable water per person. Singapore, for example, has only about 130 cubic metres per person. Both types of countries survive by virtual water imports: they import food rather than attempt to grow and produce all their food themselves. This means that small, wealthy countries can import food that needs a lot of water to produce, and export products that need little water to produce. This makes water available for other domestic purposes such as drinking and cooking.

DISCUSS

'In a dry country such as Australia, it makes more sense to import food and resources that require a lot of water to produce.' Relating to your understanding of virtual water, provide an argument for this viewpoint and an argument against this viewpoint. Ensure that your argument is supported with evidence and is logical.

General capability: Critical and creative thinking

The major exporters of virtual water are found in North and South America (the United States, Canada, Brazil and Argentina), south Asia (India, Pakistan, Indonesia, Thailand) and Australia. The major virtual water importers are north Africa and the Middle East, Mexico, Europe, Japan and South Korea.

The water footprint of an individual or country is the total volume of fresh water that is used to produce the goods and services consumed by the individual or country. It includes the use of:

- blue water (rivers, lakes, aquifers)
- green water (rainfall used for crop growth)
- grey water (water polluted after agricultural, industrial and household use).

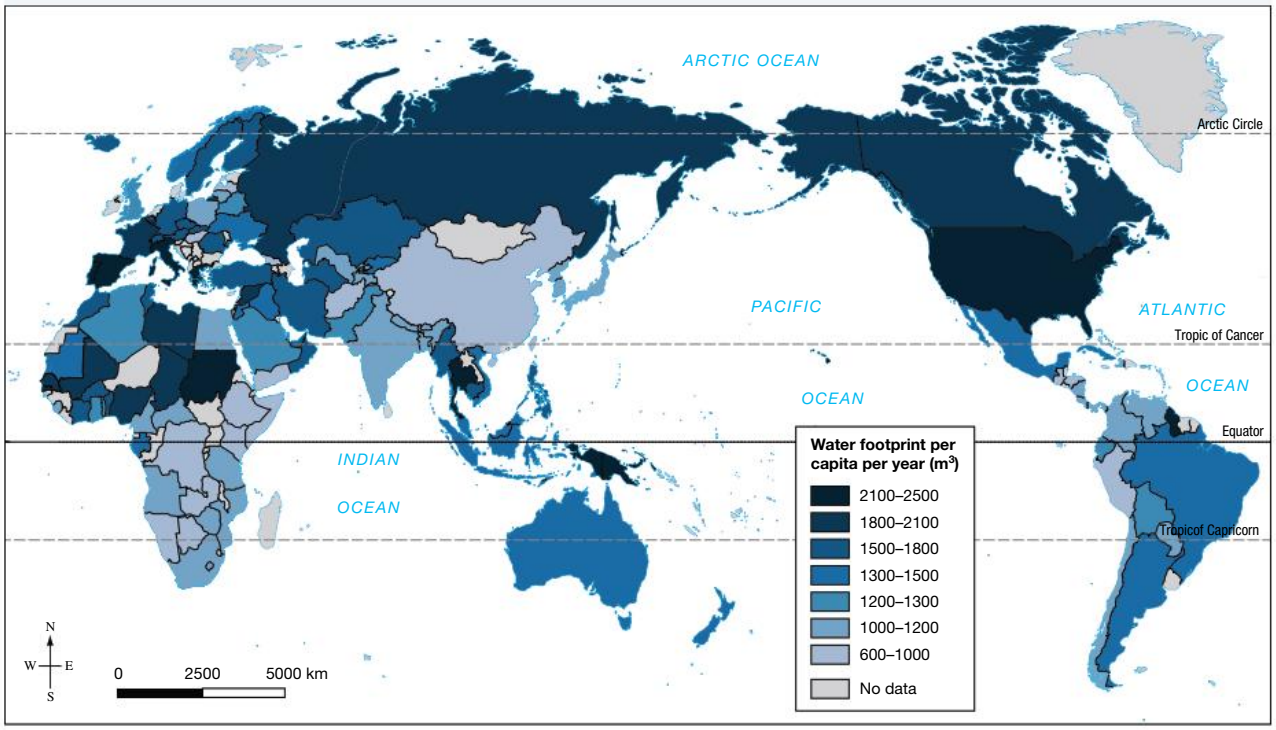
Not all goods consumed in one particular country are produced in that country — some foods and products are imported. Therefore, the water footprint consists of two parts: use of domestic water resources and use of water outside the borders of the country.

TABLE 3 Global average water used to produce everyday products

Product	Per kilo (unless otherwise stated)	Global average water (litres)
Apple		
Beef		
Cheese		
Chocolate		
Cabbage		
Cotton shirt (1)		
Hamburger (1)		
Mango		
Paper (1 A4 sheet)		

Product	Per kilo (unless otherwise stated)	Global average water (litres)
Pork		
Rice		
Tomato		
Wheat		

FIGURE 4 Average global water footprints



Source: World Water Exchange (2016)

In the United States, the average water footprint per year per capita is 2480 cubic metres per person per year, which is enough to fill an Olympic swimming pool. In China, the average water footprint is 1071 cubic metres per year. The figure for Australia is 1393 cubic metres per person per year.

Japan, with a footprint of 1200 cubic metres per person per year, has about 65 per cent of its total water footprint outside its borders, meaning a lot of its water is imported in the form of consumer goods and food. On the other hand, only about 7 per cent of the Chinese water footprint falls outside China.

10.7.4 How do indigenous peoples use water?

Water is very important to both indigenous and non-indigenous peoples across the world, and is used for many different purposes. Water has a spiritual importance to many indigenous cultures around the world, and many groups have strong connections with the natural world.

The extract below from the Indigenous Peoples Kyoto Water Declaration shows the importance of water. This declaration was put together in 2003 at the Third World Water Forum held in Kyoto, Japan.

> We, the indigenous peoples from all parts of the world… reaffirm our relationship to Mother Earth and responsibility to future generations to… speak for the protection of water. We were placed in a sacred manner on this earth, each in our own sacred and traditional lands and territories … to care for water.
>
> ***Source:*** www.waterculture.org/KyotoDeclaration.html

10.7.5 Aboriginal and Torres Strait Islander peoples

Depending on where Aboriginal and Torres Strait Islander peoples lived before European colonisation, they collected surface water from creeks, rivers and waterholes; from underground water supplies such as soaks and springs; or directly from plants, including tree roots.

Evidence collected from oral histories, Dreaming stories, rock art, artefacts, ceremonial body painting and historical records left by colonists, missionaries, surveyors, invaders and explorers shows that Aboriginal and Torres Strait Islander peoples managed water resources carefully. They channelled and filtered their water, covering it to keep it clean and to stop it from evaporating. They also created wells and tunnel reservoirs.

The way First Nations peoples map Australia's seasons is often closely linked to water. Use the **Walmajarri seasonal calendar** weblink in the Resources tab to see an example of one calendar where seasons, water and activities are closely linked.

10.7.6 Water and Aboriginal and Torres Strait Islander culture

> Our cultural values of water are part of our law, our traditional owner responsibilities, our history and our everyday lives. Our [Anmatyerr] law has always provided for the values we place on water. Australian law should respect Anmatyerr Law so we can share responsibility for looking after water.
>
> ***Source:*** The Anmatyerr people, in Rea, Dr N. & Anmatyerr Water Project Team 2008, 'Provision for cultural values in water management: the Anmatyerr story', *Land & Water Australia Final Report*, p. vi.

The rainbow serpent is a key symbol of creation, but its journey from underground to the surface also represents groundwater rising to the top via springs. The creation of water sources and where to find them was often told in stories or through artwork. Use the **Noongar knowledge — spirituality** weblink in the Resources tab to read about Waugyl, the Noongar Rainbow Serpent.

FIGURE 5 Water is a strong symbol in Aboriginal and Torres Strait Islander art.



on Resources

Digital document Regions (doc-17950)

Interactivity Unreal (int-3080)

Weblinks Walmajarri seasonal calendar, Noongar knowledge — spirituality

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Exploring places > Europe > **Mediterranean basin**
- Investigate additional topics > Managing water resources > **Three rivers in Africa**
- Investigate additional topics > Managing water resources > **Our water footprint**

10.7 ACTIVITIES

1. Research the Luangwa, Kafue and Zambezi rivers in Zambia, Africa. Use an atlas to trace the flow of each of the rivers and list some of the different water uses.
   HASS skills: Questioning and researching
   Geography concept: Environment
2. Look at the **Walmajarri seasonal calendar** weblink in the Resources tab.
   a. Which Australian region does this calendar represent?
   b. How are the seasons divided? How does this compare with a European calendar?
   c. How are seasons and water linked in this calendar?
   d. How can all Australians benefit from Aboriginal and Torres Strait Islander peoples' knowledge and practices on seasons and water use in a regional context?
   HASS skills: Analysing
   Geography concepts: Place, Interconnection
3. Use Google Earth to locate the Wabma Kadarbu Mound Springs Conservation Park. Place a pin on this location. Now zoom in and out to help you complete the following questions.
   a. Where is this park located in South Australia? Where is this ***place*** in relation to where you live? Use distance and direction in your answer.
   b. What is the name of the nearest road?
   c. Describe the surrounding area.
   d. Why would these springs be so important to Aboriginal peoples and European colonists?
   e. Do some research to find out why these springs are protected today.
   f. Use Google Maps to annotate this area with your findings. Include photos that you find using the internet.
   HASS skills: Analysing
   Geography concept: Place
4. Use a blank world map and choose two colours to show the main importers and exporters of virtual water. Describe the ***spatial*** patterns of the map you have drawn.
   HASS skills: Analysing
   Geography concept: Space
5. Conduct a debate on the following statement: 'People should eat less meat in order to consume less water.'
   HASS skills: Evaluating
   Geography concept: Environment
6. Use the **Just add water** weblink in the Resources tab to listen to an audio program about the water footprint in food production.
   a. What is the relationship between water-stressed countries and food production?
   b. Give an example where the water footprint figure is in conflict with the opinion of farmers.
   c. Detail a product produced in Wodonga that includes both virtual and domestic water.
   HASS skills: Evaluating
   Geography concepts: Sustainability, Interconnection

10.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 4, 8	Questions 5, 7, 9, 10

Check your understanding

1. What is most of the world's water used for?
2. Consider water use around the world.
   a. Which regions of the world use the majority of their water in agriculture?
   b. Which countries use water mainly for industrial purposes?
   c. Why might some countries use more water in industry than in agriculture or domestic use?
3. Refer to **FIGURE 4.** Describe the patterns you notice over ***space*** of countries with (a) very high and high water footprints and (b) very low and low water footprints.
4. Describe the water embedded (or hidden) in a cup of coffee and a hamburger.
5. From what sources did Aboriginal and Torres Strait Islander peoples collect water?

Apply your understanding

6. Study the data in **TABLES 1** and **2** to describe how water is used in Australia. Which crops use the most water? Which use the least?
7. Study **FIGURE 1** and decide which of the following statements are true and which are false.
   a. Australia uses most water for agriculture, then industry, then domestic/municipal.
   b. Countries in North Africa use most water for industry, then domestic/municipal, then agriculture. (Use the **Regions** resource in the Resources tab).
   c. Belarus uses most water for industry, then agriculture, then domestic/municipal.
   d. Colombia uses most water for agriculture, then domestic/municipal, then industry.
   e. Belize uses most water for industry, then agriculture, then domestic/municipal.
   f. Malaysia uses most water for industry, then agriculture, then domestic/municipal.

   Rewrite the statements that are false and make them true.
8. Study **TABLE 3**. Choose two meat, two grain, one dairy, two non-food, two fruit, two vegetable and two processed products from the list. Create a bar graph to show how much water is used to produce a vegetarian diet and a meat-based diet. Which diet uses more water?
9. Compare the data for north Africa and west Asia (the Middle East) in **FIGURE 1** and the maps in subtopics 10.4, 10.5 and 10.6. Write three summary statements that describe the amount of rainfall, water use (including water footprints) and water availability for these two regions. How do these patterns compare with Australia?
10. Describe how water footprints can connect ***places*** that are far away from each other.

For sample responses to every question, go to www.jacplus.com.au.

10.8 Water scarcity in Australia and the world

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- describe the global distribution of water
- describe issues of access as a human right
- explain the interconnection between water quality, sanitation and health
- identify strategies for improving water quality
- explain why droughts occur and identify the impacts of drought in Australia.

10.8.1 The human right to water

The right to water is a human right that is protected by many international agreements, yet not everyone has access to this life-giving resource. Everyone has the right to enough safe, accessible and affordable water for all their needs. Water is more important to survival than food. In hot conditions, a person can survive up to three weeks without food but only two or three days without water.

People need access to **improved drinking water** yet, in 2018, water.org and World Vision reported that 844 million people were living without access to safe drinking water. Water is also needed to cook food, to bathe, to wash dishes and clothes, and to flush toilets. However, with the global population increasing and a fixed amount of water on Earth, some regions are suffering **water scarcity**. Water scarcity occurs when the demand for water is greater than the available supply.

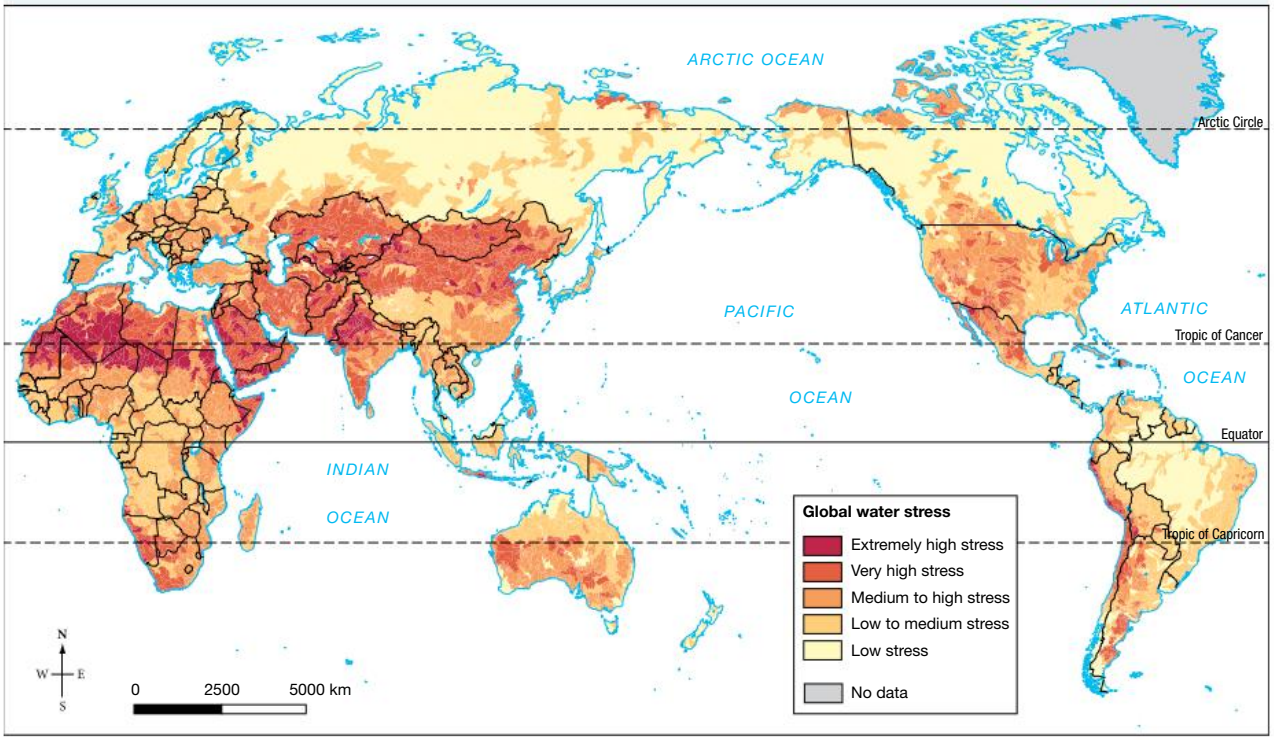
Ideally, each individual needs one cubic metre (1000 litres) of drinking water per year, about 100 cubic metres for other personal needs, and 1000 cubic metres to grow all the food that he or she consumes. **Water stress** occurs

improved drinking water drinking water that is safe for human consumption

water scarcity a situation that occurs when the demand for water is greater than the supply available

water stress a situation that occurs in a country with less than 1000 cubic metres of renewable fresh water per person

FIGURE 1 Distribution of global water scarcity



Source: Aqueduct (2019)

when there is not enough water available for all demands. A country with less than 1000 cubic metres of renewable fresh water per capita (per person) is under water stress.

10.8.2 Access to water

A major reason that so many people lack access to safe water is the difference between where people live and where rain falls. Other reasons include water being used for agriculture and industry in regions where it is dry, and water being so polluted it cannot be used.

As climate change conditions take hold, the UN estimated in 2018 that 5 billion people could suffer water shortages by 2050. The problem of lack of water is often worse in rural areas, so many people move from the countryside into towns and cities, hoping for a better water supply. These people are sometimes called water refugees. However, the water in some cities is also inadequate because it is in short supply or is very polluted.

FIGURE 2 Drought conditions can reduce water quantity and quality.



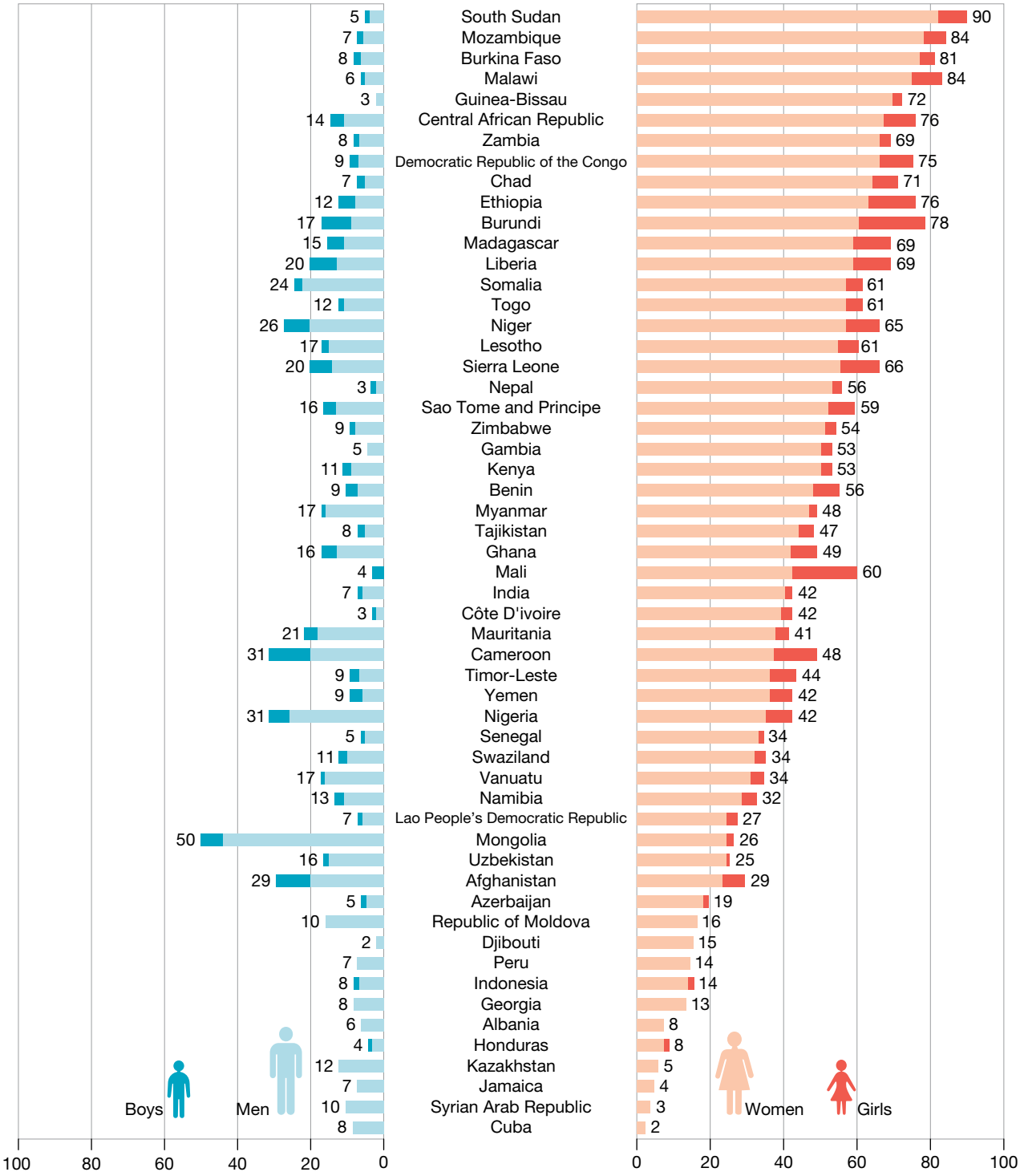
10.8.3 The water carriers

People who do not have water at home have to travel to get water. Water is very heavy and difficult to carry. The burden of this water fetching usually falls on women, who carry the heavy load on their head or back. For some people, the trip to a water supply and back can take hours each day — the average is 30 minutes to one hour. The average distance that women in Africa and Asia walk to collect water is six kilometres. The average weight they carry on their heads is about 20 kilograms — the usual weight of a suitcase taken on a flight. The World Health Organization estimates that over 40 billion work hours are lost each year in Africa alone just collecting drinking water.

FIGURE 3 Women often bear the burden of collecting water.



FIGURE 4 Who carries and collects the water?



10.8.4 How does dirty water affect health?

Everyone in the world has the right to an adequate supply of water. The right to water is linked to many other rights, including the right to food and to health. In 2018 nearly 850 million people in the world had no access to clean water, and more than 2.3 billion people had no safe way of disposing of human waste. Lack of toilets means many people defecate in open spaces or near the same rivers from which they drink. It is estimated that 90 per cent of sewage in some countries ends up flowing straight into rivers and creeks.

Dirty water and lack of proper hygiene kill around 315 000 children around the world every year, most of them younger than five. People who are sick are often unable to work properly, to look after their families or to attend school, keeping them trapped in the poverty cycle. The diseases that can be passed on to people as a result of contaminated water include diarrheal diseases such as cholera, typhoid and dysentery. Malaria, a disease transmitted by mosquitoes, kills about one million people every year.

DISCUSS

Conduct a class values continuum activity. Use pens or rulers end-to-end to create a line on the classroom floor. Standing on the left side of the line signifies you agree with a statement; on the right you disagree. If you stand a long way from the line, you strongly agree or disagree. If you stand on the line you don't know or are unsure. Be sure to be able to justify your stance.

Statement 1: It is too difficult to provide adequate clean water and sanitation to all the world's people.

When you have taken up your position, various class members give their reasons for their stance. Once these have been heard, read the statement again and see if you have changed your position on the continuum line. Repeat the activity with statement 2.

Statement 2: The Australian government should increase foreign aid so that more of the world's people can have access to clean water and adequate sanitation. **General capability: Personal and social capability**

10.8.5 Polluted rivers

Water quality can affect health in many ways. Rivers and streams act as drainage systems and, when it rains, water transports rubbish, chemicals and other waste into drains and, eventually, rivers.

Different pollutants — faeces (human and animal), food wastes, pesticides, chemicals and heavy metals — can come from industrial wastewater, domestic sewage, cars, gardens, farmland, mining sites and roads, and flow into waterways.

Some countries, cities and local areas are better than others at providing services and enforcing laws to prevent pollutants from entering water. Some of the worst polluted rivers and lakes in the world include rivers and aquifers in China (such as the Songhua River and the Yellow River), the Citarum River in Indonesia, the Yamuna and Ganges rivers in India, the Buriganga River in Bangladesh and the Marilao River in the Philippines.

FIGURE 5 Sewage contamination in the Tijuana River



10.8.6 How can water-borne diseases be reduced?

People use different methods to treat the water they have collected. They can let it stand and settle, strain it through a cloth, filter it, add bleach or chlorine, or boil it. Some people do not treat their water at all.

When there is barely enough water to drink or to cook with, it is difficult for people to set aside water for washing hands and cleaning clothes. However, hygiene and sanitation are very important for health.

There are many aid groups (such as Water.org, Clean Water Fund, Global Water Challenge and The Water Project) who work on projects to improve sanitation and access to clean water.

FIGURE 6 Collecting water that is unsafe to drink

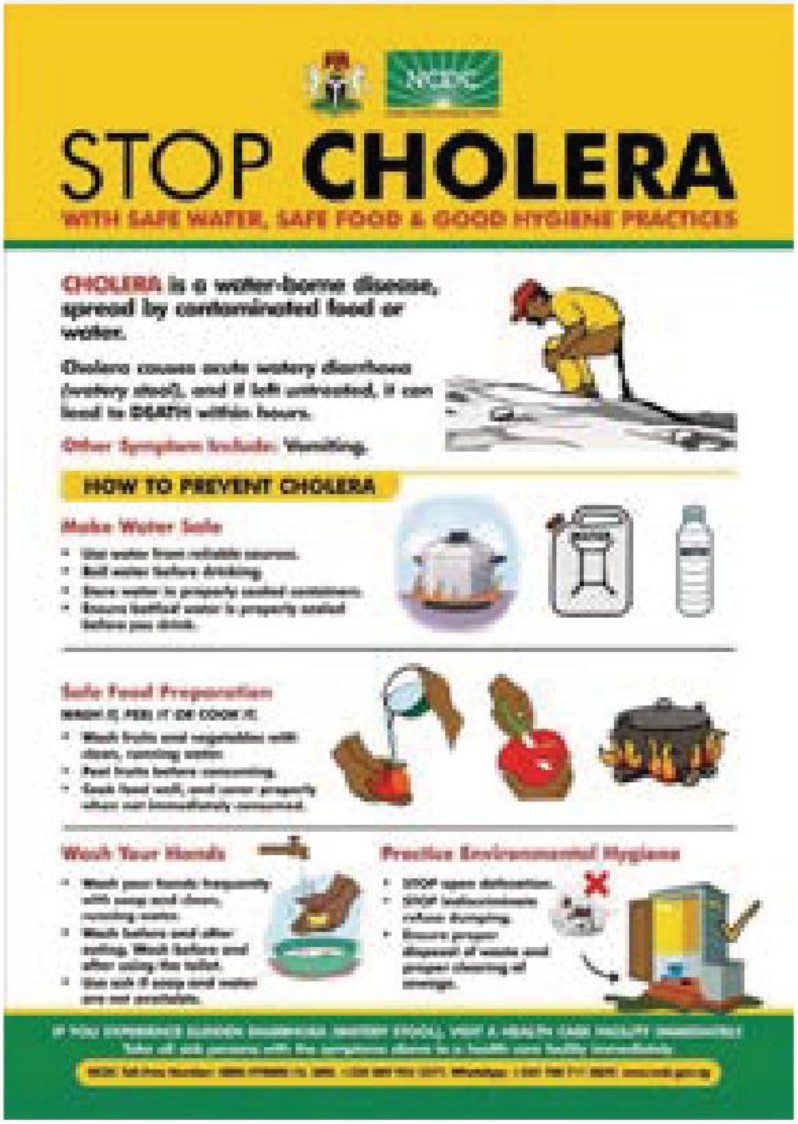


Washing hands, building cheap and effective toilets, and teaching the community about good hygiene all help to reduce disease.

FIGURE 7 The Citarum River in Indonesia is one of the most polluted rivers in the world.



FIGURE 8 A poster educating people about cholera and the measures to prevent it



10.8.7 CASE STUDY: Community-led total sanitation (CLTS), Nigeria

From 2012 to 2016, Action Against Hunger worked with 138 communities in northern Nigeria using the community-led total sanitation (CLTS) methodology. According to the World Health Organization, in 2015 diarrheal diseases caused over 75 000 deaths in children aged 1–59 months. This is because access to improved sanitation in rural areas is limited. When CLTS leaders arrived in this area of northern Nigeria, there were very high rates of illness and death due to water-related diseases. The people in these villages used the bush near their houses as their toilet.

CLTS leaders developed a relationship with the villagers and taught them how faeces can enter their food and water, and make them sick. Once this was understood, the people wanted to change their practices so this would no longer happen. Action plans were drawn up

FIGURE 9 Location of Nigeria in Africa



Source: Spatial Vision

and eventually the villagers created clean water points, built simple but effective toilets and were given lessons in sanitation.

The study has shown promising outcomes for these communities. Overall, 23 out of 46 communities (50 per cent) reported no open defecation among adults or children at home or away from home. This demonstrates that communities can make lasting behaviour changes. The study also showed that people face challenges such as collapsing toilets, habit and tradition, and financial difficulties, all of which need to be overcome.

10.8.8 What is a drought?

Australia is the driest inhabited continent on Earth. The main reason Australia is so dry is that much of the continent lies in an area dominated by high atmospheric pressure for most of the year, which brings dry, stable, sinking air to the country. Australia also experiences great variation in its rainfall due to the **southern oscillation** and **El Niño**.

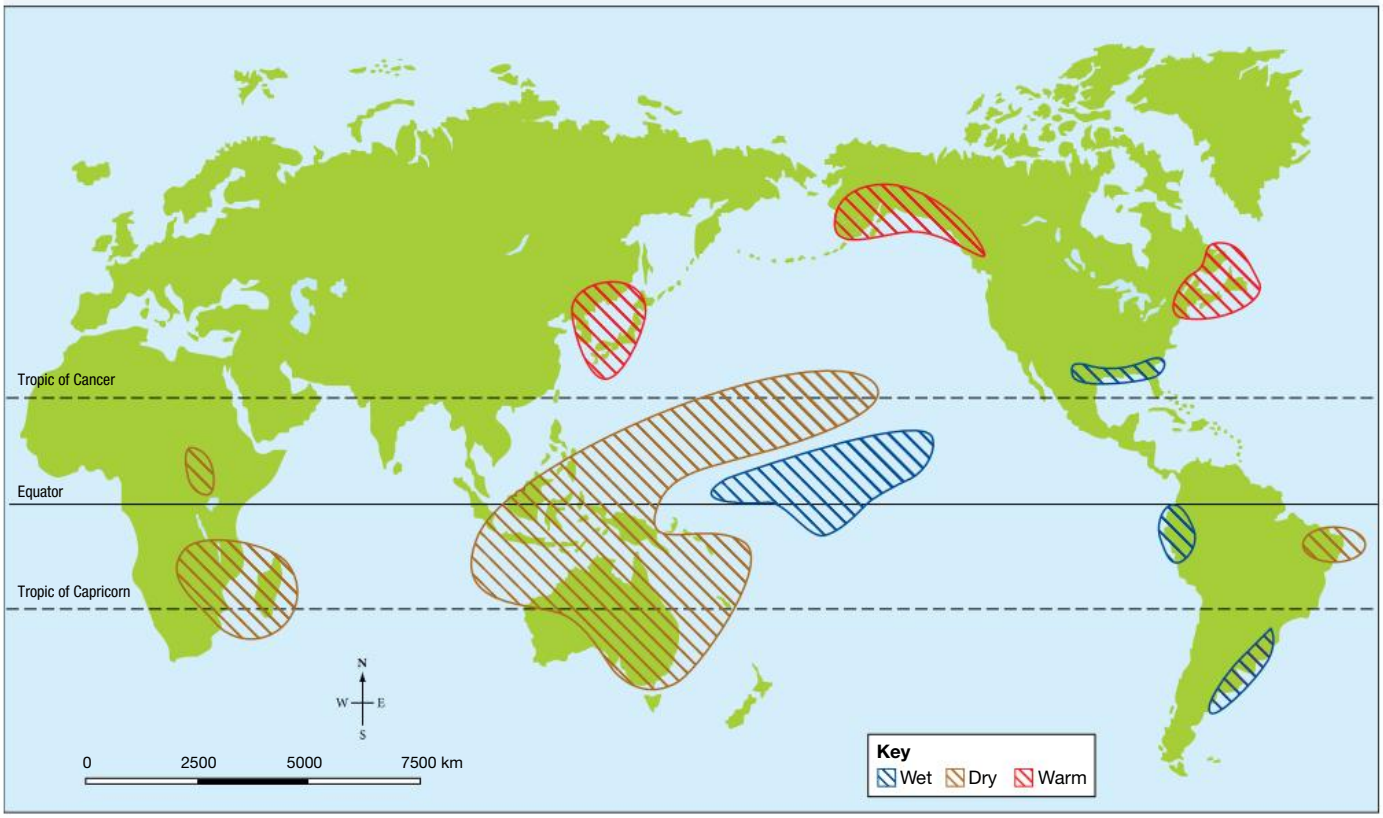
Low average rainfall and extended dry spells are a normal part of life throughout most of Australia. The continent is located in a zone of high pressure that creates conditions of clear skies and low rainfall. Drought conditions occur when the high-pressure systems are more extensive than usual, creating long or severe rainfall shortages. A drought is a prolonged period of below-average rainfall, when there is not enough water to supply our normal needs. Because people use water in so many different ways and in such different quantities, there is no universal amount of rainfall that defines a drought.

southern oscillation a major air pressure shift between the Asian and east Pacific regions. Its most common extremes are El Niño events.

El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean. This change causes drought in Australia and heavy rain in South America.

The term *drought* should not be confused with low rainfall. Sydney could experience a drought and have more rainfall during that period than Alice

FIGURE 10 Areas affected by El Niño



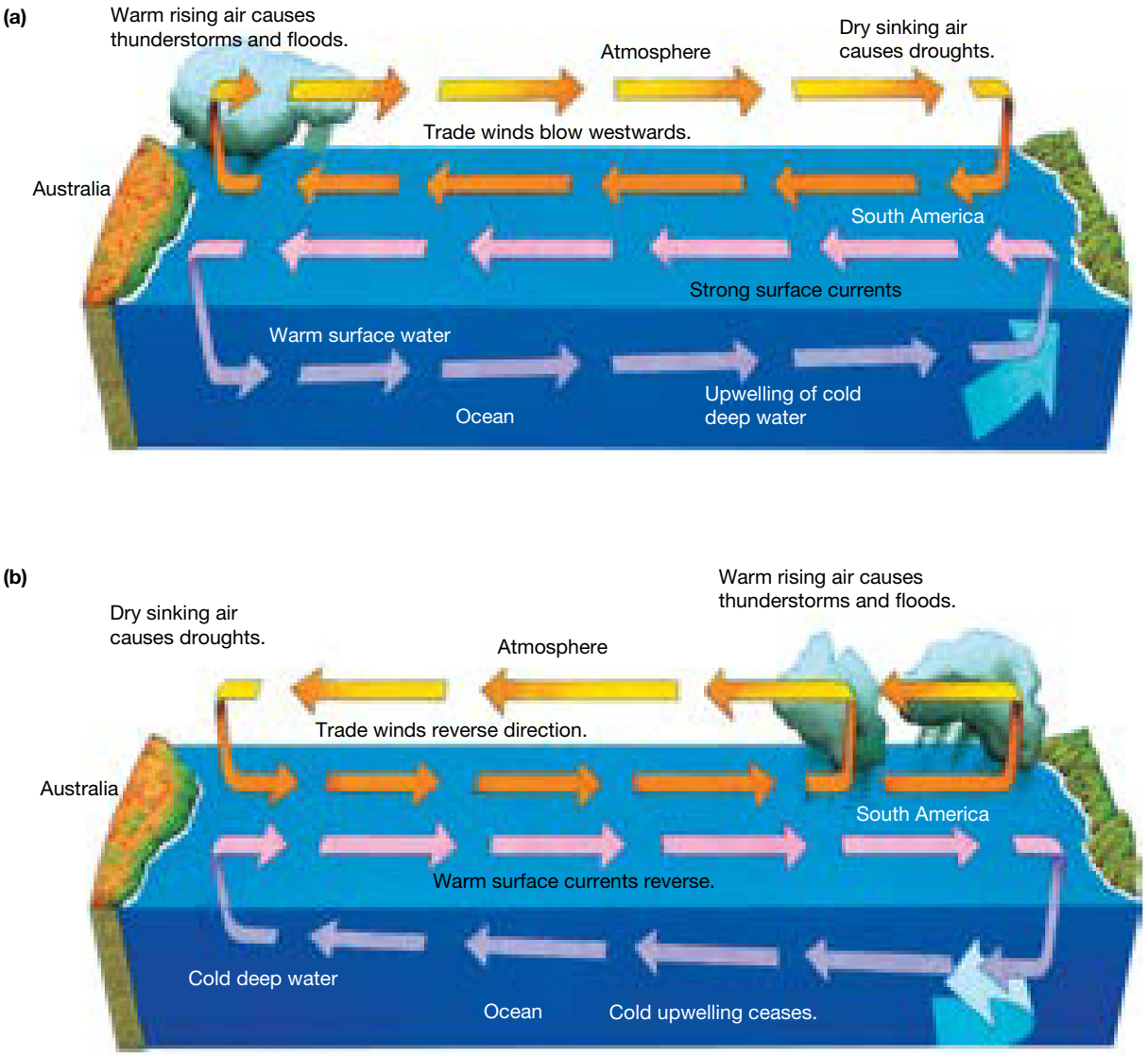
Source: MAPgraphics Pty Ltd, Brisbane

Springs, which could be experiencing above average rainfall. If low rainfall meant drought, then much of Australia would be in drought most of the time.

Droughts affect all parts of Australia over a period of time. Some droughts can be localised while other parts of the country receive good rain. Droughts can be short and intense, such as the drought that lasted from April 1982 to February 1983; or they can be long-lived, such as the 2002–2009 drought.

Different weather systems affect different parts of Australia, so there is little chance that all of Australia would experience drought at the same time.

FIGURE 11 Weather events in (a) a typical year and (b) an El Niño year



10.8.9 Impacts of drought: Australia, 2002–2009

Around the world, droughts often develop due to similar weather conditions. However, their impacts on different communities that live around the world can be diverse. Often, developed countries find themselves economically worse off during a drought period. In contrast, developing countries usually face devastating social consequences as a result of an extremely dry weather period.

Droughts can last for many years. They may be widespread or confined to small areas. The drought that started in 2002 affected large areas of Australia by 2005 (see **FIGURE 12**). When Australia experiences a drought, agriculture suffers first and most severely, but eventually everyone feels the impact.

Due to the severe lack of water caused by the drought, many farmers faced production losses because they were not able to sustain their crops or sufficiently feed their livestock. This had negative **economic** impacts.

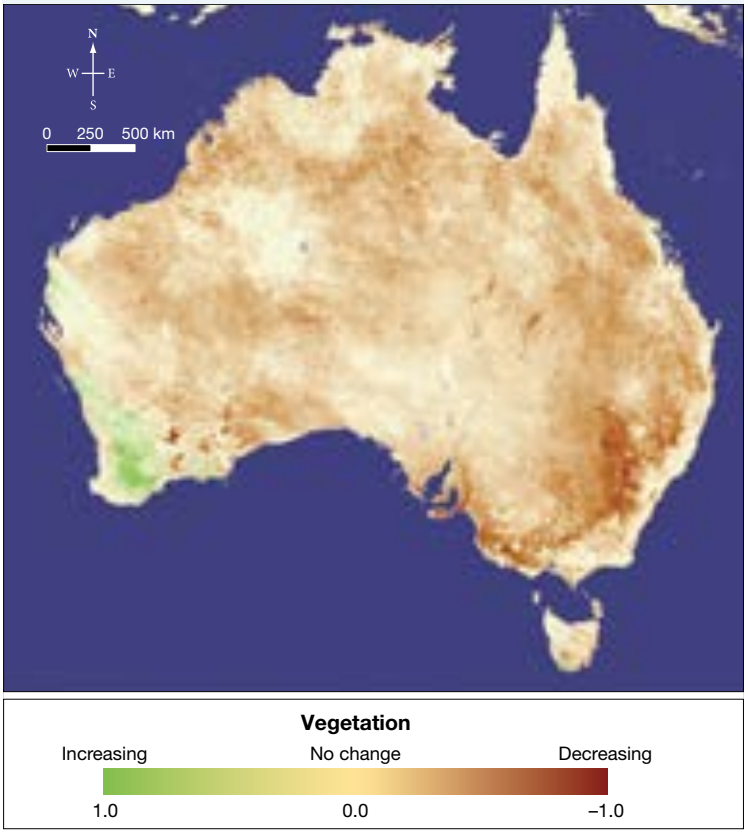
- By 2004, dairy farmers had experienced a 4.5 per cent drop in their incomes.
- Cotton crops were devastated by the shortage of water.
- Up to 20 cotton communities and approximately 10 000 people in the industry were affected.
- Some communities had to cut production by 60 to 100 per cent.
- Cattle and sheep farmers found it hard to find stockfeed, and prices increased. As a result, herds grew smaller.

In rural towns, jobs were lost and many businesses failed. Some people found themselves forced to leave drought-affected areas in search of other work. Many never returned. Very long droughts cause country people much heartache, and this can result in the break-up of families. It can also lead to severe depression in some individuals. However, the Australian government set up a fund that farmers and people in agricultural businesses can apply to for financial relief when their incomes are disrupted by drought. Counselling hotlines are also available to offer support.

Along with these economic and social impacts, the Australian environment suffers in drought. Droughts have a bad effect on topsoil in Australia. During drought conditions, millions of tonnes of topsoil may be blown away (see **FIGURE 13**). This loss takes many years to replace naturally, if it is ever replaced. The loss of topsoil can make many regions far less productive, making it harder for farmers to recover once the drought has broken.

economic relating to wealth or the production of resources

FIGURE 12 Extent of the drought — changes in vegetation cover, 2005



Source: Spatial Vision

FIGURE 13 'Dust' (topsoil) blown from drought–affected inland Australia blankets Sydney, 23 September 2009.



on Resources

Digital document	Regions (doc-17950)
Video eLesson	Weather events in a typical year and an El Niño year (eles-2275)
Interactivity	El Niño (int-3084)
Weblinks	WHO/UNICEF, News report: dust storms
Google Earth	Citarum River

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigating Australian Curriculum topics > Year 7: Water in the world > **The Dead Sea — overcoming water scarcity**
- Exploring places > Europe > **Russia and Eurasia**
- Exploring places > The world > **World: health**

10.8 ACTIVITIES

1. Geographers like to look at patterns over ***space***. Find an atlas map showing population density and compare it with **FIGURE 1**. Refer to countries in North Africa and West Asia in your answers. (Refer to the **Regions** resource in the Resources tab.)
   a. Name three coastal and two landlocked countries in these regions.
   b. Conduct research to find out how many countries in these regions suffer deaths caused by poor sanitation and dirty water.
   c. Name the continents and regions that have the fewest deaths.
   d. Why do you think this ***spatial*** pattern exists? (*Hint:* Look at maps in your atlas that show wealth.)

Geography concept: Space

2. A number of aid agencies are working in countries and regions to improve access to sanitation and clean water. Choose one of those listed in this topic and find out more about what they are doing. How will their work make a difference to the living conditions of the people they are helping?

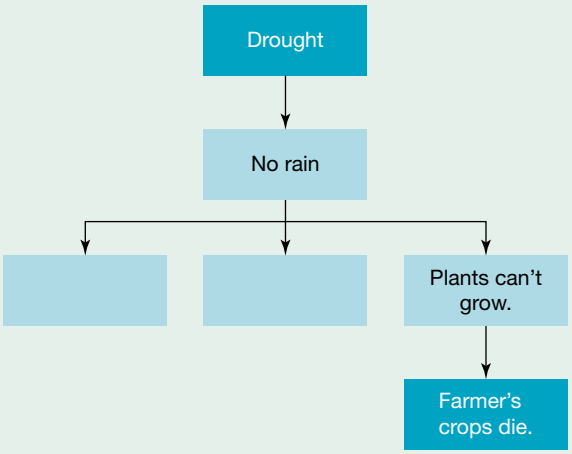
HASS skills: Questioning and researching
Geography concept: Environment

3. List some of the short-term effects that drought can have on Australia. Once you have listed them, try to come up with some long-term impacts that Australia and its people would experience if these short-term impacts continued for up to ten years.

HASS skills: Evaluating
Geography concept: Interconnection

4. List all the ***environmental***, economic and social impacts of drought. Using this list, create a flow diagram to illustrate how these three impact groups relate to, connect to and influence each other. Use this flow diagram to get you started. You can add more boxes and arrows to show how elements are connected.

HASS skills: Communicating and reflecting
Geography concept: Environment



10.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 5, 7	Questions 3, 6, 9, 12	Questions 2, 8, 10, 11

Check your understanding

1. Why is access to water a human right?
2. What is meant by water scarcity and water stress?
3. Describe the impact on a country if it is under water stress or water scarcity.
4. What might be meant by the term 'water refugee'?
5. How do rivers become polluted?
6. Refer to **FIGURE 11**, which compares conditions during a typical year and an El Niño year, and study the text. Use the following words to complete the sentences below: stable, moist, cooler, east, drought, Tahiti, dry, warm, north, Darwin.

   During an El Niño event, the normally _____ sea in the oceans to the _____ and _____ of Australia are replaced by much _____ water. The air pressure in _____ begins to fall relative to the air pressure in _____. The normal _____ easterly trade winds change their direction. The result is _____ and _____ air and severe_____.

Apply your understanding

7. a. Use an atlas to help you identify and list three countries that are experiencing extremely high water stress.
   b. What is Australia's level of water stress compared to New Zealand?
   c. Name the largest country in South America with low water stress.

8. Study **FIGURE 4**
   a. Of the 55 countries listed, how many African countries are represented in this graph?
   b. Which two countries have the highest representation of girls carrying water?
   c. Which country is the only one where boys and men are the primary water carriers?
   d. Which Asian country has the highest representation of girls and women carrying water?
9. Study **FIGURE 8**. From the list of strategies outlined in the poster, which would be the most challenging to adopt and why? Which strategy would be the easiest to adopt and why?
10. Explain what community-led total sanitation projects aim to do.
11. Identify three key *changes* drought brings to the *environment*.
12. Refer to **FIGURE 10** showing the areas affected by El Niño. Describe the areas that become (a) wetter, (b) drier and (c) warmer during an El Niño event.

For sample responses to every question, go to www.jacplus.com.au.

10.9 Ways of overcoming water scarcity

LEARNING INTENTION

By the end of this subtopic, you will be able to:
- describe the issues that arise when water needs to be shared
- identify management strategies to enable water to be shared in a sustainable way
- identify the ways in which water scarcity in Perth can be managed.

10.9.1 Sustainable Development Goals — working to address water scarcity on a global scale

Developed by the United Nations, the Sustainable Development Goals (SDGs) came into force on 1 January 2016. They are goals that aim to end all forms of poverty, protect the planet and ensure that all people enjoy peace and prosperity, with targets to be reached by the end of 2030. The SDGs build on the success of the Millennium Development Goals (MDGs) that were adopted from 2000–2015.

Goal 6 of the SDGs is to 'Ensure access to water and sanitation for all'. From 1990 to 2015 — including the 15 years of the Millennium Development Goals — the percentage of people who had access to clean water increased from 76 to 91 per cent.

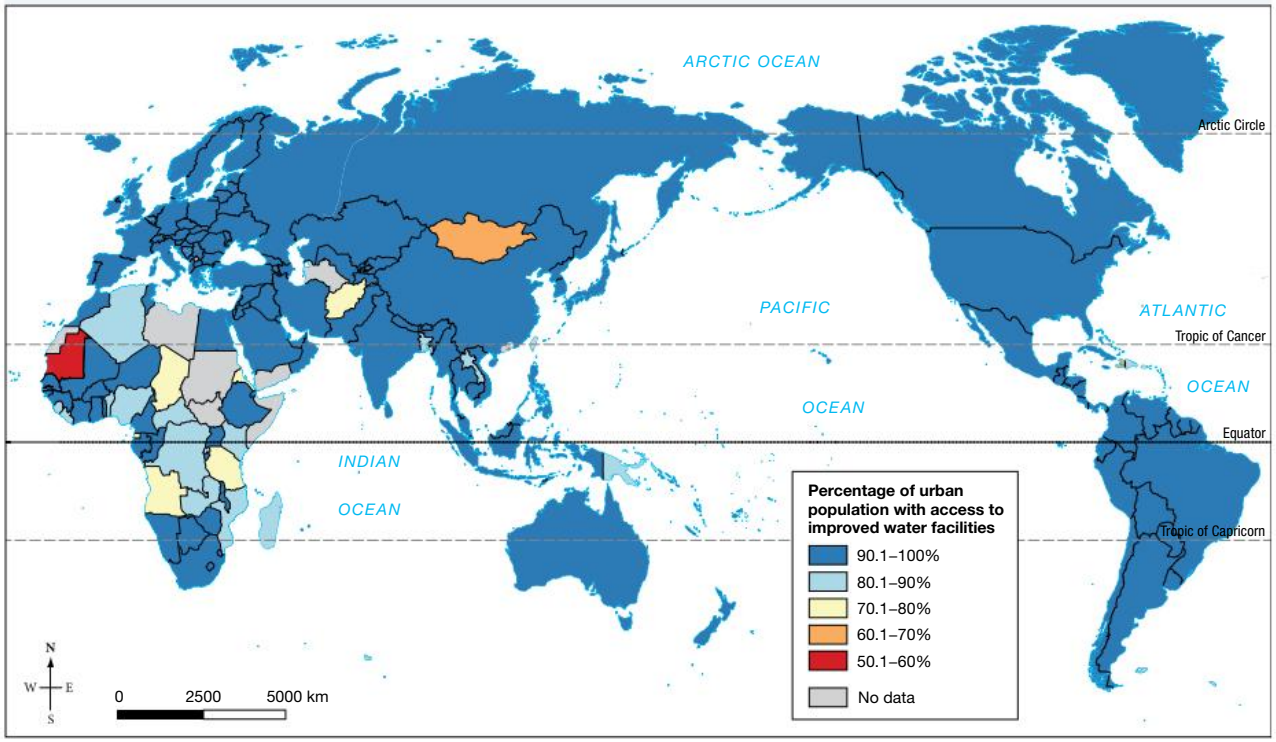
Some of the targets (by 2030) for Goal 6 are to:
- provide universal and equitable access to safe and affordable drinking water for all
- provide access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
- protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes (this goal is by 2020).

FIGURE 1 Goal 6 of the Sustainable Development Goals



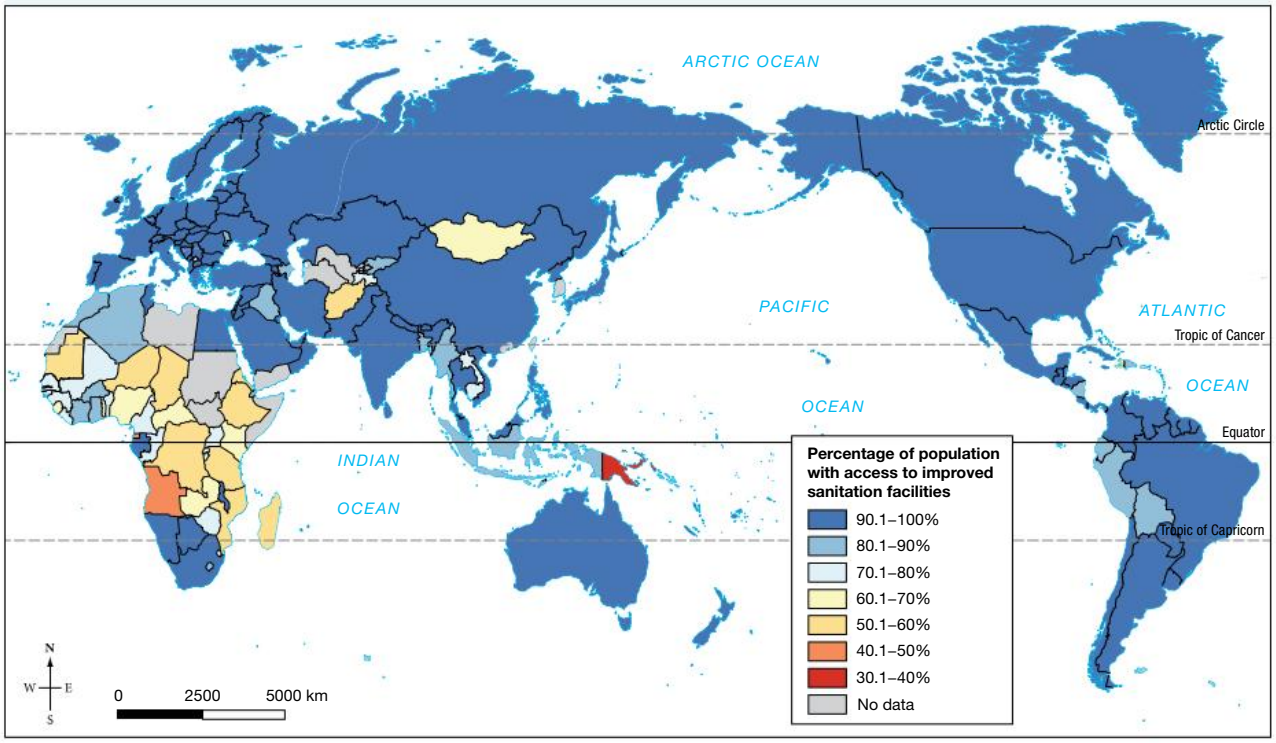
Source: The content of this publication has not been approved by the United Nations and does not reflect the views of the United Nations or its officials or Member States. https://www.un.org/sustainabledevelopment/

FIGURE 2 Percentage of global population with access to improved water facilities, 2015



Source: World Bank (2015)

FIGURE 3 Percentage of global population with access to improved sanitation facilities, 2015



Source: World Bank (2015)

10.9.2 Managing our water supply

More water cannot be created, but it can be managed better. With a growing global population, and the predicted effects of climate change, the pressure on this finite resource requires a number of solutions.

Introducing effective water management can be a challenge at any scale, whether local, national or global. It needs the cooperation of all users, including farmers, industry, individuals, and upstream and downstream people in different countries or different states. With all the competing demands on water, management is often easier to approach at a local scale.

Because agriculture uses the greatest amount of water, it makes sense to make irrigation systems more efficient. The aim is to get more production for every drop of water used. Some irrigation systems waste up to 70 per cent of their water through leaks and evaporation, so changing the irrigation method can save water. Other management practices include recycling, using desalinated water and using stormwater.

FIGURE 4 Kurnell desalination plant in southern Sydney provides water to the city's population. It is powered by wind energy produced in Canberra.



10.9.3 Managing water across borders

About 260 drainage basins across the world are shared by two or more countries. Thirteen river basins are shared by five or more countries. Depending on their location in the catchment, some countries can suffer reduced access to water because of other countries' usage. This shows the ***interconnection*** between places — what happens in one place affects another. Diverting rivers, building dams, taking large amounts of water out for irrigation, and creating pollution can all lead to conflict between countries, states and political groups.

Country disputes have occurred in the Nile Basin in north Africa, along the Mekong River in Asia, the Jordan River Basin in west Asia (the Middle East) and along the Silala River in South America. This can also happen within a country, which has happened with the Murray–Darling Basin in Australia, across four states and one territory.

Some countries sign international agreements or treaties to try to share water between nations. These include the Rhine and Danube rivers in Europe, the Nile River in North Africa, the Ganges and Brahmputra rivers in Asia, and the Parana River in South America.

10.9.4 CASE STUDY: Managing water in the Nile Basin, North Africa

The Nile River is the longest river in the world at 6695 kilometres long. It flows northward through the tropics and the highlands of eastern Africa and drains into the Mediterranean Sea in north Africa. It is also home to the Sudd wetland, Lake Victoria and 17 other wetlands sites with diverse species of flora and fauna that are listed by the Ramsar Convention.

The Nile Basin (the Nile River and all its tributaries) covers an area of about 3.1 million kilometres squared (almost the same area as the Northern Territory). The Basin covers 10 per cent of the African continent.

Ten countries share the water and land in the Nile Basin: Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Uganda and United Republic of Tanzania. More than 330 million people live in these ten countries — 160 million live within the watershed boundaries of the Nile Basin and share its water.

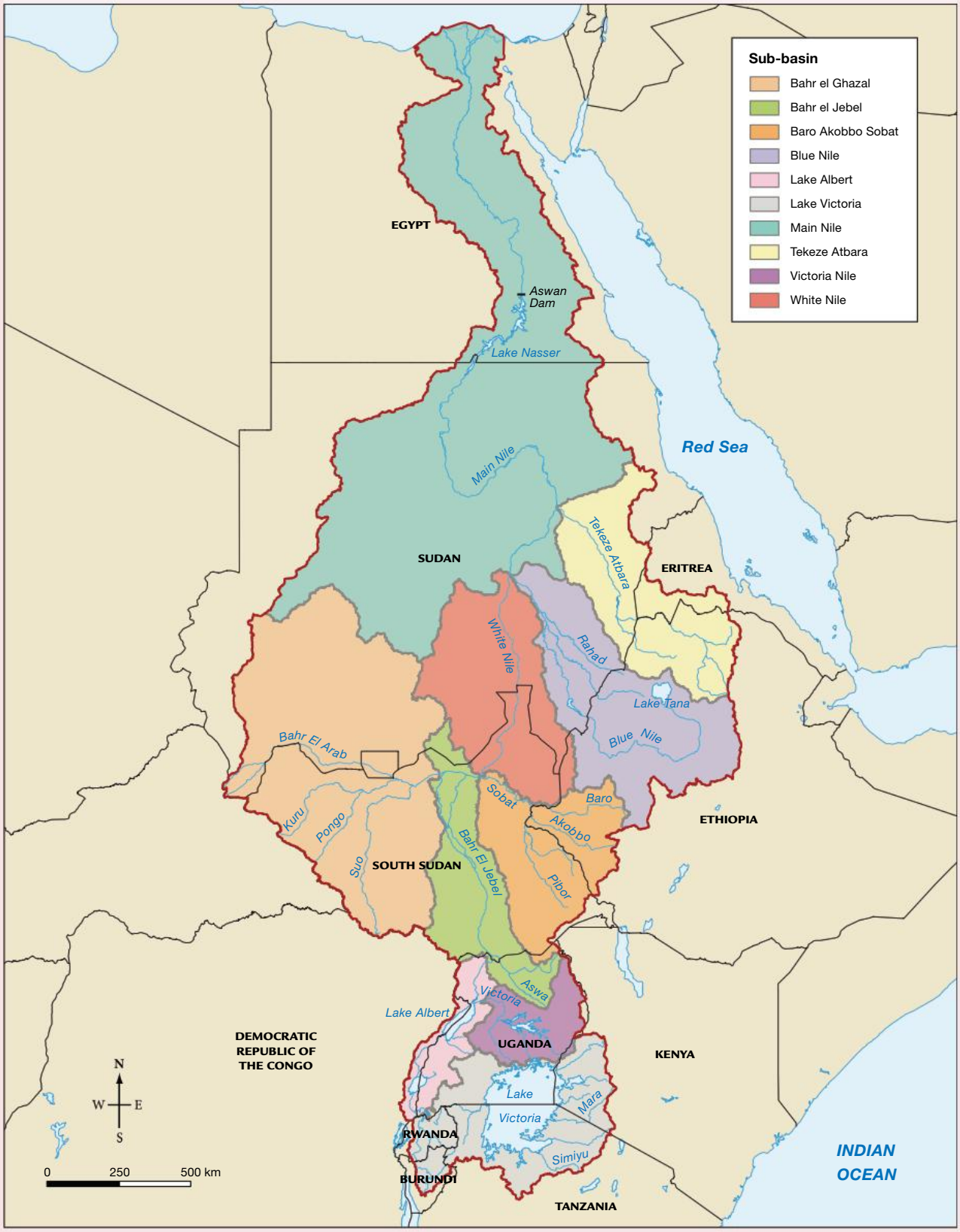
Water in the Nile Basin countries is used for hydro-electricity generation, town/city and industrial water supply, agriculture, fishing, recreation, transport, tourism and waste disposal. Most people earn a living in the Nile Basin through agriculture; it sustains millions of people. The topography of the Nile enables power generation, especially in Ethiopia. Hydropower is a major water user in the Nile, relying on water passing through turbines to generate electricity.

Nile Basin Sustainability Framework

There have been many initiatives and agreements since the 1990s regarding sharing the Nile's water. All have been based on a framework for cooperation and trying to ensure there is equitable use of this important resource.

Approved in 2011, the Nile Basin Sustainability Framework (NBSF) outlines the guiding principles for water resource management and development across the Nile Basin countries. This framework guides national policy and seeks to build consensus. It supports transboundary investment projects and promotes shared benefits and environmental concerns that ensure projects have long-term benefits. A significant effort was made to strengthen database and shared geographical information system (GIS) skills so that up-to-date water flow and rainfall data are available. Without the NBSF, there would be no guidance for the sustainable development or cooperation in sustainable water management and development in the Nile Basin.

FIGURE 5 The sub-basins and countries sharing the water and land of the Nile River Basin



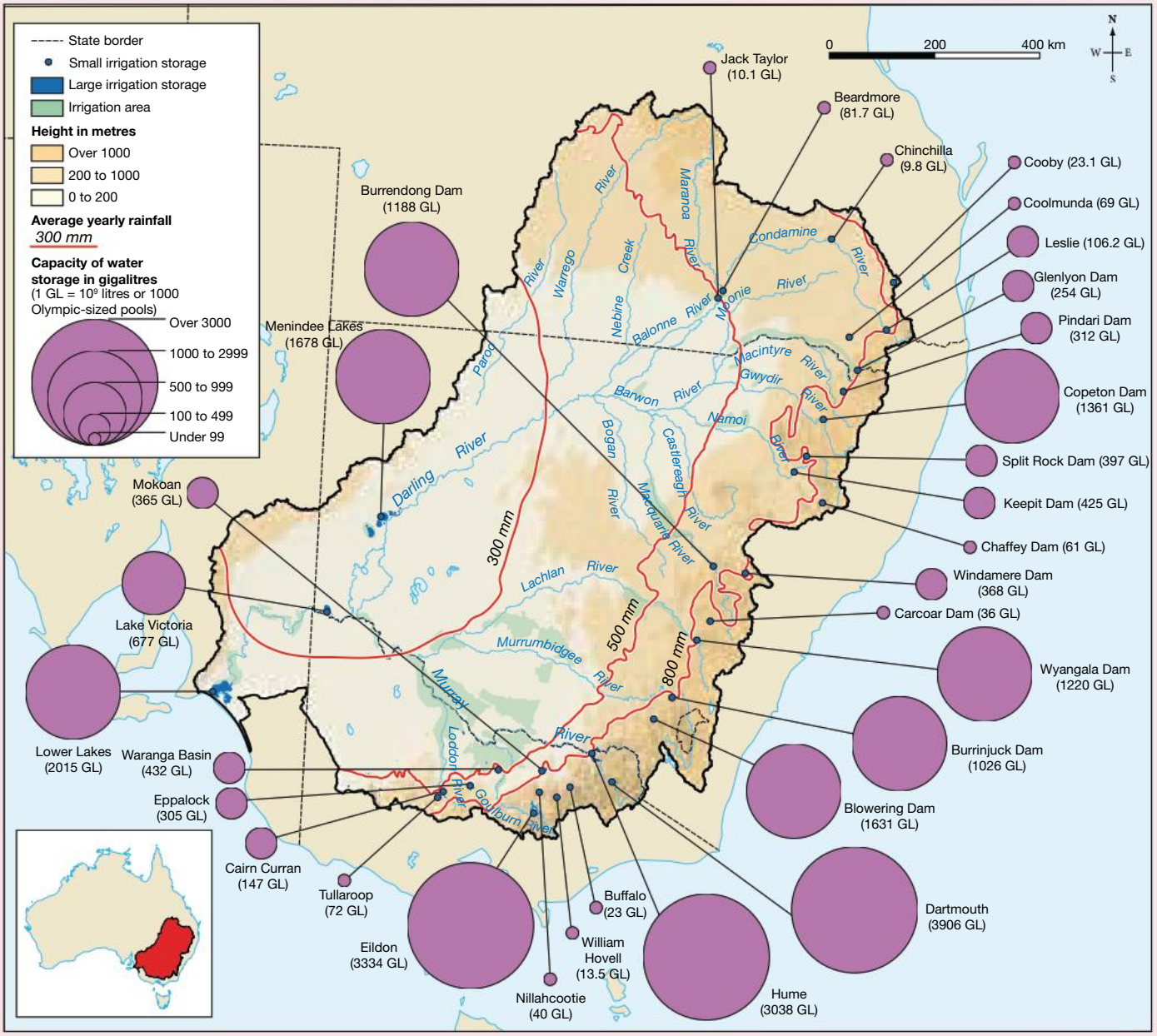
Source: Nile Basin Initiative

10.9.5 CASE STUDY: Managing water within a country: the Murray–Darling Basin

The Murray–Darling Basin (MDB) is Australia's largest catchment area, covering 14 per cent of the country's total landmass. It stretches across four Australian states (Queensland, New South Wales, Victoria and South Australia) and the Australian Capital Territory, and includes 23 separate river catchments.

This is a changed system, in which water is taken out all along its length for storage in dams and use in irrigation. During long periods of drought, little water reaches the Murray mouth, often causing it to close. The Queensland floods in the summers of 2011 and 2012 provided the largest river flows for the MDB in many years.

FIGURE 6 Map of the Murray–Darling Basin. The Australian government has been managing the basin through the Murray–Darling Basin Authority since 2008.

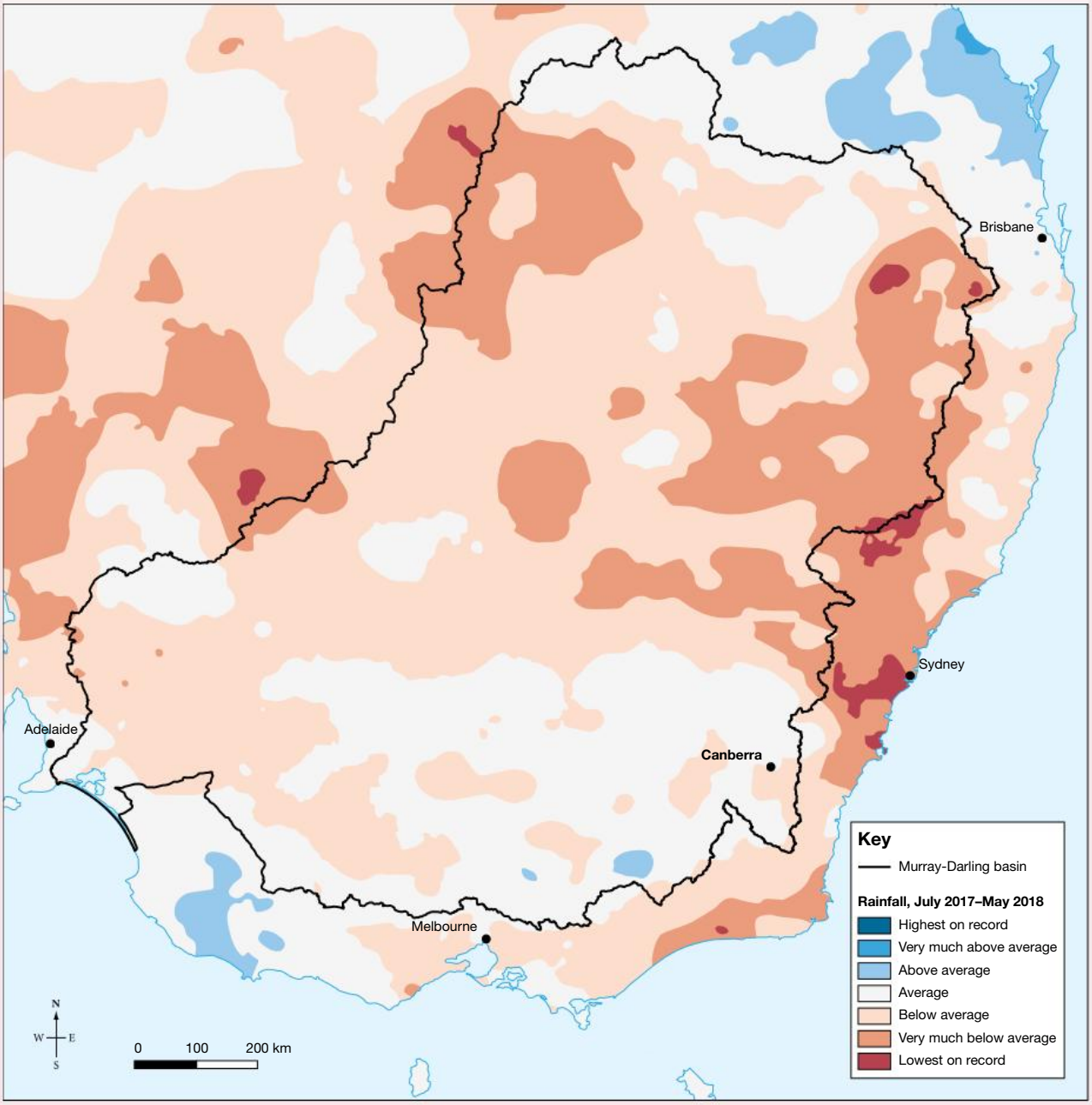


Source: Spatial Vision

The management of this river system was originally the responsibility of each of the four states and the territory, which resulted in a lot of conflict. In 2008, the Australian government took control of the MDB and prepared plans for how it should be managed.

Despite the federal government taking over management of the MDB, there has continued to be controversy over decisions made about sharing the water. In 2018–19, very low rainfall and inequitable water use in the MDB has resulted in high fish kills in the Menindee Lakes in NSW. Other impacts include reduced water allocations to farmers, who rely on water from the system for crops and stock.

FIGURE 7 Rainfall MDB measured from July 2017 to May 2018



Source: Bureau of Meteorology

FIGURE 8 Mass fish kill at the Menindee Lakes in 2019



10.9.6 Managing water scarcity in Perth

Perth, Western Australia, has a population slightly in excess of two million people, which is expected to reach around three million before 2060. A growing population creates a growing demand for domestic, industrial, municipal and agricultural water. To cope with the danger of future water scarcity, the Water Corporation of Western Australia has developed the Integrated Water Supply Scheme (IWSS). This scheme provides water for the Perth metropolitan area as well as parts of the south-west, goldfields and agricultural regions of Western Australia.

In order to cope with a drying climate in the south-west of Western Australia, the Water Corporation has moved away from dams as the chief source of water to a scheme that gathers water from a combination of:

- dams
- aquifers
- desalination plants
- stormwater.

In the 1970s the stream flow of water into dams averaged 338 gigalitres per year. By 2010 this average had fallen to 75 gigalitres. Dams in the future will be used as reservoirs to store water from other sources until it is distributed. Adding groundwater to dams ensures good water quality.
Aquifers are underground stores of water found in the rock structure. Perth has three levels of aquifers and the deepest of these is the Yarragadee Aquifer, which is a very reliable source. Some water is taken from shallow aquifers that drain naturally into the ocean.

FIGURE 9 Australia's first waste-water recycling plant at Beenyup



To help secure the sustainability of this source, the Water Corporation has built Australia's first waste-water recycling plant at Beenyup in Perth's north. Here, waste-water is purified to drinking standard and injected into the aquifers. This will provide 28 billion litres of fresh water each year, enough to supply 100 000 households.

Perth has two desalination plants at Kwinana and Binningup; together they provide nearly half of the city's water. This is about 150 million litres per year. Desalination is sustainable and completely independent of climatic change.

Stormwater is water that runs off from roads and other hard surfaces following rain events. Stormwater will naturally find its way into shallow aquifers. The Water Corporation also supports and encourages households and businesses to collect water from roofs. Care must be taken when reusing stormwater because it may contain chemicals, fertilisers and sediment.

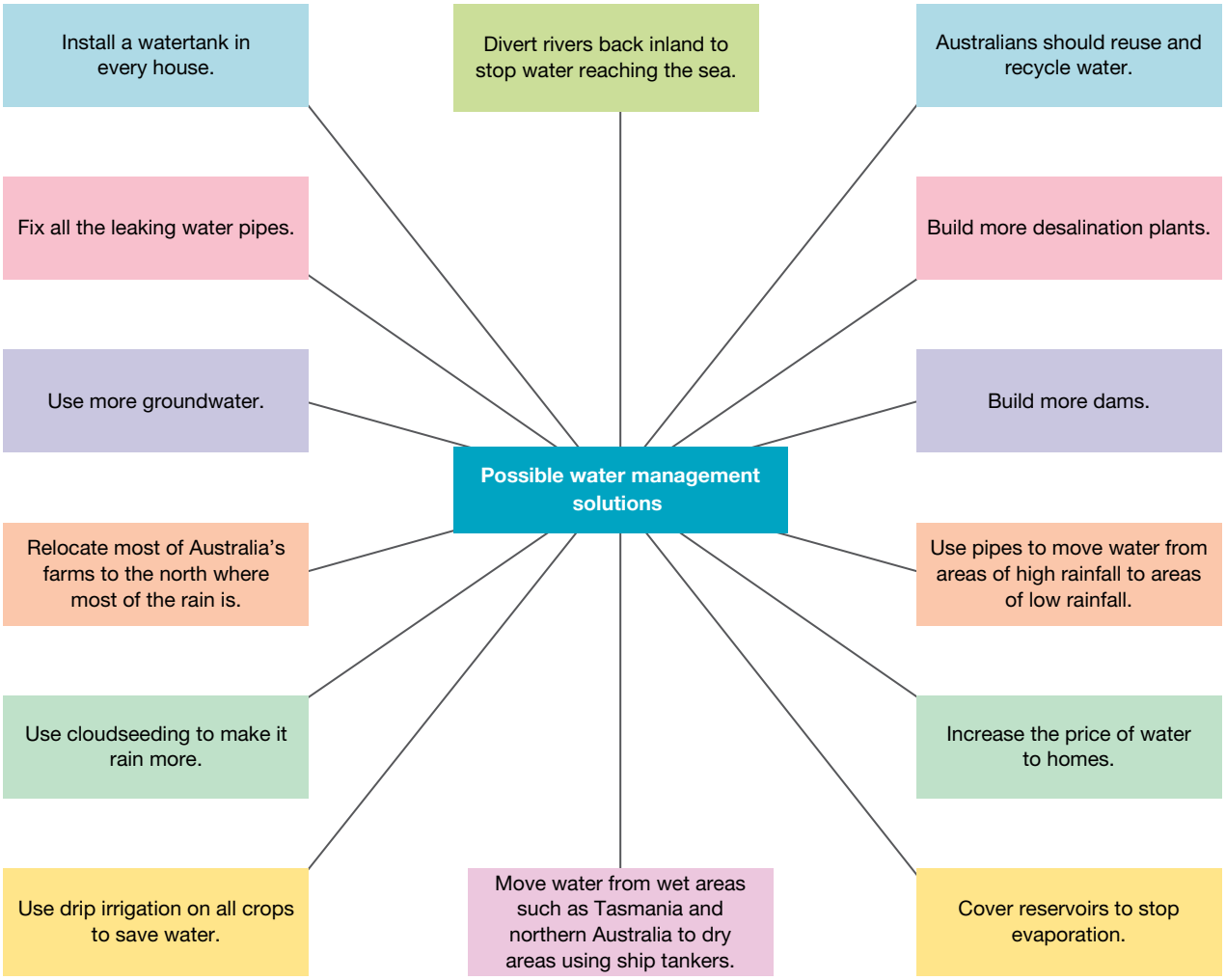
The operation of the Integrated Water Supply Scheme is now relatively unaffected by a drying climate. Today only 7 per cent of Perth's water comes from dams. Aquifers supply 46 per cent and desalination 47 per cent of the city's and the south-west region's water.

10.9.7 Other water management solutions for Australia

During times of extreme water shortages, governments, communities and individuals often attempt to ensure there is a reliable water supply. The 2002–2009 drought in Australia sparked many different water-saving actions. However, in an environment prone to drought, with increasing demand for water, it is vital to protect and manage water resources at all times — not only during dry periods.

Many different solutions have been suggested to solve our water problems. Some of these seem impractical, such as towing icebergs from Antarctica; others have generated much discussion, such as fixing all the leaking pipes in towns, cities and outback bores. Each of the suggestions has to be considered in light of various factors: cost, impact on people, impact on the environment, technology and politics.

FIGURE 10 Possible water management solutions



Option 1: Government action

The Queensland Government developed the South-East Queensland (SEQ) water grid in order to secure alternative sources of water in an environment that seemed to be growing drier. Although the project began back in 2004, it remains an excellent example of how the impacts of drought can be managed. This strategy aimed to connect the water sources of the region through a pipe network that could move water to different areas and thus meet the needs of local communities. The grid includes existing dams, three water treatment plants and a desalination plant, all connected by approximately 450 kilometres of pipes.

FIGURE 11 The desalination plant at Tugun produces drinking water for south-east Queensland.



In 2008, the Western Corridor Recycled Project was completed at a cost of $2.5 billion. This project is part of the SEQ water grid and is the largest recycled water scheme in Australia. The project will supply up to 230 megalitres per day of recycled water to industry and power plants. The water also has the potential to be used by farmers and to top up drinking supplies. However, these last two uses of recycled water have created wide debate among communities.

The desalination plant at Tugun on the Gold Coast can provide up to 133 megalitres of drinking water per day. Essentially this project produces drinking water by removing salts and other minerals from sea water. This technology is very successful and has been used in other regions of Australia for years, including Coober Pedy, where desalination is used to treat bore water. Internationally, there are approximately 7500 plants in operation. These desalination plants enable safe drinking water to be produced without having to rely on rainfall.

WATER MEASUREMENTS

- 1 ML = 1 megalitre
- 1 megalitre = 1 000 000 litres
- 10 megalitres = 4 Olympic-size swimming pools

STAGES OF THE DESALINATION PROCESS

1. Sea water is piped from the ocean through a submerged inlet tunnel to the plant.
2. At the pre-treatment stage, particles in the sea water are micro-filtered, the pH is adjusted, and an inhibitor is added to control the build-up of scale in pipelines and tanks.
3. The sea water is forced through layers of membrane to remove salt and minerals. Concentrated salt water is separated and returned to the ocean.
4. During post-treatment, small amounts of lime and carbon dioxide are added to the water, along with chlorine for disinfection.
5. The desalinated water is blended with other Gold Coast water supplies and joins south-east Queensland's water grid to supply homes and industry.

Based on information from www.watersecure.com.au

In times of drought, governments may introduce water restrictions to limit the pressure placed on water supplies by individual households and businesses. They may also introduce **incentive** schemes that provide a **rebate** on water-saving devices, such as water tanks, which help relieve the strain on the water supply.

DISCUSS

'The best way to drought-proof Australia is to build more desalination plants.' Discuss.

General capability: Personal and social capability

Option 2: You and me — personal action

During 2016–17, an estimated 1900 gigalitres of water was used by Australian households. With so much water used in our homes, it seems an obvious place for water conservation to begin.

Many of our day-to-day activities require the use of water. There are things we can do to use this water more efficiently to ensure it is not wasted. Some ideas include:

- putting aerators on taps
- using a hose with a shut-off nozzle
- cleaning driveways and paths with a broom rather than a hose.

FIGURE 14 shows some other ways we can use water wisely. Personal action can have a big impact. If every individual seeks to minimise wastage, significant water savings can be achieved.

incentive something that encourages a person to do something

rebate a partial refund on something that has already been paid for

FIGURE 12 The SEQ water grid



Source: Seqwater

FIGURE 13 Collecting rainwater from your roof can provide water for flushing toilets, watering the garden or washing the car.



FIGURE 14 Ways you can save water in your home

Ensure your next washing machine has lots of water-efficiency stars.



Ensure you completely fill your dishwasher before using it.



Don't keep the tap running when washing fruit and vegetables. Wash them in a bowl instead.



Install a dual-flush toilet.



Dispose of tissues in the bin — don't flush them down the toilet.



Have short showers. Try for three minutes!



Don't run the tap when brushing Your teeth.



Use a water-saving showerhead and keep a bucket in the shower for excess water to use on the garden.



Cover soil in mulch to retain moisture in soil. Grow drought-tolerant plants.



Water the garden in the early morning or evening to reduce evaporation.



on Resources

Digital document	Regions (doc-17950)
Interactivity	Ways forward (int-3082)
Weblinks	Catchment detox, UN SDG, The Singapore Water Story, Four National Taps

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigating Australian Curriculum topics > Year 7: Water in the world > **Salisbury Council — Aquifer storage, transfer and recovery**
- Investigate additional topics > Managing water resources > **Murray–Darling Basin**

10.9 ACTIVITIES

1. Work in groups of three or four. Use the data and facts in these pages to plan a day of promoting knowledge about this issue at your school. Use the links available at the **UN SDG** weblink in the Resources tab, which includes information on programs. Make particular reference to north and sub-Saharan Africa, and find out what is being done by aid organisations to improve the situation in these regions. Plan a video presentation that is interesting and catchy and will help people understand the action needed to improve access to clean water and sanitation. Use video and video editing programs and internet research in your planning.
   HASS skills: Communicating and reflecting
   Geography concepts: Environment, Sustainability
2. Conduct some further research to find out how water is being managed along the Jordan River in west Asia (the Middle East). (Use the **Regions** resource in the Resources tab.)
3. Investigate the use of desalination in countries in west Asia.
   HASS skills: Questioning and researching
   Geography concepts: Environment, Sustainability
4. If water were oil, leaking pipes would be fixed immediately. However, there is still a perception that water is not as valuable as oil, so the same investment is not made in it. Imagine you work for an advertising company and have to convince your audience that water is more valuable than oil. Film your advertisement and use a video editing tool to create music and voiceovers. Present this to your class and your school.
   HASS skills: Communicating and reflecting
   Geography concepts: Environment, Sustainability
5. Talk to your family about saving water as individuals or as a household. Come up with a list of other ideas that could save water around the home. With this information, create a poster that could be used to educate others.
   HASS skills: Communicating and reflecting
   Geography concepts: Place, Sustainability
6. Use the weblinks in the Resources tab to investigate Singapore's Four National Taps strategy to manage their water supply. Create a Venn diagram that shows the similarities and differences between this strategy and that of Western Australia's Integrated Water Supply Scheme.
   HASS skills: Communicating and reflecting
   Geography concepts: Place, Sustainability

10.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 7	Questions 1, 3, 6, 8	Questions 5, 9, 10, 11

Check your understanding

1. Complete the following sentence.
   Desalination is a process that removes _____ from _____.
2. Identify two ways the government attempts to ensure there is a reliable water supply.
3. Why is it difficult to manage water when the water supply crosses country or state borders?
4. Read the case study on the Nile Basin and study **FIGURE 5**. Outline the potential difficulty in managing the water in the Nile Basin.
5. Study **FIGURES 6**, **7** and **8** and read about the management of the Murray–Darling Basin.
   a. How does the Murray–Darling Basin compare to the Nile River Basin?
   b. How has the recent drought affected the MDB?
6. Read the case study about managing Perth's water supply. Summarise what stormwater is, how it can be collected and why care needs to be taken in using it.

Apply your understanding

7. Study **FIGURE 6** and answer the following questions:
   a. Name the three largest storage dams in the Murray–Darling Basin (MDB).
   b. Where is each located?
   c. How many 1000–2999 GL storages are located in NSW?
   d. Why does so little water reach the Murray River mouth in South Australia?
8. What is the aim of a desalination plant? How does it achieve this?
9. How do the Integrated Water Supply Scheme (Western Australia) and the SEQ water grid (Queensland) compare in the strategies they have adopted to ensure sufficient water for their populations?
10. Why do you think the topic of using recycled water can create debate in the community? Create a list of pros and cons for the use of recycled water.
11. Describe two ***sustainable*** ways of reducing the impacts of drought. Give reasons for your choices.

For sample responses to every question, go to www.jacplus.com.au.

10.10 Thinking Big research project: The Great Artesian Basin

Scenario



It's the year 2100, and Australia is relying more and more on groundwater for its water supply. The federal government wants to supply Western Australia and Victoria with groundwater from the Great Artesian Basin (GAB), but the Queensland, New South Wales, South Australian and Northern Territory governments are against this proposal as they think the water will be depleted if it is not used sustainably.

Task

Your team of engineers has been commissioned by the Queensland, New South Wales, South Australian and Northern Territory governments to present a poster display to the federal Minister for Water. You need to convince her that using the GAB to supply water to distant states is not a solution to the water crisis.

Your posters need to provide the minister with information about the GAB that she can then take to the prime minister to reverse any decisions about using the water in Victoria and Western Australia. Your posters need to include:

- facts and maps about the GAB
- information about how the GAB works
- photos to accompany these facts.

Follow the steps detailed in the **Process** section to complete this task.

Process

- Open the projectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Work in groups of three; this enables you to share responsibility for the project.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- Conduct research on the Great Artesian Basin (GAB). In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.



- You will need to find the following information:
  - Where is the GAB? Include a map with some main settlements, roads and landscapes.
  - What is the area of the GAB? (What percentage of Australia?)
  - How deep is it?
  - How much water is stored?
  - How old is the water?
  - What is the temperature of the water?
  - How fast does the water travel?
  - How does the GAB work?
  - How important is the GAB to Australia and particularly to Aboriginal peoples?
  - How do people use the GAB? In this section include a case study of one of the following springs: Dalhousie Springs, Coward Springs, Elizabeth Springs, Mound Springs.
  - Which animals and plants rely on the GAB?
  - What are the sustainability issues surrounding the GAB?
- Produce two posters to convey your story about the GAB. See the weblinks and images in the Media centre for some creative ideas for poster displays (you may find some more while conducting your research).
- Be sure to enter the source for any information you find online.
- Check thoroughly to ensure correct spelling and grammar, and that you have completed all elements required. When happy with your work, submit your poster to your teacher for assessment.

on Resources

ProjectsPLUS The Great Artesian Basin (pro-0233)

10.11 Review

10.11.1 Key knowledge summary

10.2 Environmental resources

- People depend on the Earth's environmental resources for survival.
- There are renewable and non-renewable environmental resources.
- Careful use of environmental resources will ensure their sustainability.
- Australia has an abundance of environmental resources, both renewable and non-renewable. These include minerals, soils, forests and natural scenery.

10.3 Fossil fuels and energy

- Australia has large reserves of non-renewable energy such as oil, coal and natural gas.
- Many of these resources are used by Australia in global trade.
- Australia has many potential renewable energy sources: hydro-electric, wind, solar, tidal, geothermal and biomass energy.

10.4 Water as a resource

- Water is a renewable resource in most forms.
- The water cycle is a process that cycles water in different forms across places.
- Water connects places as it moves through the environment.
- Groundwater is water stored in aquifers under the ground and is an important source of water for people living in arid and semi-arid regions.
- If more groundwater is used than is being recharged, aquifers may dry up; groundwater can therefore be regarded as a finite and non-renewable resource.
- There are many groundwater sources throughout Australia that have long been used by Aboriginal and Torres Strait Islander peoples and passed on in Dreaming Stories and songs.

10.5 Water in the world

- Of all the water in the world, only a small fraction is available to people to use.
- Rainfall varies widely across the world.
- Climate change is affecting the amount of water available in many locations around the world.
- There are many amazing water records in the world — most rainy days; largest rivers, biggest dams etc.

10.6 Australia's climate and how it affects water availability

- Australia is the driest permanently inhabited continent in the world.
- Australia's rainfall is highly variable even at a global level.

10.7 Water use

- Globally, water is mainly used for agriculture but this varies from region to region.
- Australia's uses 70 per cent of its water for agriculture.
- Virtual water includes the water used to manufacture food and goods.
- Some foods and goods require very large amounts of water to be produced.
- Countries that export these high water-use products are virtually exporting their water; countries importing these goods are virtually importing water.
- There is a strong relationship between Aboriginal and Torres Strait Islander peoples' use of water and the landscape.

10.8 Water scarcity in Australia and the world

- Access to adequate and clean water and to adequate sanitation varies across the world.
- Africa has the worst data related to water and sanitation provisions.
- Women are over-represented in the task of fetching and carrying water.
- Access to clean and sufficient water and adequate sanitation reduces health-related deaths.

- Work on the Sustainable Development Goals have resulted in improved access to clean water and sanitation but there is still a lot of work to be done to improve this for many more people.
- Australia is the driest inhabited continent on Earth and, although it has several large rivers, the availability of fresh water is scarce.
- A drought is a prolonged period of below-average rainfall, when there is not enough water to supply our normal needs.
- Weather events such as El Niño can produce extended periods of drought.

10.9 Ways of overcoming water scarcity

- Water needs to be carefully managed for enough people to receive an adequate supply.
- Cross-boundary water management needs to be carefully planned to ensure upstream and downstream populations share the resource equitably.
- Personal behaviours can help minimise water use and wastage.
- Governments have significant role in managing drought and water scarcity. Proper water management includes the development of technologies, such as desalination plants, and encouraging more responsible household water use.

10.11.2 Key terms

alluvial soil a fine-grained fertile soil brought down by a river and deposited on its bed, or on the floodplain or delta

aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater. Water can move along an aquifer.

artesian aquifer an aquifer confined between impermeable layers of rock. The water in it is under pressure and will flow upward through a well or bore.

atmosphere the layer of gases surrounding the Earth

biomass organic (once living) matter used as fuel

blue water water that has been sourced from surface or groundwater. It is either evaporated, incorporated into a product or taken from one body of water (e.g. a river) and returned to another (e.g. an irrigation channel)

climate change any change in climate over time, whether due to natural processes or human activities

desalination a process that removes salt from sea water

Dreaming the English word used to label the systems of beliefs about life, culture and spirituality of Australian First Nations peoples.

economic relating to wealth or the production of resources

El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean. This change causes drought in Australia and heavy rain in South America.

evaporation the process by which water is converted from a liquid to a gas and thereby moves from land and surface water into the atmosphere

fossil fuels fuels that come from the breakdown of living materials, and which are formed in the ground over millions of years. Examples include coal, oil and natural gas.

green water water from precipitation that is stored in the root zone of the soil and transpired or used by plants

groundwater water held within water-bearing rocks, or aquifers, in the ground

hydrologic cycle another term for the water cycle

improved drinking water drinking water that is safe for human consumption

incentive something that encourages a person to do something

intensive agriculture any method of farming that requires concentrated inputs of money and labour on relatively small areas of land; for example, battery hens and rice cultivation

manufacture to make products on a large scale

mound spring mound formation with water at its centre, which is formed by minerals and sediments brought up by water from artesian basins

precipitation rainfall, a form of water from the atmosphere

rainfall variability the change from year to year in the amount of rainfall in a given location

rebate a partial refund on something that has already been paid for

relative humidity the amount of moisture in the air

riverine environment the environment around a river or river bank

run-off precipitation not absorbed by soil, which runs over the land and into streams

soak place where groundwater moves up to the surface
southern oscillation a major air pressure shift between the Asian and east Pacific regions. Its most common extremes are El Niño events.
subsistence farming a form of agriculture that provides food for the needs of only the farmer's family, leaving little or none to sell
turbine a machine for producing power, in which a wheel or rotor is made to revolve by a fast-moving flow of water, steam or air
uranium radioactive metal used as a fuel in nuclear reactors
virtual water all the hidden water used to produce goods and services
water footprint the total volume of fresh water that is used to produce the goods and services consumed by the individual or country
water scarcity a situation that occurs when the demand for water is greater than the supply available
water stress a situation that occurs in a country with less than 1000 cubic metres of renewable fresh water per person

10.11.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Earth provides us with more than a place to live. What resources do we take from it to survive?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4286)
Reflection (ewbk-4342)
Crossword (ewbk-4341)
Student learning matrix (ewbk-4324)

Interactivity Water as a resource crossword (int-7700)

10.11 Review exercises

Multiple choice

1. What is the result of unequal access to resources?
   - A. Poverty
   - B. Food prices all over the world will drop.
   - C. Food prices all over the world will rise.
   - D. Famines will end.
2. Identify the fossil fuels from the options below. Select all that apply.
   - A. Wind
   - B. Coal
   - C. Solar
   - D. Oil
   - E. Natural gas
   - F. Water
3. Which statement explains the phrase 'Freshwater: lifeblood of the planet'?
   - A. The Earth is made up of 90 per cent water.
   - B. Rivers and streams carry water.
   - C. Water is precious because it is the basis of all living things.
   - D. The Earth is made up of 50 per cent water.

4. How do rainfall and run-off contribute to the amount of water Australia has to use?
   - **A.** Rainfall and run-off make no difference to the amount of water Australia has to use.
   - **B.** Where there is a lot of rainfall, plenty of water is available for use. When rainfall is low and variable and there is little run-off, there is little water available for use.
   - **C.** It is variable whether rainfall and run-off make a difference to the amount of water Australia has to use.
   - **D.** All of the above.
5. Water scarcity occurs when:
   - **A.** the demand for water is greater than the supply available.
   - **B.** the demand for water is less than the supply available.
   - **C.** there is too much water to fulfill all demands.
   - **D.** there is not enough water to fulfil all demands.
6. Water stress occurs when:
   - **A.** the demand for water is greater than the supply available.
   - **B.** the demand for water is less than the supply available.
   - **C.** there is too much water to fulfill all demands.
   - **D.** there is not enough water to fulfil all demands.
7. What is a water footprint?
   - **A.** The total volume of dirty water that is used to produce the goods and services consumed by an individual or country
   - **B.** The total volume of fresh water that is used to produce the goods and services consumed by an individual or country
   - **C.** Some of the water used for food production
   - **D.** All the water used to produce services and goods
8. What is virtual water?
   - **A.** The total volume of dirty water that is used to produce the goods and services consumer by an individual or country.
   - **B.** The total volume of fresh water that is used to produce the goods and services consumer by an individual or country.
   - **C.** Some of the water used for food production.
   - **D.** Online water.
9. Which agricultural product generally takes more water to produce?
   - **A.** Vegetables
   - **B.** Fruit
   - **C.** Grains
   - **D.** Meat
10. What natural resources does Australia have in abundance?
   - **A.** Water
   - **B.** Mineral resources, scenery and good soil
   - **C.** Farming land and good water
   - **D.** Scenery and good soil

Short answer

11. As world population increases, we are going to have to produce more food with less water.' Do you agree or disagree with this statement? Justify this by using examples from this topic.
12. Water has been described as one of the biggest issues facing the world. Do you agree with this? Use examples from this topic to justify your view.

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 10 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

10.1 Overview

Video eLesson
- Water: A vital resource (eles-1615)

10.2 Environmental resources

eWorkbook
- Environmental resources (ewbk-4325)
- Water as a renewable resource (ewbk-4326)

Interactivities
- Environmental resources (int-7766)
- Mineral deposits in the Pilbara region (int-7767)

Google Earth
- Mt Tom Price mine

10.3 Fossil fuels and energy

Interactivities
- The biggest buyers in the Australian coal market, 2018 (int-7769)
- Australian non-renewable energy consumption by fuel (int-7770)
- World energy production (int-7771)
- Global oil consumption (int-8163)
- Australia's renewable energy consumption, by fuel type (int-7773)

Weblinks
- Gulf of Mexico
- NOAA
- Treehugger
- National Geographic Education — Coal
- Geoscience Australia
- Top 10 profitable companies

My World Atlas
- Investigate additional topics > Energy > **World energy**
- Investigate additional topics > Energy > **Energy in Australia**

10.4 Water as a resource

eWorkbook
- Sources of water (ewbk-4327)
- Using groundwater (ewbk-4328)
- Water flow through catchments (ewbk-4329)
- Groundwater use (ewbk-4330)

Interactivities
- The water cycle (int-5614)
- An artesian aquifer (int-7775)
- Water works (int-3077)
- Water beneath us (int-3078)
- Oodnadatta Track (int-3079)

Weblinks
- Interactive map of important Noongar sites
- Noongar spirituality
- Swan River Stories

My World Atlas
- Investigating Australian Curriculum topics > Year 7: Water in the world > **Salisbury Council — Aquifer storage, transfer and recovery**

10.5 Water in the world

Interactivity
- Predicted change in annual run-off due to climate change, 2084 (int-5298)

Weblinks
- Planet Earth, fresh water
- Introduction to water
- Pumped dry

10.6 Australia's climate and how it affects water availability

eWorkbook
- Australia's climate and water availability (ewbk-4331)

Interactivity
- Hot and dry (int-3081)

My World Atlas
- Australia > **Australia: weather and climate**

10.7 Water use

eWorkbook
- Significance of water to Aboriginal and Torres Strait Islander peoples (ewbk-4332)
- The aesthetic value of water (ewbk-4333)
- Virtual water (ewbk-4334)
- Uses of water (ewbk-4335)

Digital document
- Regions (doc-17950)

Interactivity
- Unreal (int-3080)

Weblinks
- Walmajarri seasonal calendar
- Noongar knowledge — spirituality
- Just add water

My World Atlas
- Exploring places > Europe > **Mediterranean basin**
- Investigate additional topics > Managing water resources > **Three rivers in Africa**
- Investigate additional topics > Managing water resources > **Our water footprint**

10.8 Water scarcity in Australia and the world

eWorkbook
- Differences in water availability (ewbk-4336)
- Does everyone have enough water? (ewbk-4337)
- Water scarcity (ewbk-4338)

Digital document
- Regions (doc-17950)

Video eLesson
- Weather events in a typical year and an El Niño year (eles-2275)

Interactivity
- El Niño (int-3084)

Weblinks
- WHO/UNICEF
- News report: dust storms

Google Earth
- Citarum River

My World Atlas
- Investigating Australian Curriculum topics > Year 7: Water in the world > **The Dead Sea — overcoming water scarcity**
- Exploring places > Europe > **Russia and Eurasia**
- Exploring places > The world > **World: health**

10.9 Ways of overcoming water scarcity

eWorkbook
- Water and health (ewbk-4339)
- Strategies to address water scarcity (ewbk-4340)

Digital document
- Regions (doc-17950)

Interactivity
- Ways forward (int-3082)

Weblinks
- Catchment detox
- UN SDG
- The Singapore Water Story
- Four National Taps

My World Atlas
- Investigating Australian Curriculum topics > Year 7: Water in the world > Salisbury Council — Aquifer storage, transfer and recovery
- Investigate additional topics > Managing water resources > Murray–Darling Basin

10.10 Thinking Big research project: The Great Artesian Basin

ProjectsPLUS
- The Great Artesian Basin (pro-0233)

10.11 Review

eWorkbook
- Reflection (ewbk-4342)
- Crossword (ewbk-4341)
- Student learning matrix (ewbk-4324)

Interactivity
- Water as a resource crossword (int-7770)

To access these online resources, log on to **www.jacplus.com.au**.

11 Choosing a place to live

11.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Rural, urban, remote or central, the world is full of places. Are any two places the same?

11.1.1 Introduction

We all live in different places. Places are important to people, whether the places are rural or urban, remote or central, permanent or temporary. But no two places are alike; they differ in aspects such as their appearance, size and features. In your mind's eye, try to picture the similarities and the differences between places such as a popular tourist destination, a remote village overseas, a scientific base in Antarctica, an Australian Aboriginal and Torres Strait Islander community and a mining town.

Why does your family live in the place, state, city, street or house that it does? Why do many Australians live in big cities near the coast? Have you thought about the reasons your parents selected the place or environment in which you now live? People living in Australia have been making choices about where to live for many thousands of years, and these choices are influenced by factors such as cost, proximity to family and friends, and access to resources and facilities. Some places are considered more 'liveable' than others, but how can this be measured? This topic looks at why Australians choose to live in the places they do.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4287)

Video eLesson Choosing a place to live (eles-1619)

FIGURE 1 Where would you choose to live?



11.2 A sense of place

LEARNING INTENTION

By the end of this subtopic you will be able to:

- define the geographical concept of place
- describe how places are similar and different
- explain how places are viewed differently by people.

11.2.1 What creates a sense of place?

Places are central to the study of Geography. This is because geographers are interested in where things are found on Earth and why they are there. But what exactly is a place?

To understand what a place is, think about **location** and **region**. Each place has a unique identity that makes it different from other places. A combination of characteristics is specific to that place, making it individual. A sense of place comes from being aware of what makes that location significant and seeing its special qualities.

The characteristics of a place can come from:

1. natural features
2. human features — that is, features built by people
3. a combination of natural and human features.

Eventually, one or more of these features becomes a symbol of that place in people's minds.

place specific area of the Earth's surface that has been given meaning by people

location a point on the surface of the Earth where something is to be found

region any area of varying size that has one or more characteristics in common

FIGURE 1 Rio de Janeiro, Brazil, showing the Corcovado in the foreground with the statue of Christ and Sugarloaf Mountain, or Pao de Acucar, in the background, to the right



FIGURE 2 Disney World, Orlando, Florida, United States



FIGURE 3 The Taj Mahal in Agra, India



FIGURE 4 The Grand Canyon, Utah, United States



FIGURE 5 Table Mountain, Cape Town, South Africa



FIGURE 6 Golden Gate Bridge, United States



FIGURE 7 The Great Wall of China



FIGURE 8 Purnululu in Western Australia



Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigating Australian Curriculum topics > Year 7: Place and liveability > **New York City**

on Resources

Google Earth

Taj Mahal
Grand Canyon
Disney World
Table Mountain
Purnululu

11.2 ACTIVITY

1. Conduct a survey of your class to find out each person's top five favourite ***places*** in Australia.
   a. Collate the results in a table similar to the following.

Place	Student A	Student B	Student C
Great Barrier Reef	✓		✓
Uluru		✓	✓
My grandparents' farm near Margaret River, WA		✓	

   b. This table could also be set up electronically, using a spreadsheet program.
   c. Graph the results to show the ranking of the places by class percentage; for example, perhaps 45 per cent of the class named Uluru in their top five places in Australia.
   d. As a class, discuss the patterns shown by the graph. Suggest reasons to explain why people or dislike certain places.

HASS skills: Analysing

11.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6	Questions 2, 3, 8, 9, 10	Questions 5, 7

Check your understanding

1. Define the following terms in your own words.
   a. Place
   b. Location
   c. Region
2. Study **FIGURES 1**, **2**, **3**, **4**, **5**, **6**, **7**, and **8**. Describe five characteristics in the ***environment*** of each feature that create its individual sense of ***place***.
3. Of all these characteristics, which one do you believe to be the most important in creating an identity for that ***place*** in the minds of people?
4. Study **FIGURES 1**, **2**, **3**, **4**, **5**, **6**, **7**, and **8**. For each figure, identify whether the characteristics of the place come from natural features, human features, or both.
5. Suggest reasons these ***places*** have become famous around the world.

Apply your understanding

6. Do you think that people's favourite ***places*** would vary with the age of the individual? Explain your answer.
7. No matter where we live, we all live in the one ***place***: Earth. From what you have learned so far, define what a ***place*** is in your own words. What do you think would be the characteristics of a ***place*** that would appeal to anyone, wherever they come from? (*Hint:* What feelings do you have when you are in a ***place*** that you like?)
8. Name and describe a place you have visited and enjoyed that is predominantly made up of natural characteristics.
9. Name and describe a place you have visited and enjoyed that is predominantly made up of human characteristics.
10. Name and describe a place you have visited and enjoyed that is made up of both natural and human characteristics.

For sample responses to every question, go to www.jacplus.com.au.

11.3 Why people live in certain places

LEARNING INTENTION

By the end of this subtopic you will able to explain the reasons that people live in certain places and describe how places change over time.

11.3.1 Push and pull

People choose to live in specific places for a wide range of reasons. These reasons can be broadly divided into **pull factors** and **push factors**. Pull factors are those that attract or 'pull' a person to a place, whereas push factors that those that discourage or 'push' people away from a place. The combination of reasons varies from person to person and what one person may see as an advantage, another person may see as a negative.

It is also true, though, that the reasons people choose to live in a place often change over time. Sometimes, these reasons might even be connected to the very existence of the place — or its changing nature.

Four factors influence the liveability of places or why people decide to live there:

1. available financial resources (money)
2. employment
3. relationships with other people (for example, wanting to be near family or moving for a partner's job)
4. lifestyle.

Many of these factors change throughout a person's life. For example, where a 20-year-old single person wants to live is often quite different from where someone in their forties or someone with a partner and two teenage children may want to live.

In other situations, the reason for living in a place may disappear; this is the case for a number of towns in Western Australia. The township of Kanowna is situated 22 kilometres east of Kalgoorlie, and was established after gold was discovered in 1893. Within a short period of time, the population had grown to over 12 000 and **infrastructure** such as a hospital, railway line, school, post office and at least ten hotels had been constructed. As the gold discoveries eventually dried up, the population drifted away and the township was abandoned in the mid-1950s. Interest in the geology of the area returned in the 1970s and after new deposits were uncovered in the late 1980s, the Kanowna Belle Gold Mine began operation in 1993. With the mine located only 19 kilometres from Kalgoorlie, the majority of workers choose to live there, unless they are **fly in, fly out (FIFO)** employees. As of the 2016 census, only ten people still lived in the original gold mining township of Kanowna.

pull factors positive aspects of a place; reasons that attract people to come and live in a place

push factors reasons that encourage people to leave a place and go somewhere else

infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines

fly in, fly out (FIFO) describes workers who fly to work in remote places, work 4-, 8- or 12-day shifts and then fly home

Cossack has a similar story to Kanowna. Established in the late 1860s, around 200 kilometres west-south-west of Port Hedland, it was renamed after the HMS Cossack in 1871 and became a base for the pearling industry in Western Australia. The development of the pastoral industry in the Pilbara region and the discovery of gold also attracted people to the port town.

In 1898, a cyclone destroyed a significant portion of the town and, as the size of pearling and transport ships began to increase in the early 1900s, the harbour was no longer suitable to accommodate these. In light of these challenges, the pearling industry was relocated to Broome, a new port was opened at Port Samson, and the town of Cossack was eventually abandoned in the 1950s. Most of the historic buildings in the town were built in the 1880s and have been redeveloped as tourist attractions; tourists can either walk or drive the 5-kilometre Cossack Heritage Trail.

Many of the towns in the north-eastern United States were established as manufacturing towns. At first they were located near major ports or iron ore and coal deposits, and some closed down when these resources ran out. In more recent times, factories such as the one shown in **FIGURE 3**, which is near Baltimore, have closed down because the owners could no longer compete with the goods produced at a lower cost in China and other South-East Asian countries. With no other jobs available, people left the area, and it fell into a state of urban decay. In 2018, Baltimore is once again thriving, especially with many STEM jobs.

FIGURE 1 The restored courthouse is one of the attractions on the Cossack Heritage Trail.



FIGURE 2 The Customs House and Store is another attraction on the Cossack Heritage Trail.



FIGURE 3 A disused factory near Baltimore



Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigate additional topics > Population > Population of Australia
- Investigate additional topics > Energy > Energy in Australia

on Resources

Interactivity Push/pull factors(int-3089)

Google Earth Baltimore, USA
Kanowna
Cossack

11.3 ACTIVITIES

1. Survey the members of your class and find out the reasons their families chose to live in the ***place*** or ***location*** where they do. Classify the responses using the four categories named in this subtopic in a table like the following.

Student	Resources	Employment	Relationships	Lifestyle
Gina	Near major shops	Near my dad's work		
Miguel		Near my mum's work	Close to my family who came to Australia earlier; close to my father's best friend	
Daniel				Near the sea, because we all sail or surf

   a. Present the answers using a column graph, correctly and fully labelled.
   b. As a class, discuss the pattern of reasons shown by the graph, and the possible explanations for this. For example, how important to people are social connections?

HASS skills: Communicating and reflecting, Evaluating
Geography concept: Place

2. Look up on Google Earth the ***location*** of the current settlement of Cossack in Western Australia. Calculate the distance between Cossack, the nearby town of Wickham, and Port Samson. Study the land use and features of the environment around all three locations. Identify and list the advantages and disadvantages of Cossack as a tourist ***location***, using evidence from your Google Earth study.

HASS skills: Evaluating
Geography concepts: Place, Environment

11.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 8	Questions 3, 4, 6, 7	Question 5, 9

Check your understanding

1. Explain the difference between *push* and *pull* factors.
2. What are four factors that influence the liveability of places and why people decide to live where they do?
3. Identify and justify the push and pull factors that exist for people thinking about whether they should move to Baltimore today.
4. Define the term 'urban decay' in your own words.
5. Study **FIGURE 3**. Identify some of the specific signs that indicate an area is in urban decay.

Apply your understanding

6. Suggest reasons some people continue to live in decaying urban ***environments***, and why others might choose to move.
7. Study **FIGURES 1** and **2** and think about the ***changes*** over ***time*** that have occurred in Cossack as a ***place***. Was the decline of the original township of Cossack due to push or pull factors? How did these influence people's choice of where they would live? Justify your answer.
8. How has the type of employment opportunities changed for people in Baltimore? What might be some of the flow-on effects of this change?
9. Consider the information on Kanowna and imagine that you have been employed at the Kanowna Belle Gold Mine. You have been given the option of housing within Kalgoorlie or within the original Kanowna township. Consider the potential advantages and disadvantages of both options and explain what your final decision would be.

For sample responses to every question, go to www.jacplus.com.au.

11.4 Liveable places in Australia

LEARNING INTENTION

By the end of this subtopic you will be able to:
- describe your neighbourhood
- create a mind map of your neighbourhood
- compare your mind map with a Google map
- describe the similarities and differences between your map and a Google map.

11.4.1 My place

What is your **neighbourhood** or local place like? All of us live in a **community**, and these are often centred on the place where we live, or go to school or work.

neighbourhood a region in which people live together in a community

community a group of people who live and work together, and generally share similar values; a group of people living in a particular region

Teenagers have different types of local places that have special meaning for them, each one at a different scale: their bedroom, home and neighbourhood.

When you live in a neighbourhood, you become familiar with all the things that help to create the character of the place. Sometimes a neighbourhood is made up of

people who have similar interests and beliefs, whether these be cultural, sporting, environmental or job-related. Other neighbourhoods have a mixture of people from different backgrounds, creating a vibrant, multicultural community identity. The fact that Australian neighbourhoods can be so different is what makes Australia such an interesting place to live in.

Neighbourhoods have always existed in Australia. The 'country' that is special to the many Aboriginal and Torres Strait Islander nations is often based on language. For instance, the Noongar people consists of fourteen Aboriginal communities who lived in what is now the south-west region of Western Australia before Europeans arrived. Each community spoke its regional dialect and controlled a territory that had definite boundaries. This means these people saw, and often still see, their neighbourhood as the region in which people spoke the same language and had the same customs, such as marriage rituals. People were, and are, socially connected.

Because nearly 90 per cent of Australians live in towns and cities, most people likely live in a street that is part of a suburb, town or city, and which itself is part of a state or territory. On the other hand, many Australians do not live in urban areas, but still live in their own communities that are just as distinctive as neighbourhoods in towns and cities. How can we describe where our local place is and what it is like? Sometimes, people try to use words to do this, but it is not an easy task. Geographers have no such trouble, however; they can use maps.

FIGURE 1 Aboriginal groups of South West Western Australia



FIGURE 2 Mental map of Jayden's local place (a) by Jayden and (b) by Annette, Jayden's mother

(a)



(b)



11.4.2 What makes Australia so liveable?

Where is your favourite place in Australia? Have you been to a holiday paradise, one that you think would be the perfect place to live? Is the climate perfect, the scenery spectacular? Is it safe, fun and the place for adventure? Is this place in a city, in the **wilderness** or in the next street? Is it paradise because your friends or family live there or because of the natural or **built environment**?

Among the most popular and beautiful tourist destinations in Australia are the Great Barrier Reef, Uluru, Melbourne, Sydney, the Gold Coast, the Great Ocean Road, Monkey Mia, Kakadu, the Tasmanian Wilderness, the Blue Mountains, Port Arthur, Byron Bay, Kangaroo Island and Ningaloo Reef. Many of these places have unique landscapes, located within naturally stunning environments. Four of these are predominantly built environments: Sydney, Melbourne, the Gold Coast and Port Arthur. The remaining ten places are best known for their natural, often **remote**, and almost wilderness environments.

Some of these wonderful places are found in or close to cities and large towns; some have significant local populations; and some are quite remote. They are all places that attract large numbers of visitors every year. People come to see or experience an **aspect** of the local environment that brings them pleasure.

FIGURE 3 shows the location of five of Australia's most popular places for tourists.

These places are often perfect for a holiday but they may also be a place to live. Is it mostly the excitement of a big city, the natural beauty, or some other factor that makes you decide which place is the most liveable? The following provides some further information on the five locations from **FIGURE 3**.

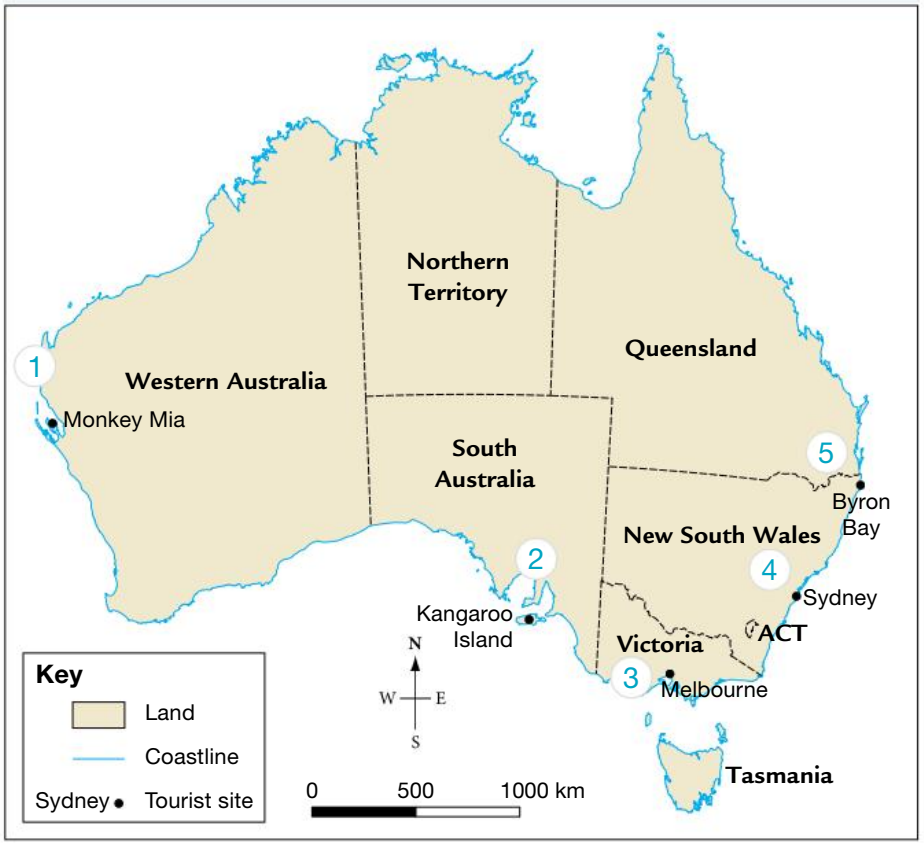
wilderness a natural place that has been almost untouched or unchanged by the actions of people

built environment a place that has been constructed or created by people

remote describes a place that is distant from major population centres

aspect feature or quality, or the direction in which something is facing

FIGURE 3 Five of Australia's most popular places for tourists



Source: Spatial Vision

1. Monkey Mia is an environment where you can experience natural wildlife by interacting with dolphins. It is located in Shark Bay on the coast of Western Australia, 850 kilometres north of Perth. For over 40 years, a small pod of dolphins has come ashore to connect with beachgoers. The Department of Environment and Conservation provides staff who supervise the feeding of fish to these dolphins each day. It is an unusual opportunity for people to see wild dolphins up close, quite near to the shore. Monkey Mia is a place of great natural beauty without a huge tourist resort attached. Most visitors camp. It is an important stop on the around-Australia tourist trail. At the 2016 census, fewer than 800 residents currently live near the Monkey Mia Resort.

FIGURE 4 Seeing wild dolphins up close is an attraction for tourists to Monkey Mia.



2. Kangaroo Island is a place of natural beauty. It is Australia's third largest island, found about 160 kilometres south of Adelaide. It is a wildlife lover's paradise, being home to many native Australian animals in their natural habitats, including koalas, kangaroos, seals and penguins. It has remote, unspoiled beaches and interesting rocky outcrops. Although first settled in the late 1830s, its present population of over 4200 is the highest it has ever been. It was originally settled as a fishing and farming community but today is better known as a tourist destination.

FIGURE 5 Kangaroo Island is known for its abundance of wildlife.



3. Melbourne is the second-largest and most **liveable city** in Australia (2011–2017; second to Vienna in 2018 according to the *Economist* magazine). It is the capital of Victoria and home to over five million residents in 2018. It is an attractive destination for tourists, who enjoy visiting its major sporting and cultural events, shops, restaurants and theatres. Melbourne is located beside Port Phillip Bay and on the Yarra River. It is not a city known for its beautiful natural environment, but it has become known for its distinctive laneways, bars and café culture.

liveable city a city that people want to live in, which is safe, well planned and prosperous and has a healthy environment

FIGURE 6 Melbourne is attractive for both residents and tourists.



4. Sydney is a built environment in a beautiful setting and is Australia's largest and oldest city. It is often called the 'Harbour City'. Sydney is popular with both domestic and international tourists and is home to nearly 5.5 million residents in 2018. It has many attractions, including restaurants, beautiful beaches, theatres, galleries and iconic landmarks. It has a beautiful natural environment with varied experiences provided by the built environment. This makes it an extremely popular destination for everyone.

FIGURE 7 Sydney has many cultural and environmental attractions.



5. Byron Bay is a beachside town in northern New South Wales, located 160 kilometres south of Brisbane. It is a very relaxed place with a local community that includes many artists and retired hippies. It is an important surfing place, with easy access to offshore reefs and stunning beaches. It has become a popular place for 'schoolies' end-of-year celebrations. In 2019, Byron Bay Shire had a population of nearly 35 000 people in (9500 in the township of Byron Bay), who rely heavily on tourism and agriculture for their income.

FIGURE 8 Byron Bay's natural beauty and laidback atmosphere attract residents and tourists.



on Resources

Interactivity How did they live here? (int-3091)

Weblink Nothing like Australia

11.4 ACTIVITY

Create a mental map of your neighbourhood or local ***place***. A mental map is a drawing or map that contains your memory of the layout and distribution of features in a place. Locate your house in the centre of the sheet and work outwards from there. The map should be as detailed as possible. Include features such as:

- streets and their names
- houses of friends or family
- shops, parks, trees, post boxes, telephone poles, pedestrian crossings, railway lines and stations
- anything you can remember, but the map must be drawn from memory.

Present the map using geographical rules (BOLTSS). Since you are not drawing the map to a ***scale***, write 'Not to scale' in the correct position. Remember to use conventional colours and symbols as far as possible. Compare your mental map to an actual map of your neighbourhood.

a. In what ways was your map accurate?
b. Which features did you not mark on your map?
c. Which parts of your neighbourhood did you know well and which did you not know well?
d. Think of reasons to explain your answers to (c).

Design a map of your most liveable ***place***. Consider the natural and built ***environments***; distance to a city, services, job and recreational opportunities; climate; and lifestyle. Annotate your map to explain why this is where you would like to live. Use the **Nothing like Australia** weblink in the Resources tab to help find your ideal location.

Geography concepts: Place, Environment

11.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 6	Questions 3, 7, 8, 9	Questions 4, 10, 11, 12

Check your understanding

1. What is a *neighbourhood*?
2. What percentage of Australians live in cities and towns?
3. In your own words, define the term 'liveable city'.
4. Classify each of the following places in Australia as a natural environment, built environment, or both.
   a. Monkey Mia
   b. Kakadu
   c. Sydney
   d. The Blue Mountains
   e. Melbourne
   f. Great Barrier Reef
   g. The Gold Coast
   h. Port Arthur
5. Which city was named the 'most liveable city' in the world in 2018?

Apply your understanding

6. Brainstorm a list of the features to describe your most liveable ***place***.
7. Study **FIGURE 2**, which shows two mental maps of the same neighbourhood ***place***. One is drawn by Jayden, a seven-year-old boy, and the other is drawn by his mother.
   a. Compare the two maps by drawing up a table like the following and filling in the spaces.

	Features that are different	Features that are similar
Land use		
Transport		
Street layout		
Relative sizes		
Names of places		
Other		

   b. Suggest reasons to explain the major similarities and differences between the maps drawn by Jayden and his mother. Think about factors such as age, duties during the day, transport and friendships.
8. Is your most liveable ***place*** in a natural or a built ***environment*** or a mixture of the two?
9. After reading about the five places described in section 11.4.2, which of these ***places*** is most similar to your most liveable ***place***? Explain your answer.
10. If you wished to work as a national park ranger, which of the ***places*** in **FIGURE 3** would be best and why?
11. If you were planning a career in the theatre, which of the ***places*** in **FIGURE 3** would be best and why?
12. If you wished to live in a relaxed coastal ***environment*** close to a capital city, which of the ***places*** in **FIGURE 3** would be best and why?

For sample responses to every question, go to www.jacplus.com.au.

11.5 Australians living in remote places

LEARNING INTENTION

By the end of this subtopic, you will be able to

- explain key terms: rural place, remote place, and fly in, fly out (FIFO)
- explain why people live in remote places
- identify and classify places as being either rural or remote
- identify problems faced by people living in rural and remote places
- discuss strategies that could be used to ensure the sustainable survival of rural and remote places.

11.5.1 Settling inland Australia

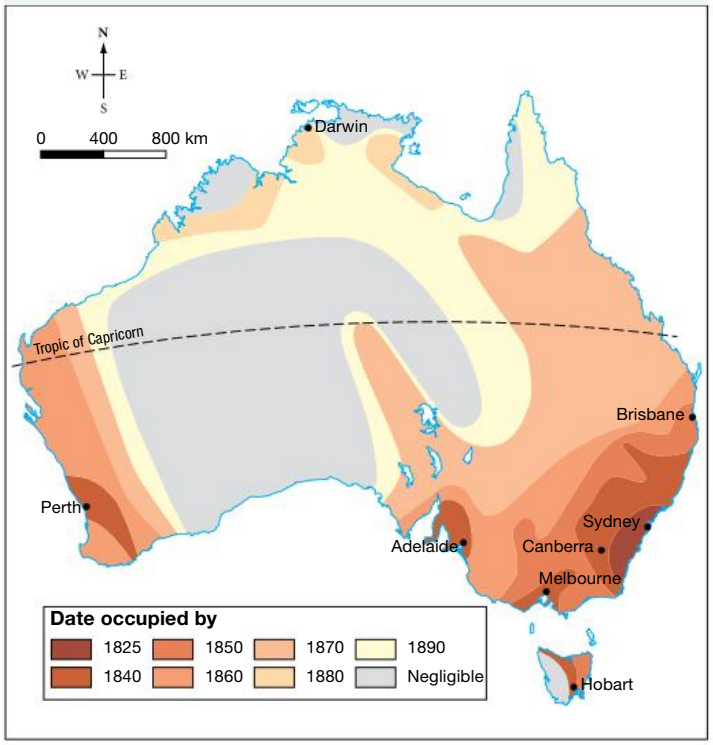
For over 100 years, a small percentage of Australians have been moving away from large cities and coastal regions to live in more remote locations. They are often searching for new farmland or the mineral resources of the inland. Why do some people choose to live in places where their nearest neighbour is 50 kilometres away and it takes six hours to get to the closest supermarket? Why do they find remote places more liveable?

The potential to relocate people inland has never been faster or easier. The interconnection provided by modern transport and the high-speed communication provided by phone and internet should mean that technology has reduced remoteness. However, the general shift of Australia's population for the last 100 years has been towards the major cities and away from the **country**. In 2016, the average age of farmers in Australia was 56 years and getting older (this is up 17 years from 2010). Most children of farmers leave the country and seek education and work opportunities in large cities.

country the place where an Aboriginal and Torres Strait Islander Australian comes from and where their ancestors lived; it includes the living environment and the landscape

Over the past 100 years, governments and private industry have made many attempts to encourage people to occupy the more remote places of Australia. Soldier settlement programs and mining developments are two such schemes.

FIGURE 1 Stages in European land occupation in Australia



Source: © Spatial Vision

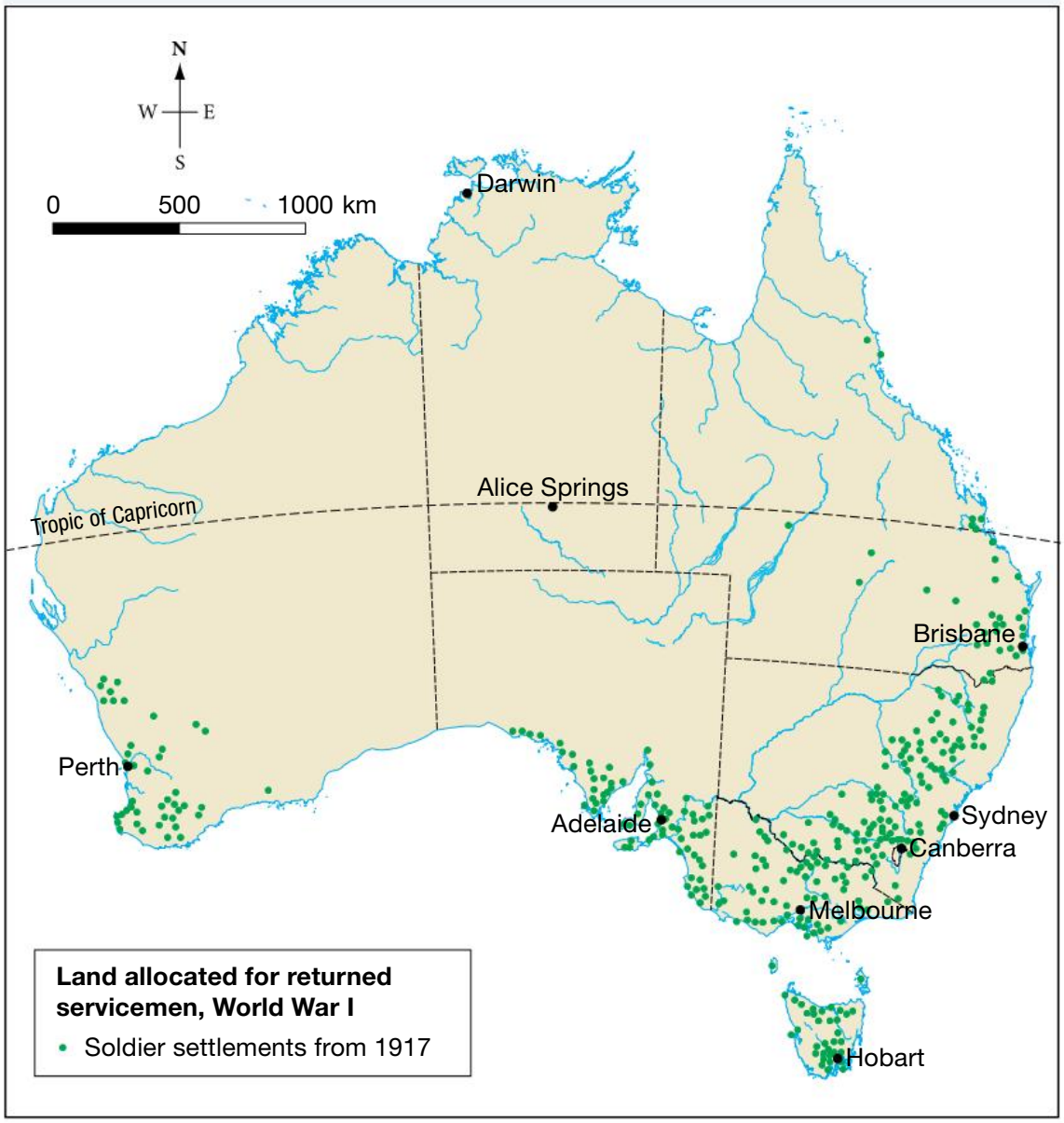
Soldier settlement schemes

After both World War I and World War II, the state and federal governments of Australia began a program of providing land to returned soldiers. This was to give these soldiers work, but it was also seen as a way of attracting people to otherwise sparsely inhabited places.

After World War I, more than 25 000 soldiers were resettled in places such as the Wheatbelt and south-west region in Western Australia, Merbein and Mortlake in Victoria, Griffith and Dorrigo in New South Wales, Murray Bridge and Kangaroo Island in South Australia and the Atherton Tableland in Queensland. The settlers were expected to stay on their land for at least five years and to improve the quality of the land they were farming. Many of these settlements were not successful because the soldiers were not always suited to farming, the farms were often too small, and farmers did not have enough money to invest in stock or equipment.

After World War II, a similar scheme was much more successful, because farms offered were bigger and roads, housing and fences were supplied.

FIGURE 2 Location of soldier settlement areas, 1917



Source: Spatial Vision

Remote mining communities

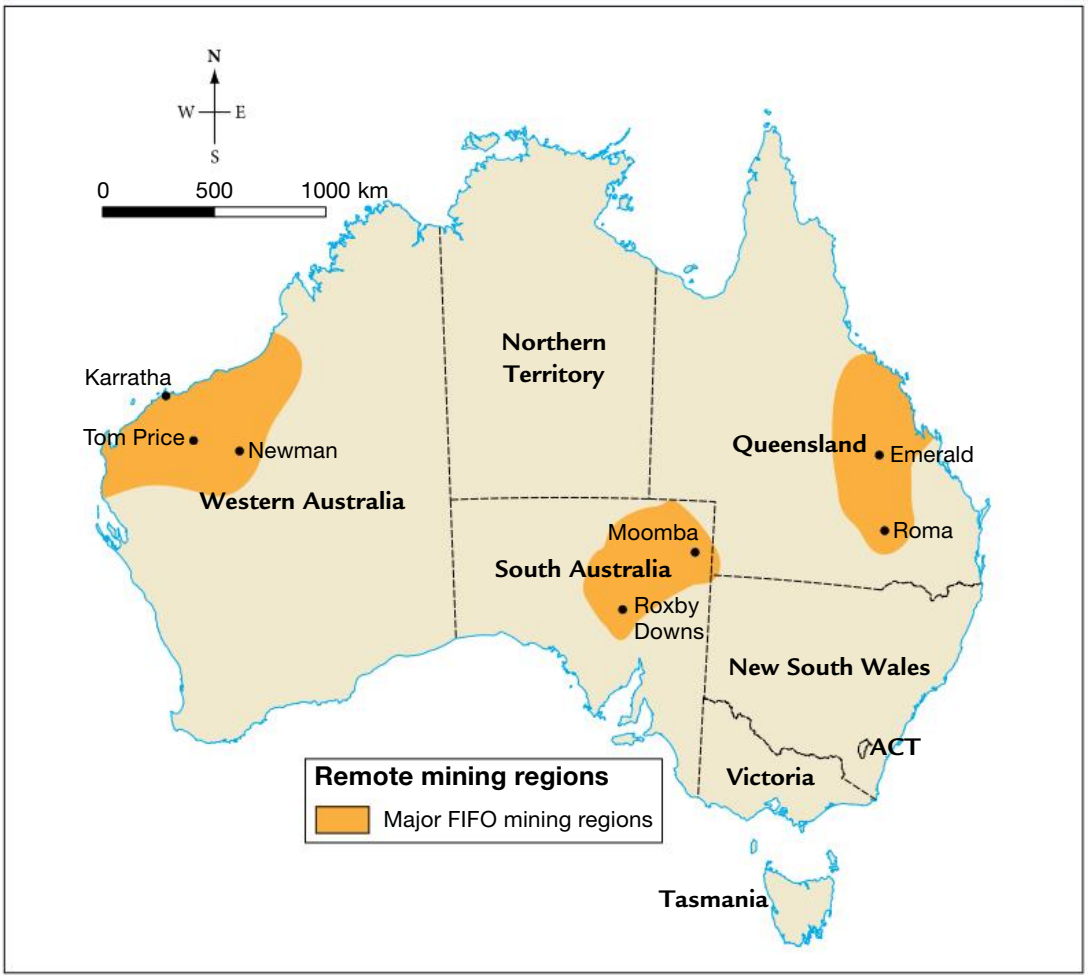
Karratha, Broken Hill and Tom Price are examples of current mining towns that are just as remote as the goldrush towns of Bathurst and Ballarat were in the 1850s and 1860s.

Today it takes only one and a half hours to fly from Perth to Tom Price in Western Australia, yet it can be difficult to attract workers to mines in this region. Wages are high; workers in the mining and construction industry in these locations can earn between $90 000 and $120 000 per year. Fewer jobs are now available because the mining boom has passed, but skilled workers are still attracted to these remote places. Some workers fly in and fly out (FIFO) for their shifts. In 2017, it was estimated that between 75 000 and 90 000 Australians fly in for a shift that may last several weeks, eventually flying home for their days off.

FIGURE 3 Mount Tom Price mine and Tom Price township: note the FIFO workers' huts in the left foreground



FIGURE 4 Location of remote mining regions



Source: Spatial Vision

11.5.2 Rural settlement

Some people live in rural areas because they are involved in primary industries. Others provide services. Griffith is a large town (population 17 000) in the Murrumbidgee Irrigation Area in New South Wales.

FIGURE 5 Farms in the Griffith area support businesses in the town.



The climate in this area is semi-arid (warm, with unreliable rainfall). The land became productive farmland after **irrigation** was provided in 1912. Reliable water and available farmland attracted many people to this area.

Two main types of farm are in this area.

- Type A farms are usually about 220 hectares in size (a hectare being 10 000 square metres). Each year they grow a combination of rice, corn, wheat, vegetables and pasture, and graze beef cattle. Irrigation water is usually used.
- Type B farms are **horticulture** farms, and are usually about 20 hectares in size. They grow a combination of permanent crops that may include grapes, peaches, plums, and citrus fruit such as oranges. Many of these plants last for many years, and irrigation is always needed.

11.5.3 Are rural communities sustainable?

Rural communities are an important part of Australia's social identity, but they are facing significant change and challenges in maintaining their population. Many are experiencing a decline because young people are leaving in search of education and employment. Some rural communities are able to alter this trend, and are surviving against the odds. Others have not fared so well.

Coober Pedy is a vibrant multicultural town in the far north of South Australia, 850 kilometres north of Adelaide and 700 kilometres south of Alice Springs. The town is located in one of the most **arid** environments of Australia.

For thousands of years, Aboriginal peoples walked the stony desert of the Coober Pedy area as part of their rotational occupation of land. The traditional custodians of the land are the Antakirinja people.

The town's name may have come from the name Kupa Piti, meaning 'white man's hole'. Opal was discovered in February 1915 and, after several cycles of boom and bust, the town expanded rapidly during the 1960s. Opal developed into a multi-million dollar industry, and the town is sometimes called the 'Opal Capital of the World'.

Opal continues to be important to Coober Pedy's identity and economy, but the town now draws its income from mining services, tourism and public services. Coober Pedy has a large Aboriginal community, and the town's population has now declined to an estimated 1762 people in the 2016 census.

irrigation water provided to crops and orchards by hoses, channels, sprays or drip systems in order to supplement rainfall

horticulture the growing of garden crops such as fruit, vegetables, herbs and nuts

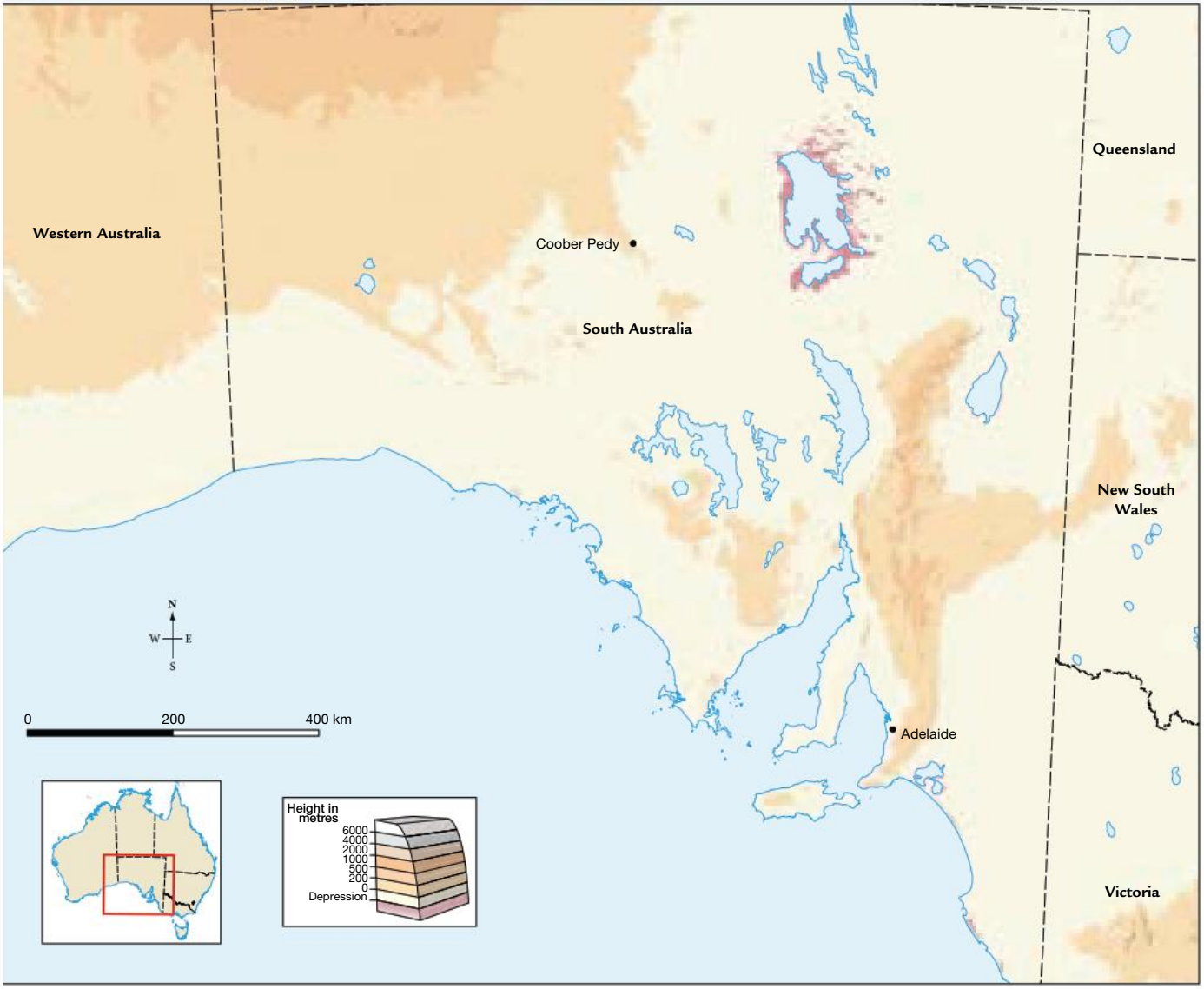
arid lacking moisture; especially having insufficient rainfall to support trees or plants

FIGURE 6 Topographic map extract of Griffith



Source: Spatial Vision

FIGURE 7 Coober Pedy location map



Source: Spatial Vision

What does the future hold for Coober Pedy?

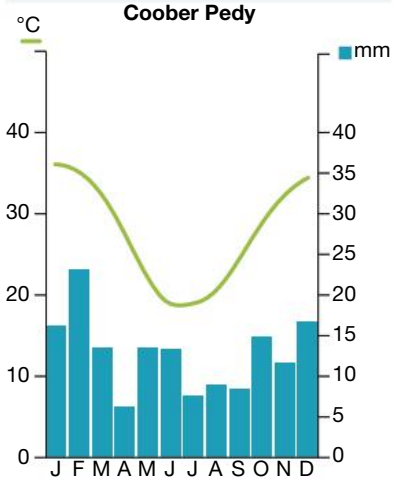
Coober Pedy is widely known for its underground housing (see **FIGURE 10**), an effective and environmentally friendly response to the town's searing summer heat and chilly desert evenings. Recent exploration has revealed significant deposits of iron ore, copper, gold and coal in the area, along with platinum, palladium and rare earths.

Yet in 2014, the Cairn Hill iron ore/copper/gold mine was closed due to low iron ore prices.

The location of the town makes it an ideal centre for mining services, and a base for the delivery of state and federal government services in the region. This presents an opportunity for the town to reverse its steady population decline and again see growth in its economy and population.

Coober Pedy has good hospital and medical services, primary and secondary schooling, a TAFE campus, childcare services and police. However, these services are under some pressure, and there is a

FIGURE 8 Climate graph for Coober Pedy, South Australia



continuing problem with the recruitment and retention of medical professionals. This rural environment is extremely remote, so many of the pastoral properties in the region have been linked to telecommunication services since 1987. The Stuart Highway provides the main transport and service route for the town.

FIGURE 9 Along with other South Australian fields, Coober Pedy produces most of the world's opal. Mullock heaps create Coober Pedy's distinctive landscape.



FIGURE 10 Much of Coober Pedy lives underground to take advantage of the cooler and more stable underground climate.



DISCUSS

Discuss strategies that could be implemented to entice more people to live in Coober Pedy and reverse its population decline. Develop a list of possible strategies that could be implemented.

General capability: Critical and creative thinking

11.5.4 A question of survival

Many rural communities are facing global pressures, such as more overseas competition and fluctuations in the Australian dollar, which can affect the prices of commodities (such as minerals, wool and beef). Climate change and resultant droughts and floods also affect these rural communities. The rural communities that are not experiencing the trend of people moving to urban areas (see **FIGURE 11**) all have one thing in common: they have discovered another source of income. They may have shifted their focus to growing olives or grapes, or perhaps made use of a natural environmental resource such as a nearby national park.

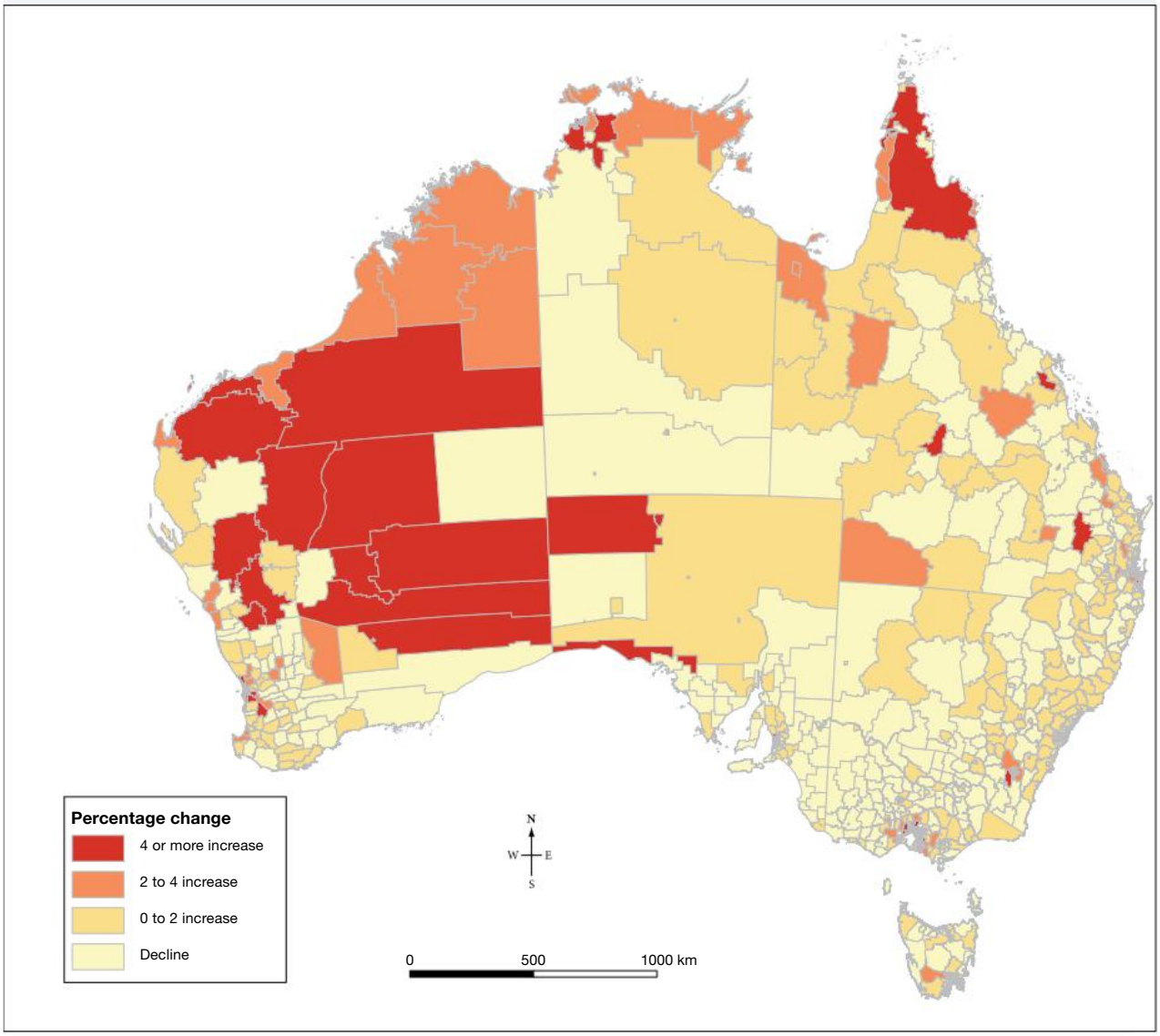
In some cases, a rural community is unable to reinvent itself or tackle the problem effectively. The loss of an industry such as mining may have terrible effects on employment, leaving the resident population with lower incomes and few job prospects.

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigate additional topics > Population > **Population of Australia**

FIGURE 11 Australia's population increase and decrease 2011–2016



Source: Spatial Vision

on Resources

eWorkbook	Topographic map extract — Griffith (doc-17952)
Interactivity	Remote living (int-3090)
Weblink	Soldier settlement
Google Earth	Tom Price township Griffith

11.5 ACTIVITIES

1. Research a local soldier settlement scheme. When was it established? How successful was it? How did this scheme help to populate a remote ***place***? Map its geographic features by using Google Maps. Use the **Soldier settlement** weblink in the Resources tab to help with your research.
   HASS skills: Questioning and researching
   Geography concept: Place
2. How might people be encouraged to move from the coastal fringe to the more remote ***places*** of Australia? What could make you or your family move or relocate? Produce a short film, a snappy slide show or an advertising campaign that highlights the pull factors that might make people ***change*** the ***place*** where they live.
   HASS skills: Evaluating
   Geography concepts: Place, Change
3. Use an internet mapping tool to view a satellite image of Coober Pedy. What clues can you see that tell you about the climate of Coober Pedy? Can you see the mullock heaps, as shown in **FIGURE 9**?
   HASS skills: Analysing
   Geography concepts: Place, Space

11.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 6, 9	Questions 3, 5, 10, 11	Questions 4, 7, 8, 12, 13

Check your understanding

1. What makes a ***place*** remote?
2. How does FIFO reduce remoteness?

For questions 3 to 5, refer to **FIGURE 6** or download the topographic map of Griffith from the Resources tab.

3. a. What is the main use for farmland in the area surrounding Griffith?
   b. Sketch the symbol of this land use.
   c. Is this an example of farming type A or type B?
4. a. Compare the pattern made by irrigation channels and natural waterways, such as Mirrool Creek.
   b. Why is irrigation useful in semi-arid areas? At what time of the year do you think it would be mainly used?
   c. How can you tell from the map that it is not hilly in the areas where there is irrigation farming?
5. Identify two natural factors and two human factors that might have influenced people to choose to live in the Griffith area.
6. Describe the location of Coober Pedy.
7. Why are rural communities under threat?
8. Refer to **FIGURE 11**.
   a. Which regions of Australia are experiencing a decline in population growth?
   b. Describe where population growth is increasing.

Apply your understanding

9. Describe the ***change*** in the speed of settlement of inland Australia that is illustrated by **FIGURE 1**.
10. Study **FIGURE 2**. Use your atlas to compare the location of soldier settlements with a rainfall map of Australia. Were soldier settlements located in ***places*** that receive good rainfall for farming?
11. The soldier settlements of 1917 were established on remote, underused land. One hundred years later, would these places still be considered remote? Refer to **FIGURES 2** and **4** in your answer.

12. Refer to **FIGURE 6**.
    a. Imagine you travelled in a southerly direction for 2.5 kilometres from Griffith city centre. Now select one square kilometre at this location. Count the number of buildings in your chosen square kilometre.
    b. Continue out from the city edge for at least another 7 kilometres. Choose another square kilometre and count the buildings in your chosen area.
    c. Compare your results. In which area would you be closer to your neighbours?
    d. Which one represents intensive farming?
13. Many farms are in the Griffith region, which means many people are in the area to support shops, businesses, schools and cultural activities. However, in some parts of Australia, farms are very big and it is a long way to the nearest neighbours. Anna Creek, a beef cattle property in northern South Australia, for example, is 24 000 square kilometres (2 400 000 hectares). The property is in a semi-arid region of South Australia, where vegetation is sparse and the nearest town for supplies is 170 kilometres away.
    a. Use the scale to calculate the number of square kilometres covered by the map in **FIGURE 6**.
    b. How does this compare to the single farm of Anna Creek?
    c. At which location, Anna Creek or Griffith, could you most likely satisfy each of the following wishes: to play in a sport team every week, to regularly buy clothes, to collect data about lizards, to grow a lush lawn, to safely learn to drive, to have a private airstrip?

For sample responses to every question, go to www.jacplus.com.au.

11.6 'Lifestyle' places

LEARNING INTENTION

By the end of this subtopic, you will be able to:
- define key terms: sea change, tree change and urban renewal
- explain what is meant by the term lifestyle place
- identify who might live in a lifestyle place and offer reasons for these choices.

11.6.1 Lifestyle

In the years after 1990, the healthy state of the growing Australian and world economies meant that more and more people had jobs and were earning higher incomes. This gave them greater choice as to where and how they wanted to live, and the type of life that they wished to lead, because they had the resources (money) to allow them to choose.

For some people, 'lifestyle choice' means escaping the rush of the modern urban society by choosing a **sea change** or **tree change**. For others, it means using their new-found wealth to fulfil their wants and desires, no matter how wild. Others choose to live in inner-city areas, close to shops, cinemas, restaurants and galleries. Because of this last group of people, governments and businesses have been able convert older industrial areas near the city centre into new activity centres where employment, residences, recreation and services can be found in the one location. Such places are in great demand by those who can afford them, particularly young professionals who want to be near the entertainment and facilities of the inner city.

sea change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town

tree change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush, or on the land as a farmer

FIGURE 1 Lifestyle choices for those who have the resources: (a) modern condominiums at Canary Wharf in the centre of London — a lifestyle that has arisen from the old docks — and (b) the historical apartments above the shops in Mala Strana in the centre of Prague, Czech Republic.





FIGURE 2 The contrast between the shantytowns, or favelas, of Rio de Janeiro and their more affluent neighbours is very clear: who has the greater lifestyle choice?



FIGURE 3 Contrasting lives in India. (a) The growing middle classes in modern India often purchase modern apartments, like those in this building in New Delhi. (b) For many poor Indians in urban areas, their home and way of life is on the street. Land for housing is expensive in cities such as New Delhi, and beyond the means of many people.





FIGURE 4 (a) and (b) The perfect sea change? These houses in the canal district next to Venice Beach, California, give their owners perfect peace and tranquility. (c) … or do they? (d) The beachfront houses on Venice Beach (e) Condominiums on the cliffs of the Pacific Ocean, in the well-off suburb of Santa Monica, California (f) Many homeless people in California opt to live on Venice Beach because of the climate.













11.6.2 CASE STUDY: Central Perth Redevelopment Scheme

Development WA (formerly the Metropolitan Redevelopment Authority, now amalgamated with LandCorp) has been working on the Central Perth Redevelopment Scheme since 2011. This is an urban renewal project made up of seven inner-city projects that are at various stages of completion. Its focus is to provide vibrant and appealing places to live, work, study, socialis e and visit. The aim is to create culturally diverse and welcoming places within Perth that help foster a sense of community.

According to Development WA:

> *Historically, Perth has developed as a sprawling suburban city. Cultural forces have played a large role in moulding the development of Perth ; namely, the 'Great Australian Dream' (the quarter acre block) and a love of the car. Unabated sprawl, sole dependence on cars, and high levels of resource consumption are not creating a sustainable future. [Development WA] is working hard to meet these challenges by providing an alternative sustainable urban lifestyle choice for the people of Perth.*

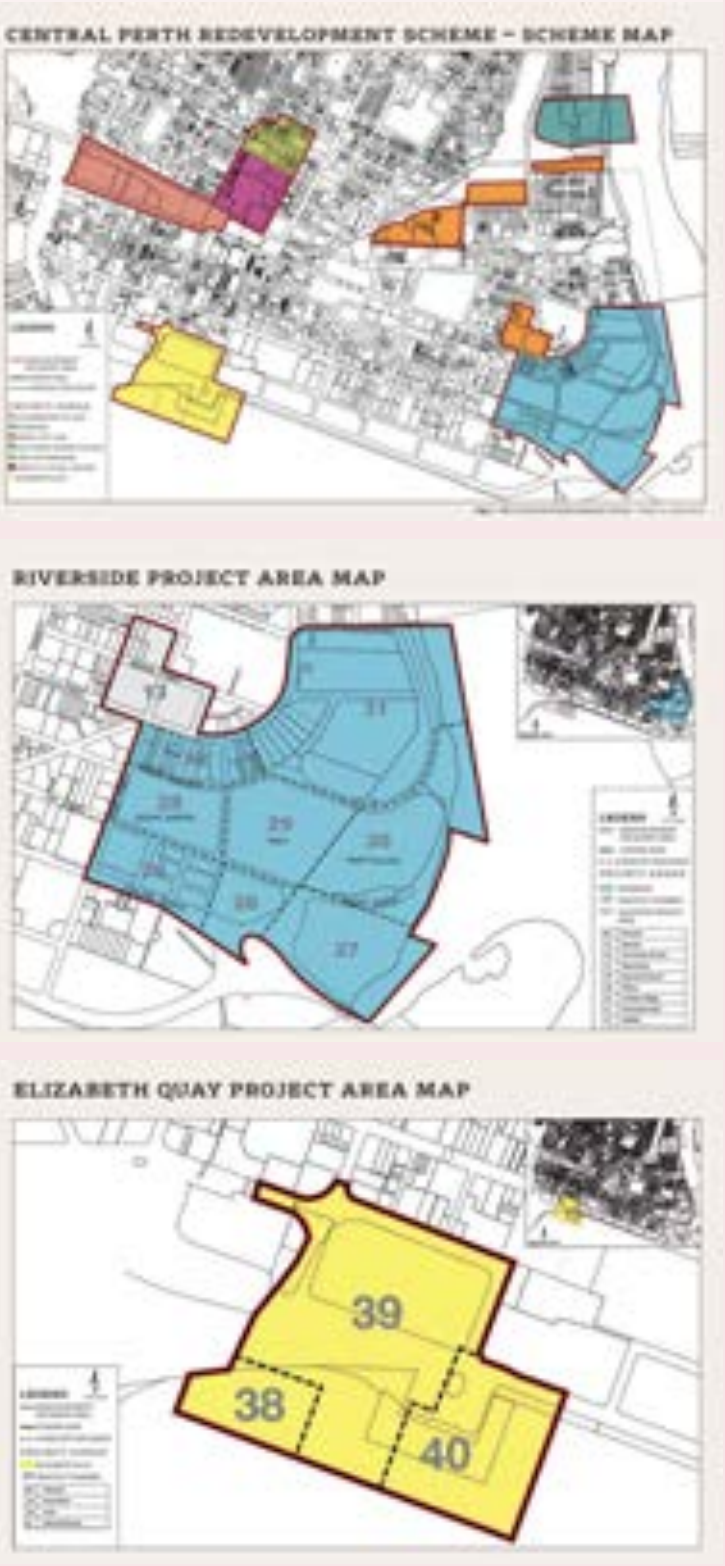
> *Urban renewal is all about creating great places. Somewhere you want to live, work or visit. [Development WA] places a focus on PEOPLE in developing great places. People want the urban environment to be attractive and activated, with a 'sense of place' — having qualities and characteristics that make people feel connected to a location.*

Liveability has been a major consideration in the development of this scheme, with strategies incorporated to ensure the projects appeal to a wide range of people, and meet their varied needs in regards to affordability, leisure interests, access ability and overall wellbeing.

Riverside and Elizabeth Quay are two examples of the inner-city projects that form part of the overall redevelopment scheme. Both projects:

- incorporate sustainable materials and technologies wherever feasible
- include strategies to minimise and reduce waste

FIGURE 5 Project maps for the Central Perth redevelopment scheme



- aim to protect the biodiversity of the areas
- encourage increased use of public transport, walking and cycling
- provide affordable housing in line with the housing diversity policy
- include amenities for work, retail and recreation.

The East Perth Power Station is also in line for development as part of the scheme, with a plan to commemorate the historical and cultural significance of the site. An Aboriginal cultural centre or art gallery has been suggested as one way to celebrate this heritage, and to acknowledge the importance of this location on the Swan River to the original inhabitants. Any redevelopment proposal also looks set to include buildings for residential and commercial use. As of 2019, five developers had been asked to submit their plans for this project.

FIGURE 6 The site of Perth's potential power plant redevelopment



on Resources

Google Earth Canary Wharf, London
Prague, Czech Republic
Rio de Janeiro
East Perth Power Station

Weblinks Development WA:–East Perth Power Station
Map of East Perth Power Station precinct

11.6 ACTIVITIES

1. In groups of four, use a graphics software program to create a concept wheel that explores the meaning of the word 'lifestyle'. Display all the wheels in a class presentation.
   As a class, compare and discuss the lifestyle wheels that you produced. Can you identify a common view of lifestyle representative of the whole class? **HASS skills: Communicating and reflecting**
2. The vision for the East Perth Power Station is to create 'a vibrant waterfront destination with heritage charm'. In groups of three or four, imagine that you are developers who are presenting their 'pitch' for the East Perth Power Station redevelopment to the government. Use Google Earth to zoom in on the East Perth Power Station and explore this development site. Using **Development WA** and **Map of East Perth Power Station precinct** weblinks in the Resources tab create your own response to the project. As a class, compare the responses and vote on the best design. **HASS skills: Questioning and research**

11.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 6	Questions 2, 9, 10	Questions 4, 7, 8

Check your understanding

1. What is meant by the term 'lifestyle choice'?
2. Study **FIGURES 1**, **2**, **3** and **4**. Identify the features in the photographs that indicate that the people living in these ***places*** have the resources to choose to live in such ***environments***.
3. Outline the differences between a sea ***change*** and a tree ***change***?
4. Compare the images in **FIGURES 2** and **3**. What similarities and differences can you see in the 'lifestyle' choices of these residents of Rio de Janeiro and New Delhi? How much real power do they have to decide where they live?
5. How do Development WA describe 'a sense of place'?

Apply your understanding

6. Would you like to live at Riverside or Elizabeth Quay? List what you would consider positive and negative aspects. Ask your family about how they would feel about living there.
7. Study the lifestyle ***environment*** in **FIGURE 4**. From the evidence in the images, identify and list any possible ***changes*** (natural or human) that might affect the liveability of Venice Beach and Santa Monica.
8. Would you like to live in a ***place*** like Venice Beach? Give reasons for your answer.
9. Name two *tree* ***change*** locations that you or your family would like to live in and why.
10. Name two *sea* ***change*** locations that you or your family would like to live in and why.

For sample responses to every question, go to www.jacplus.com.au.

11.7 Growth cities in Australia

LEARNING INTENTION

By the end of this subtopic you will be able to explain the interconnection between push and pull factors and the growth of cities, and identify the places in Australia that are growing at the fastest rate.

11.7.1 The growth suburbs

Which place in Australia is growing the fastest? If a place is liked by lots of people, does that make it the best? What makes a suburb the most popular? Coastal areas have always been a popular place for Australians to relax and holiday. Is the fastest growing place in Australia near the coast?

People might move to a new place for many different reasons. The attractions that entice people to live somewhere are called its pull factors. Pull factors include cheaper housing, better climate, more job opportunities and improved lifestyle. People can also be forced to leave their home and move to a new place. These reasons are known as push factors. Loss of your job or business, poor school or health facilities, and a natural disaster, such as flood or fire, are examples of push factors.

The Australian Bureau of Statistics, which collects information for the Australian Government, says that two of the five fastest growing suburbs are in Melbourne. The other two suburbs are in Canberra and Sydney respectively. Over recent years, Melbourne has been Australia's fastest growing capital city. It is not surprising

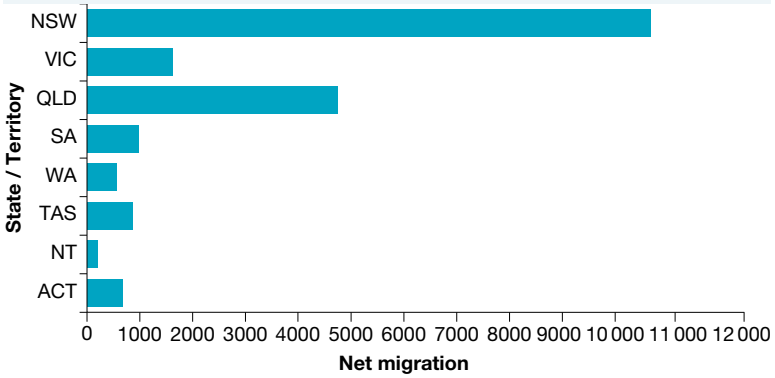
that it often tops tables as the world's most liveable city. In Western Australia, the areas that experienced the highest growth rates across 2018–2019, were the Alkimos–Eglinton region in Perth's outer north-west (which increased by 12 per cent), North Coogee (9.6 per cent) and the Casuarina–Wandi region in Perth's south-west (9.2 per cent).

What makes the Gold Coast such a great place to live?

The Gold Coast's warm weather, beach culture and holiday lifestyle have attracted many new residents.

FIGURE 1 shows that most of the new arrivals came from New South Wales. Many were attracted to the place their family visited on holiday, and they later decided to make it their permanent home. The Gold Coast is now the sixth-largest urban area in Australia. It is a major tourist destination, offering a wide range of work opportunities, community facilities and intercity and interstate transport links by road, rail and air. Many new residents are older Australians who have retired to this place.

FIGURE 1 Net migration to the Gold Coast between 2011 and 2016

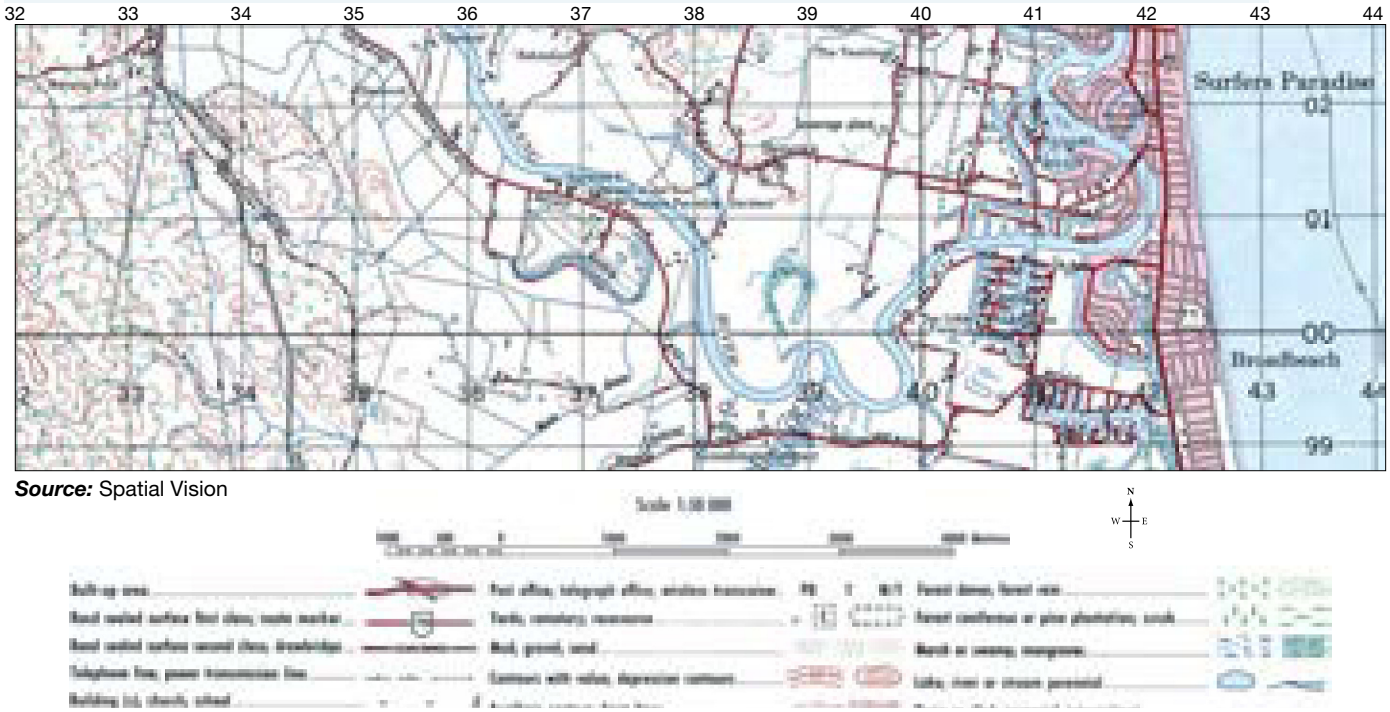


The increased population has placed pressure on the coastal environment, as well as on the existing infrastructure of schools, hospitals, roads and housing.

Use Nearmap or Google Maps to access an **aerial photograph** of the Gold Coast region today. Compare this to **FIGURE 2**, showing the changes that have occurred to the land use here over the past 50 years.

aerial photograph a photograph taken of the ground from an aeroplane or satellite

FIGURE 2 Topographic map extract of the Gold Coast region in 1967



Source: Spatial Vision

Why was the Gold Coast chosen for an AFL expansion team and the 2018 Commonwealth Games?

The main AFL states are Victoria, South Australia, Western Australia and Tasmania along with the Aboriginal communities of the Northern Territory. In March 2009, the Gold Coast Football Club, now named the Gold Coast Suns, was established, supported financially by the Australia Football League (AFL). The club's establishment on the Gold Coast has seen a rise in youth participation in AFL.

The six largest Australian cities now have at least one AFL club: Sydney (two clubs), Melbourne (nine clubs), Brisbane (one club), Perth (two clubs), Adelaide (two clubs) and Gold Coast (one club).

FIGURE 3 The ground developed for the Gold Coast Suns AFL team



The Gold Coast was chosen to host the Commonwealth Games in 2018. Metricon Stadium at Carrara, the home of the Gold Coast Suns, was temporarily transformed and increased in capacity to host the athletics events as well as the opening and closing ceremonies for the Commonwealth Games. Australia has hosted five Commonwealth Games, but this was the first time they were not held in a state capital city.

on Resources

eWorkbook Topographic map extract — Gold Coast region (doc-11400)

11.7 ACTIVITY

1. Compare **FIGURE 2** with the Nearmap or Google Maps aerial image of the same ***place*** today.
   - **a.** Study the map and photo in small groups. Identify the changes to the ***environment***, both built and natural, between the map and the photo.
   - **b.** Collate this information in a table.
   - **c.** Write one sentence to describe the change to the built ***environment***.
   - **d.** Write one sentence to describe the change to the natural or physical ***environment***.
   - **e.** The population of the Gold Coast is predicted to double to 1.2 million people by 2050. Is much ***space*** left in this area of the Gold Coast for housing? Suggest where new suburbs could be established.

   Geography concepts: Place, Environment
2. Using your knowledge of the factors that have made the Gold Coast so liveable and grow so fast, use your atlas to identify another place that could become the 'new' Gold Coast. Identify the pull factors for your location and write a paragraph to sell its advantages to potential residents.

   HASS skills: Evaluating
   Geography concepts: Place, Environment

11.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 5, 8	Questions 3, 7, 9	Questions 6, 10, 11

Check your understanding

1. What features of the Gold Coast have made it grow so quickly?
2. Where have most of the new residents of the Gold Coast come from?
3. What services, facilities and environmental attractions does the Gold Coast offer to people wishing to find a more liveable ***place*** to retire to?
4. What are *push factors*? Give an example.
5. What are *pull factors*? Give an example.
6. What was significant about the Gold Coast hosting the 2018 Commonwealth Games?

Apply your understanding

7. Push and pull factors result in the rise or fall of the population of a place. Use examples to explain the differences in environment, services and facilities between a place with push factors and a place with pull factors.
8. Think about the ***place*** where you live. Make a list of the pull factors that make your town or suburb more liveable. Then list the possible push factors that might make someone leave your suburb or town to live somewhere else.
9. Imagine you are a town planner. Suggest two new features that you can add to your suburb which would make it a more appealing place to live.
10. Many of Australia's towns and cities are growing faster than ever before. What do you believe is behind this growth?
11. Consider the push and pull factors that you've identified and discussed already. Which do you believe is the most important factor people consider when deciding where to live? Justify your response.

For sample responses to every question, go to www.jacplus.com.au.

11.8 Life in a country town

LEARNING INTENTION

By the end of this subtopic you will be able to identify the characteristics of country towns that make them popular places, and explain why country towns are becoming more popular.

11.8.1 The attraction of the country

Country towns come in all shapes and sizes. They can be small centres with a post office and general store or they can be substantial towns. Because most of Australia's population and businesses are concentrated in the capital cities, even people who live in quite large towns outside the capital cities see themselves as living in the country.

Even though most Australians live in large urban centres, the rural or country regions are very important because this is where food is grown, **natural resources** are extracted and ecosystems can flourish. Many Australians travel to country places for holidays and many dream of moving to the country. The attractions of country

natural resources resources (such as landforms, minerals and vegetation) that are provided by nature rather than people

places include cheaper housing, less traffic, a greater sense of safety, and the allure of living within and around natural environments.

CASE STUDY: Country life

How do you feel about living in different places? The following nine statements refer to different opinions about living in rural areas or cities:

- Rural areas are peaceful, have lots of space and clean air.
- Cities provide more choice in activities and places to live.
- I feel isolated in cities.
- Pollution and noise in big cities impair living conditions.
- I don't feel safe in big cities because of crime.
- Rural areas have great communities with people supporting one another.
- The natural environment in many rural areas is very attractive.
- I feel isolated in rural areas.
- Jobs and transport are more accessible in cities.

Complete a diamond ranking diagram by writing the statement you most agree with at the top and the one you most disagree with at the bottom. Then choose the next two top and bottom statements and the final three in the middle of the ranking. Explain your ranking to another person. How might these rankings change if they were completed by people who live in places different from where you live? Can you test this hypothesis?

General capability: Intercultural understanding

11.8.2 Demography

The **demographic** characteristics of country places are influenced by location and activities in the surrounding area.

For example, Narrogin is a country town approximately 190 kilometres south-east of Perth. It is a regional centre in a very productive wheat- and sheep-farming area. The population of the town has remained fairly stable at around 4300 people for the past few years, but it is ageing. Prosperous towns like Narrogin become the focus for significant sporting and cultural organisations; the region's recreation complex is usually located in such towns.

Kellerberrin, located on the Great Eastern Highway, is a smaller town approximately 200 kilometres east of Perth. The town has a population of around 1100 people and is located in wheat-growing country. Kellerberrin has far fewer community facilities than Narrogin.

demographic describes statistical characteristics of a population

TABLE 1 Population growth of selected Western Australian urban centres

YEAR	PERTH		NARROGIN		KELLERBERRING	
	Population	% growth	Population	% growth	Population	% growth
2011	1 833 560		4360		1210	
2016	2 037 380	+2.13%	4280	–0.65%	1080	–2.5%
2021	2 262 400	+2.12%	4270	–0.42%	990	–1.99%
2026	2 494 360	+2.07%	4010	–0.76%	880	–2.10%

A sense of belonging

People who live in country centres have a strong sense of identity, connectedness and belonging. Towns like Kellerberrin and Narrogin feature a range of sporting clubs including Australian Rules football, hockey, netball, equestrian, athletics and cricket. These clubs cater for all age groups, with a strong focus on junior sport. Cultural activities like art exhibitions and theatre groups tend to be found in the larger towns. Declining populations have affected the ability of smaller towns to field teams in some major sports, and the range of cultural activities is also shrinking. A recent service now common in country towns of all sizes, however, is the Community Men's Shed. Here, retired men meet to undertake practical projects with a community focus.

FIGURE 1 Lawn bowls is a popular sports in small towns.



DISCUSS

As a class or group, discuss the meaning of the term 'country life'. Create a list of words that describe your agreed view. **HASS skills: Communicating and reflecting**

FIGURE 2 What growing up in a country town might mean



Fewer restrictions on your time

A greater understanding of the natural world (e.g. plants, animals, weather) and appreciation of the importance of the quality of the environment

A sense of safety (e.g. cars and houses not always locked)

A small group of people your age

Little public transport; reliance on car travel

A volunteer fire brigade

Clean air

An understanding of Aboriginal traditions

Greater likelihood of seeing native animals

A wider range of pets

Travelling to school by bus

Leaving home for tertiary study

Opportunities for physical activity

Uncrowded roads

Plenty of space to move about in

A limited range of specialists, shops and employment

Quiet walking and riding trails and fishing spots

Knowing many people in the community and many people in the community knowing you

Community reliance on surrounding resources (e.g. farming, mining, fishing or the environment that attracts tourists)

Fewer films and less live music

Resources

Interactivity Country town services (int-3092)

Google Earth Kellerberrin

11.8 ACTIVITY

1 a. Create a list of Australian country towns that you have heard of.
   b. Collaborate with others to map the location of each of these towns.
   c. For each town, record its latitude, distance and direction from the state capital city.
   d. Complete the following generalisation about the known towns: 'Most of the towns we know are located _____.'

Geography concept: Place

2 Aboriginal and Torres Strait Islander Australians have always had a sense of belonging to a ***place***, and elements of the natural ***environment*** are honoured on their flags. What aspects of the natural ***environment*** are represented on the Aboriginal and Torres Strait Islander flags?

Geography concepts: Place, Environment

11.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 4, 7, 8	Questions 5, 9, 10

Check your understanding

1. In which direction would you travel from Narrogin to reach Perth?
2. In which direction would you travel from Kellerberrin to get to Perth?
3. Provide three reasons country ***places*** are important.
4. Classify each of the characteristics in **FIGURE 2** as economic, social or ***environmental***.
5. Identify the characteristics in **FIGURE 2** that are attractive to you. Are most of these characteristics social, economic or ***environmental***?

Apply your understanding

6. What are three opportunities in your community for young people to feel socially connected?
7. Study the data in **TABLE 1**.
   a. The population of Perth is predicted to _____ between 2011 and 2026.
   b. How many people will have left Narrogin between 2011 and 2026? How many will have left Kellerberrin?
   c. Which town will be affected most by falling population? Explain why.
   d. Suggest reasons different groups such as teenagers, families, and elderly people might leave towns such as Narrogin and Kellerberrin.
8. In Australia, the trend is for people to move away from the country to the major cities. Suggest three reasons you think this happens.
9. Country towns are critical to the rest of Australia. Explain what role country towns can play on a national scale.
10. How might governments use demographic information from country towns?

For sample responses to every question, go to www.jacplus.com.au.

11.9 Seasonal places

LEARNING INTENTION

By the end of this subtopic you will be able to:

- explain what is meant by the term seasonal places
- identify seasonal places
- identify the characteristics of seasonal places.

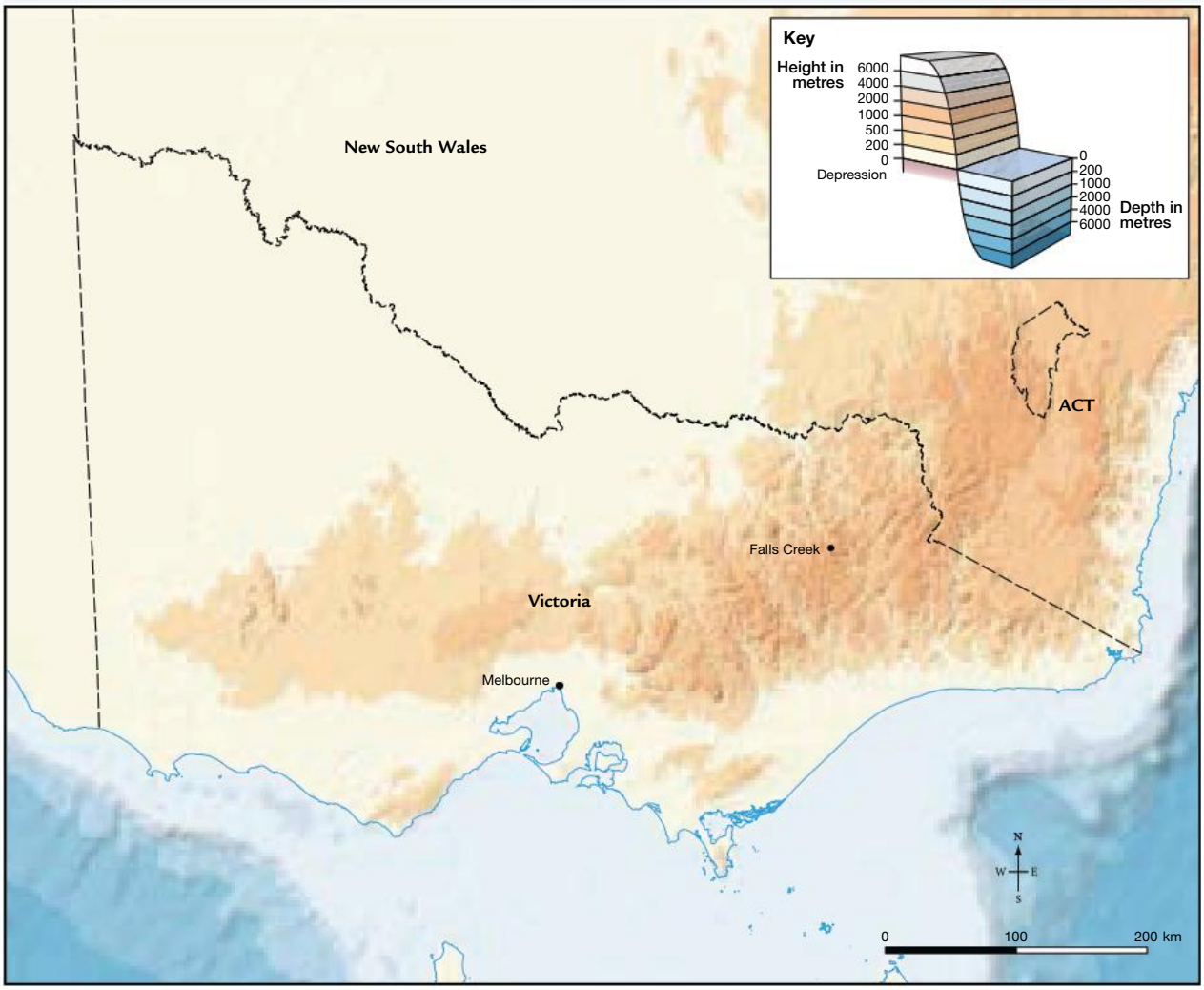
11.9.1 Falls Creek — a seasonal village

Many aspects of the way people live are influenced by the seasons. Our recreational activities, transport, housing features and clothing often change throughout the year. In some towns, changes occur in business activity and population as seasons change.

Falls Creek is located in north-east Victoria about 20 kilometres south of Victoria's highest mountain, Mt Bogong. It is in the Great Dividing Range, which extends from northern Queensland to western Victoria. As a ski resort, Falls Creek is very busy in winter and quiet in the summer. The village sits at an **elevation** of 1765 metres above sea level.

elevation height of a place above sea level

FIGURE 1 Location of Falls Creek, a ski resort in Victoria



Source: Spatial Vision

11.9.2 Falls Creek climate

Falls Creek is much cooler and wetter than places at a similar latitude. It holds several rainfall and temperature records in Victoria.

- Lowest temperature: –11 °C (3 July 1970)
- Highest monthly rainfall: 989.6 mm (July 1964)
- Highest annual rainfall: 3738.5 mm (1956)

The elevation of Falls Creek means the air is always cooler, which increases the chances of rain or snow. The southern aspect of the ski slopes means that the snow remains on the slopes for longer.

Snow is the major attraction at Falls Creek, and many snow-making machines are now used to improve snow cover and extend the ski season. Nearby Rocky Valley Lake provides plenty of water to feed into the high-pressure snow gun, but the temperature must also be very low (around –2 °C) for the snow machine to work.

FIGURE 2 Climate graph for Falls Creek (latitide 36.87°S)

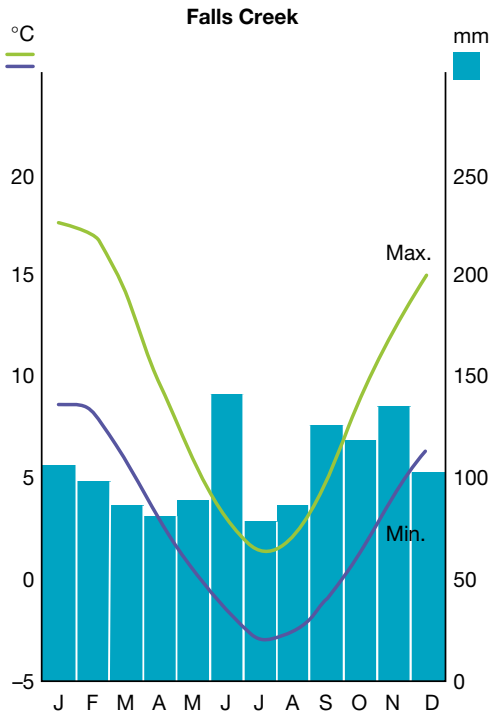


FIGURE 3 Elevation and temperature: the higher a place is above sea level, the less heat it receives.

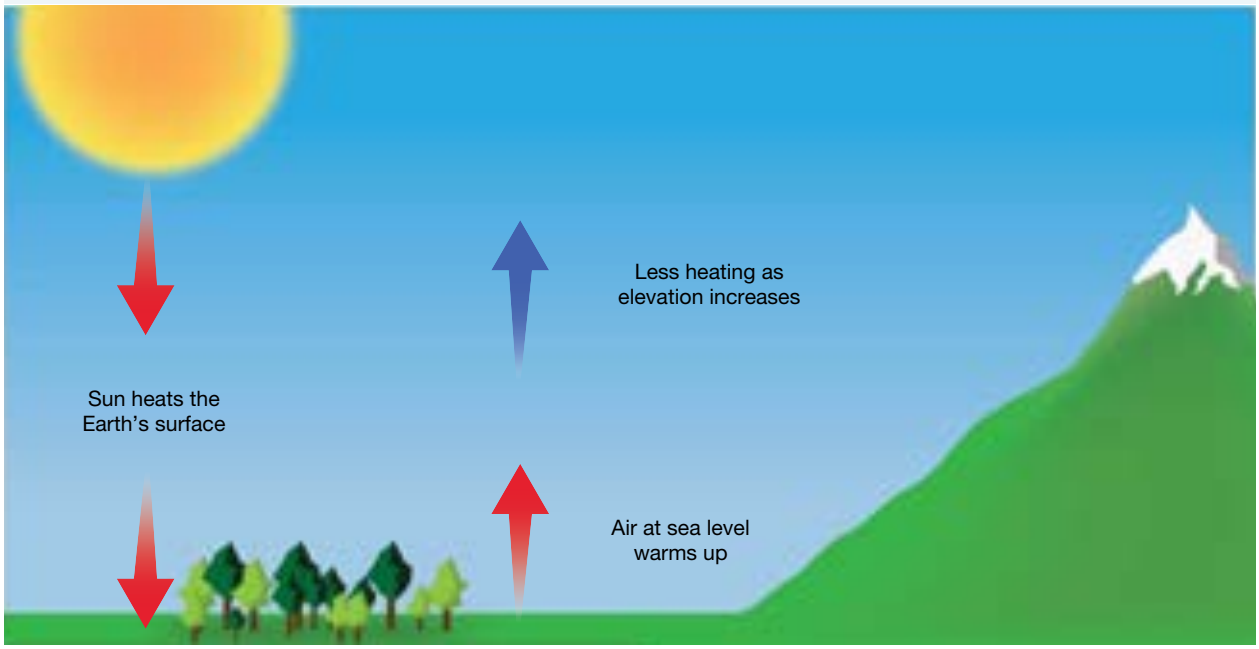
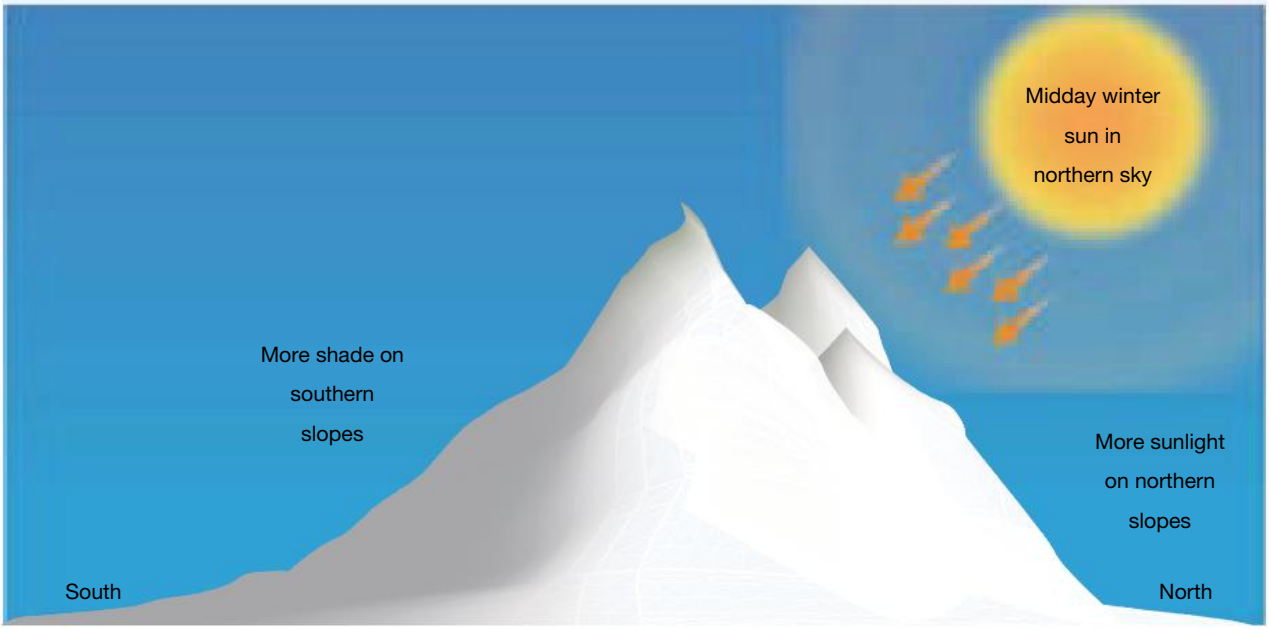


FIGURE 4 The influence of aspect on snow cover. The slope that does not face the sun is always cooler.



11.9.3 Seasonal activities

FIGURE 5 Seasonal activities include skiing and bushwalking.



TABLE 1 Differences between summer and winter at Falls Creek

Data	Summer	Winter
Population*	225 workers plus visitors	2500 workers plus visitors
Visitor numbers#	35 000	130 000
Examples of type of work	Maintenance, building, road construction, revegetation and outdoor recreation	Maintenance, hospitality, snow activities, ski patrol and child minding
School enrolment*	10	40
Examples of activities	Cycling, bushwalking, fishing, altitude sports training, horse riding and tennis	Downhill skiing, cross-country skiing, snowboarding, snowshoeing, snow tubing, night skiing and snow bike riding
Special activities	Dragon boat races and alpine cycling competitions	Ice plunge, sled-dog races and skiing

Notes: *Numbers are approximate. #Many visitors stay for several days.

Resources

Interactivity Alpine regions — open or closed? (int-3093)

11.9 ACTIVITIES

1. In a group, brainstorm then create a list of towns that are busy in one season of the year. Choose one from the list and describe its location in at least three ways. In which season is the town busy? What is the attraction that draws people to the town?
   HASS skills: Analysing
   Geography concept: Place
2. Present the differences between summer and winter at Falls Creek in a visual format. Consider recreational activities, transport options, housing needs, clothing requirements and access to goods and services.
   HASS skills: Communicating and reflecting

11.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 7	Questions 5, 6, 8, 9	Questions 4, 10, 11

Check your understanding

1. In which state of Australia is Falls Creek?
2. What is the special attraction that draws people to Falls Creek?
3. According to **TABLE 1**, how many more people visit Falls Creek in winter than in summer?
4. Using the description of the location of Falls Creek as a guide, describe the location of your town or city. Refer to your state, directions, distance and at least one other feature.
5. Refer to the climate graph (**FIGURE 2**) for Falls Creek. In which months would you expect it to snow?
6. Explain why July would be a suitable month to operate the snow-making machines. Which other months could also be suitable?

Apply your understanding

7. In which season is each of the following jobs most likely to be available at Falls Creek?
   a. Child minder
   b. Mechanic
   c. Fitness trainer
   d. Tennis coach
   e. Ski instructor
   f. Bicycle mechanic
   g. Chef
   h. Cleaner
   i. Stable hand
   j. Retail assistant
8. How do the seasons influence the way of life in your town? Identify three aspects that ***change*** according to the season.

9. Over the past 50 years, the general trend has been a slight decrease in snowfall. If this trend continues, what impact will it have on the village of Falls Creek? Consider the impact on people (social impact), on business (economic impact) and on the natural surroundings (***environmental*** impact).
10. Falls Creek has internet and mobile phone coverage. What influence do you think this would have on access to goods and services?
11. What kind of new activities would you introduce to Falls Creek to boost tourism in the summer months?

For sample responses to every question, go to www.jacplus.com.au.

11.10 Places of change

LEARNING INTENTION

By the end of this subtopic you will be able to:
- explain why places change over time
- describe the changes that might occur in a place over time
- predict how a place might look in the future.

11.10.1 On the move

A town will change over time if the factors influencing people's decision making about living there also change. Change may be due to government plans, the perception of the natural environment, the economic activities that are carried out in the place and access to resources and other places.

FIGURE 1 A Tallangatta house being moved to the new town site



The original buildings in Tallangatta, in north-east Victoria, about 40 kilometres from Albury and Wodonga, can be seen only when the water level in Lake Hume is very low. The current town was moved from its original location in 1956. Houses were lifted onto trucks (with parts of the buildings often falling off during the journey) and moved about eight kilometres (see **FIGURE 1**). The original site, in a valley beside the Mitta Mitta River, was flooded when the size of Lake Hume was increased.

11.10.2 Town closed

In 1917, it was decided that a town was needed on the dry and hot Nullarbor Plain to provide services for the Indian Pacific railway (see **FIGURE 2**). With a population of 300, the town of Cook was once big enough to have a school, hospital, shop and accommodation for train drivers. When the railways were privatised in 1997, the town was closed. Cook currently has no known residents and it has effectively become a ghost town.

FIGURE 2 The location of Cook



Source: Spatial Vision

11.10.3 Access to resources

Resource depletion

Silverton, 25 kilometres north-west of Broken Hill, was once home to 3000 people who mainly worked in mining. Most people left, often taking their homes with them, when richer mines opened at Broken Hill. According to the 2016 census, the population of Silverton is 50, although the town is now visited by many tourists.

FIGURE 3 Silverton wind farm



Silverton has reinvented itself as a unique location for the filming of TV and movie productions. The town and its semi-arid surroundings have been used as the setting in many films, such as *Mad Max 2*, *Dirty Deeds*, *Strangerland*, *Mission Impossible 2* and *The Adventures of Priscilla, Queen of the Desert*. In the coming years, we may see another change in Silverton's population with the construction of the Silverton Wind Farm. After years of delays, construction of the renewable energy project commenced in 2017, with the first generation of electricity occurring in 2018. All 58 wind turbines have now been constructed, making it the seventh largest wind farm in Australia.

FIGURE 4 Silverton has reinvented itself as a tourist destination.



Resource discovery

Karratha is a hot, dry place 1600 kilometres north of Perth. It was founded in the 1960s for workers on the growing iron ore mines in the Pilbara region. In the 1980s, the development of the natural gas industry encouraged further growth. The town currently supports about 22 000 people and is expected to support up to 40 000 by 2030.

FIGURE 5 The planned town of Karratha



DISCUSS

Discuss the following statement with a partner: *'Environmental factors are the main reason towns change'.* Compose a clear paragraph to express your opinion. The first sentence will clearly state your view. The rest of the paragraph should contain at least two pieces of evidence to support your view.

HASS skills: Communicating and reflecting

11.10.4 Sea change

Margaret River, 270 kilometres south of Perth, has become popular because it offers a rural lifestyle and is accessible to the capital city. People who move from the city to the coast are said to have made a sea change. Those who move to an inland location are said to have made a tree change.

FIGURE 6 The Bussell Highway — the main street in Margaret River — in 1991



Change over time

Many people now recognise that the Margaret River region has many attractions, such as beaches, waterways, caves, wineries, national parks and mild weather that suits farming and tourism.

However, what people have thought about the region has changed over time. Before 1830, the Noongar people, including the Wardandi Nation, valued the natural characteristics (such as flora, fauna, weather, sea and rivers) and made few changes to the natural environment. In 1830, white settlers arrived to cut down trees and sell timber. In 1950, they began using the cleared areas for dairy cattle and beef cattle.

Tourists also began to value and visit the region's natural features, such as beaches, rivers and caves. By 1970, people were moving from the city to enjoy the quiet country atmosphere and, by 1990, the area had become popular as a sea change destination.

TABLE 1 Origin of people who moved to Margaret River, 2006–2011

Previous place of residence	Number
New South Wales	83
Victoria	35
Queensland	44
South Australia	30
Western Australia	1004
Tasmania	13
Northern Territory	20
Overseas	365

11.10.5 Tourism

Port Douglas, 60 kilometres north of Cairns, was a busy port in the 1870s and had a population of more than 10 000. The mining that had attracted people to this hot, wet area did not last. By the 1960s, the population was only 100. In the 1980s, road and air access to the town improved. People were prepared to travel long distances from within Australia and from overseas to enjoy the warm weather, stunning beaches and the World Heritage areas of the nearby Great Barrier Reef and Daintree rainforest. The permanent population is now about 3500. During the peak holiday season (May to November) the population of Port Douglas can increase to more than double its regular size.

FIGURE 7 Port Douglas in 1971, before the tourist boom



FIGURE 8 Port Douglas in 2019



DISCUSS

Many places change over time. Study the two photographs of Port Douglas in 1971 and in 2019. Discuss how the following people might respond to change that has taken place here:

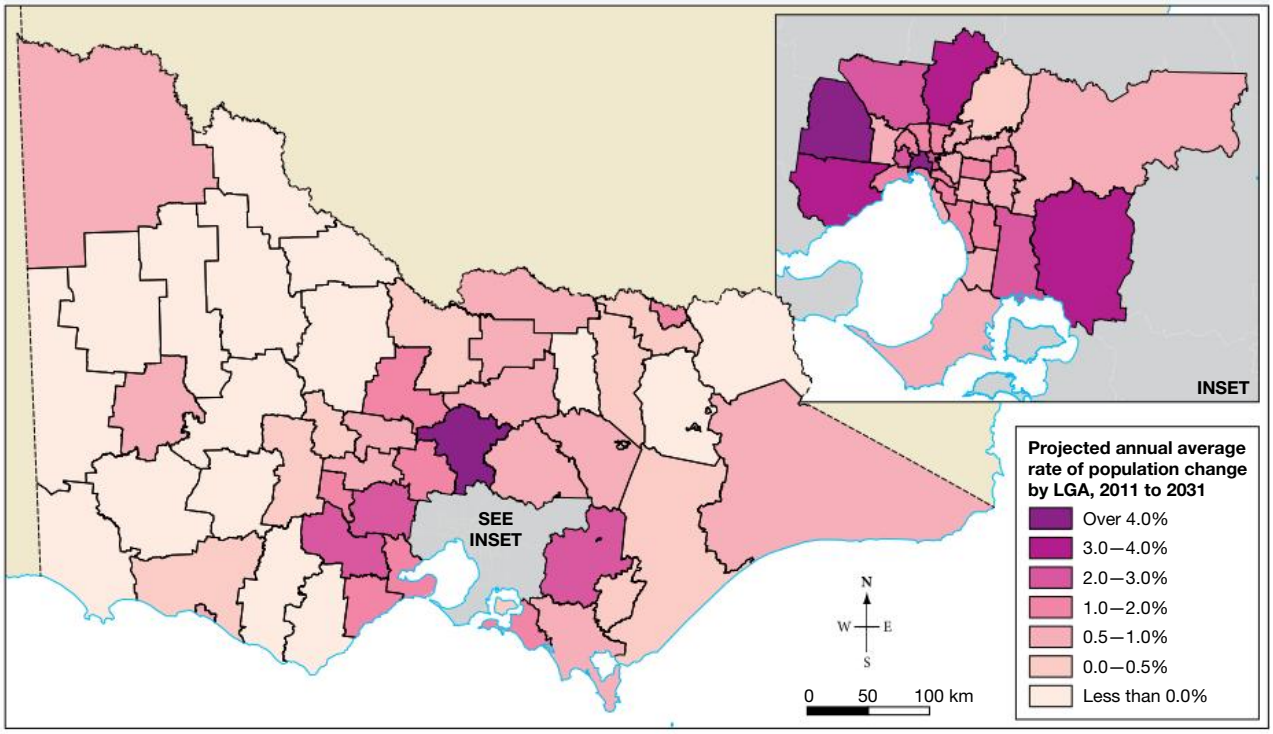
- A resident whose family has lived in Port Douglas for three generations
- A shop owner
- A travel agent
- A tourism company owner
- A fisherman
- A painter/photographer

General capability: Personal and social capability

11.10.6 Change in the future

Even in a small state like Victoria, predicted population growth varies across the state. Towns relying on big farms are predicted to lose population. The use of machinery and the closure of processing plants have reduced employment opportunities. Towns in regions very close to Melbourne are predicted to grow. People who live in these places still have access to jobs and entertainment in Melbourne even though they live in regional Victoria. More people creates a need for more businesses.

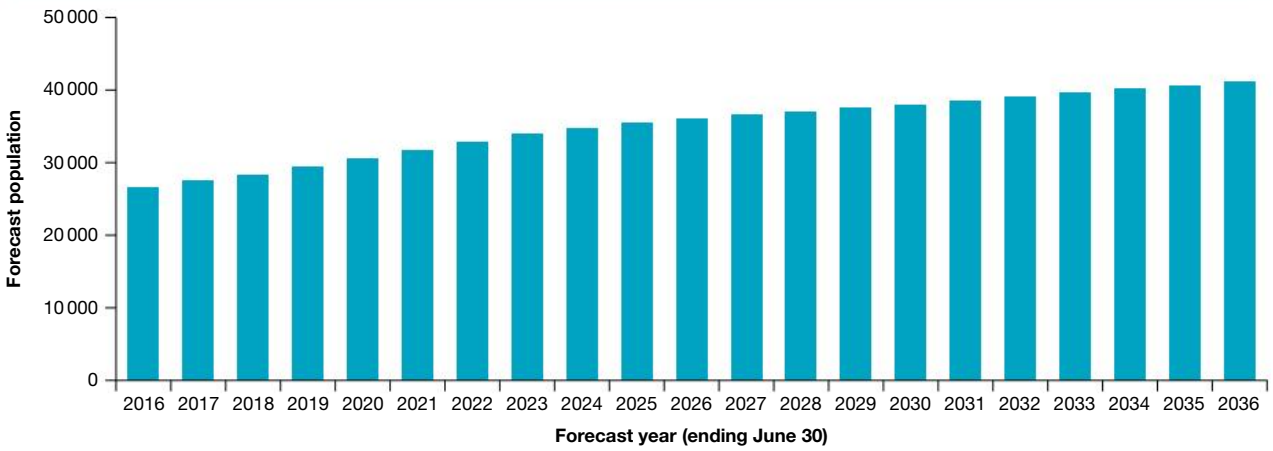
FIGURE 9 Projected population change for regional Victoria, 2011–2031



Source: The Department of Environment, Land, Water and Planning.

The population of Perth is predicted to grow by over 34 per cent between 2020 and 2036. This is likely to place pressure on urban infrastructure such as roads and CBD transport options, but also provides opportunities for inner-city services such as cafés and restaurants.

FIGURE 10 Forecast population growth for Perth



Resources

Google Earth Tallangatta
Silverton
Karratha
Margaret River

11.10 ACTIVITIES

1. Find maps of Victoria that provide information about landform and climate. Refer to your maps and **FIGURE 9** to complete the following.
   a. Think about landform and population ***change***. Are most areas of declining population in ***places*** that are not mountainous? Are most areas of increasing population on the coast side of the mountains?
   b. Think about climate and population ***change***. Are most of the highest growth population areas in ***places*** where rainfall is over 600 millimetres per year? Are most areas of declining population in ***places*** where the rainfall is lower?
   c. What might be reasons for your findings in (a) and (b)?

   HASS skills: Analysing
   Geography concept: Place
2. a. Draw a sketch map of natural features at Port Douglas in 1971. Show the ocean, promontory, Dickson Inlet, flat land and hills. Add the settlement features (such as housing, roads and marina).
   b. Using another colour or an overlay, show the settlement features for 2019.
   c. Annotate your map to describe the ***changes*** that have occurred and the ***changes*** you think will happen in the next ten years.

   HASS skills: Communicating and reflecting
   Geography concept: Change
3. Look at **FIGURE 6**. What do you think the main street in Margaret River looks like today? Predict what you would expect to see in terms of the road, footpaths, plants, types of shops, types of buildings and open spaces. Use Google Street View and check your hypothesis. Do you think Street View visited at a busy holiday time?

   HASS skills: Evaluating

11.10 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 4, 7	Questions 5, 8, 11	Questions 6, 9, 10

Check your understanding

1. Which water storage drowned old Tallangatta? How far was the town moved?
2. In which region of Western Australia is Karratha?
3. What now draws people to Silverton?
4. What is the population of Port Douglas in the peak holiday season?
5. Study **FIGURE 2**.
   a. How many states does the Indian Pacific railway travel through?
   b. Why do you think the railway is called the Indian Pacific?
   c. In which general direction does the train travel from Sydney to Perth?
6. Read the description of the ***change*** over time for Margaret River. Create a timeline to show the ***changing*** view of Margaret River.

Apply your understanding

7. Refer to **TABLE 1**. What were the three main ***places*** new residents came from to settle in Margaret River between 2006 and 2011?
8. Suggest why May to November is the peak holiday season in Port Douglas.
9. Refer to the map in **FIGURE 9**.
   a. Describe the location of the areas predicted to grow by more than 3 per cent. For example, are they inland or by the coast? Are they in the north, south, east or west of the state? Are they clustered together or spread out? Are they close to Melbourne?
   b. What will happen to towns in regional Victoria?
   c. Estimate the proportion of Victoria that is predicted to increase its population and the proportion that is predicted to decrease its population.
10. Factors that cause ***change*** can be categorised as social (related to people), economic (related to money) or ***environmental*** (related to setting or surroundings). Consider all the reasons for ***change*** provided in this subtopic and list each in its correct category.
11. What would be the advantages and challenges of living in a town such as Port Douglas, which relies on tourism? Use speech bubbles like the ones provided.



For sample responses to every question, go to www.jacplus.com.au.

11.11 Isolated settlements

LEARNING INTENTION

By the end of this subtopic you will be able to explain why a settlement might be isolated, and identify the challenges faced by people living in isolated communities.

11.11.1 Way up north

Life in some towns is strongly influenced by geography. It is now possible to live in extreme conditions and be socially connected while enjoying access to a wide range of goods, services and community activities.

Dawson, with a population of 1400, is the second largest city in the Canadian state of Yukon. At the latitude of 64°N, it is only about 360 kilometres from the Arctic Circle.

Dawson is a long way from neighbouring towns. It is 770 kilometres from the next town to its north (Inuvik) and 810 kilometres to Anchorage, the largest town in Alaska.

FIGURE 1 Location of Dawson, Yukon, Canada



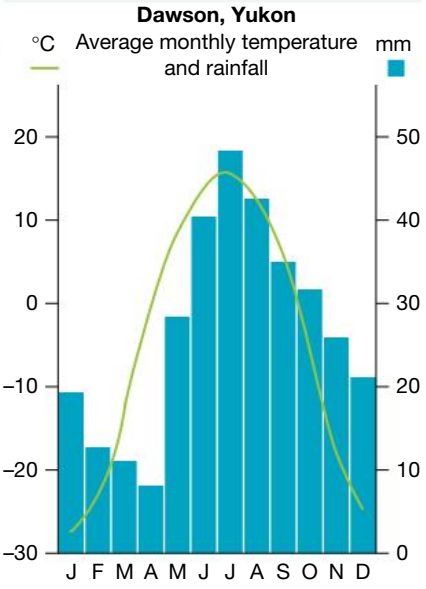
Source: Spatial Vision

11.11.2 Climate

TABLE 1 Average hours of sunlight at Dawson, Yukon, and Longreach, Queensland

Month	Dawson, latitude 64°N	Longreach, latitude 23°S
January	4	13
February	6.9	13
March	10.2	12.5
April	13.7	12
May	17.1	11
June	20.6	11
July	21.4	11
August	18.1	11
September	14.6	12
October	11.2	12.5
November	7.8	13
December	4.7	13.5

FIGURE 2 Climate graph for Dawson



11.11.3 Settlement

The site of Dawson, on the junction of the Yukon and Klondike rivers, was always an important hunting and meeting site for indigenous peoples, who still live in the area. The harsh climate deterred white colonisers until gold was discovered in 1896. The population grew by thousands every week, quickly reaching 30 000.

However, most people did not stay long. Living conditions were very poor: people lived in tents and huts; they had no power, water or sewerage; and crops would not grow in the low temperatures. The **permafrost** also made it difficult to dig the foundations for buildings. Furthermore, it turned out that the gold was not accessible: it was in gravel that was frozen for most of the year.

Today

Today the town has infrastructure, and housing is solid and heated. The community of Dawson operates year round, with the climate having a strong influence on activities. A road to Alaska has encouraged tourism, and new mining techniques have increased goldmining.

permafrost permanently frozen ground not far below the surface of the soil

The weather conditions mean that some jobs, such as road-making and building, cannot be done in the winter. Some of those employed in these industries move south in the winter, either for work or holidays.

The town of Dawson is no longer completely isolated in winter. Internet and phone connections allow communication; snow-ploughing and spreading of sand keep the roads open most of the time; and planes fly in and out all year.

The weather influences many aspects of social life in Dawson. The 'Thaw di Gras' carnival celebrates the end of winter, and music festivals and a kayak marathon take place in summer. Winter is the time of snowmobile treks, skiing and the famous Yukon Quest dog-sled race from Whitehorse (Yukon) to Fairbanks (Alaska). During the race, dogs and mushers (sled drivers) need protection from the cold, but if the weather warms to 4 °C, it becomes too hot for the dogs to travel during the day.

FIGURE 3 Competitors in the dog-sled race the Yukon Quest.



FIGURE 4 It is so cold in winter that the Yukon River freezes over, and the ice is thick enough to support fully loaded trucks.



FIGURE 5 Dawson City, Yukon, Canada



on Resources

Weblink Bureau of Meteorology

11.11 ACTIVITIES

1 a. Construct a multiple bar or column graph to show the average number of hours of sunlight at Dawson.
b. On your graph, use colour, shading or symbols to show summer and winter.
c. Imagine you live in Dawson, where the school year is from August to June. In which months would you arrive or leave in the dark?
HASS skills: Questioning and researching
Geography concept: Place

2 Use the **Bureau of Meteorology** weblink in the Resources tab to find the average monthly temperatures for your location. Present the statistics for the minimum and maximum temperature in a graph. Compare your graph to the one provided for Dawson. Write three clear statements comparing the average monthly temperatures of Dawson and your location. Write three clear statements comparing the monthly rainfall for Dawson and your location.
HASS skills: Questioning and researching

11.11 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Question
1, 4, 5	3, 6, 7	2, 8, 9

Check your understanding

1. Refer to the map in **FIGURE 1**. How far is Dawson from Whitehorse, the state capital?
   a. What influenced indigenous people to live in the Dawson area?
   b. Why did people move to Dawson in 1897?
   c. What influences people to live in Dawson nowadays?
2. List at least four ways in which the natural ***environment*** has influenced the settlement of this area.
3. What factors have improved liveability in Dawson?
4. Define the term 'infrastructure' and list three examples.

Apply your understanding

5. Activities in Dawson include volleyball, curling, film festivals, craft, dances, motorcycle riding, gold panning, softball, writing workshops and outhouse races. Which of these would occur only in summer? Which would occur only in winter? Which could occur all year?
6. Which months of the year would be most popular for tourists visiting Dawson City? Provide at least two reasons to support your answer.
7. How do you think the climate would make school life in Dawson different from your life?
8. What do you think happened to the early buildings when the heating from houses warmed the soil and melted the permafrost?
9. How have people tried to overcome the disadvantages of this location?

For sample responses to every question, go to www.jacplus.com.au.

11.12 A nomadic way of life

LEARNING INTENTION

By the end of this subtopic you will be able to explain why people might choose a nomadic lifestyle, and describe the challenges faced by people living a nomadic lifestyle.

11.12.1 Traditional Tuareg way of life

Most people live in the one place, but from time to time they may move to a new location. About 30 million people in the world live a nomadic lifestyle. Nomads do not wander aimlessly. From time to time they pack up all their possessions and move, often returning to a place at some point in the future.

The Tuareg people (pronounced *twah-reg*) lead a nomadic way of life mainly in the Sahara Desert. A number of related families live in groups of 30 to 100. These groups usually move to a new site every two or three weeks, because the environment provides very little water and food.

11.12.2 A harsh environment

Timbuktu is a town in Mali (see **FIGURE 1**) that has long been famous as a trading town. Here, goods such as salt were brought from the north across the Sahara, and goods such as gold came from the south.

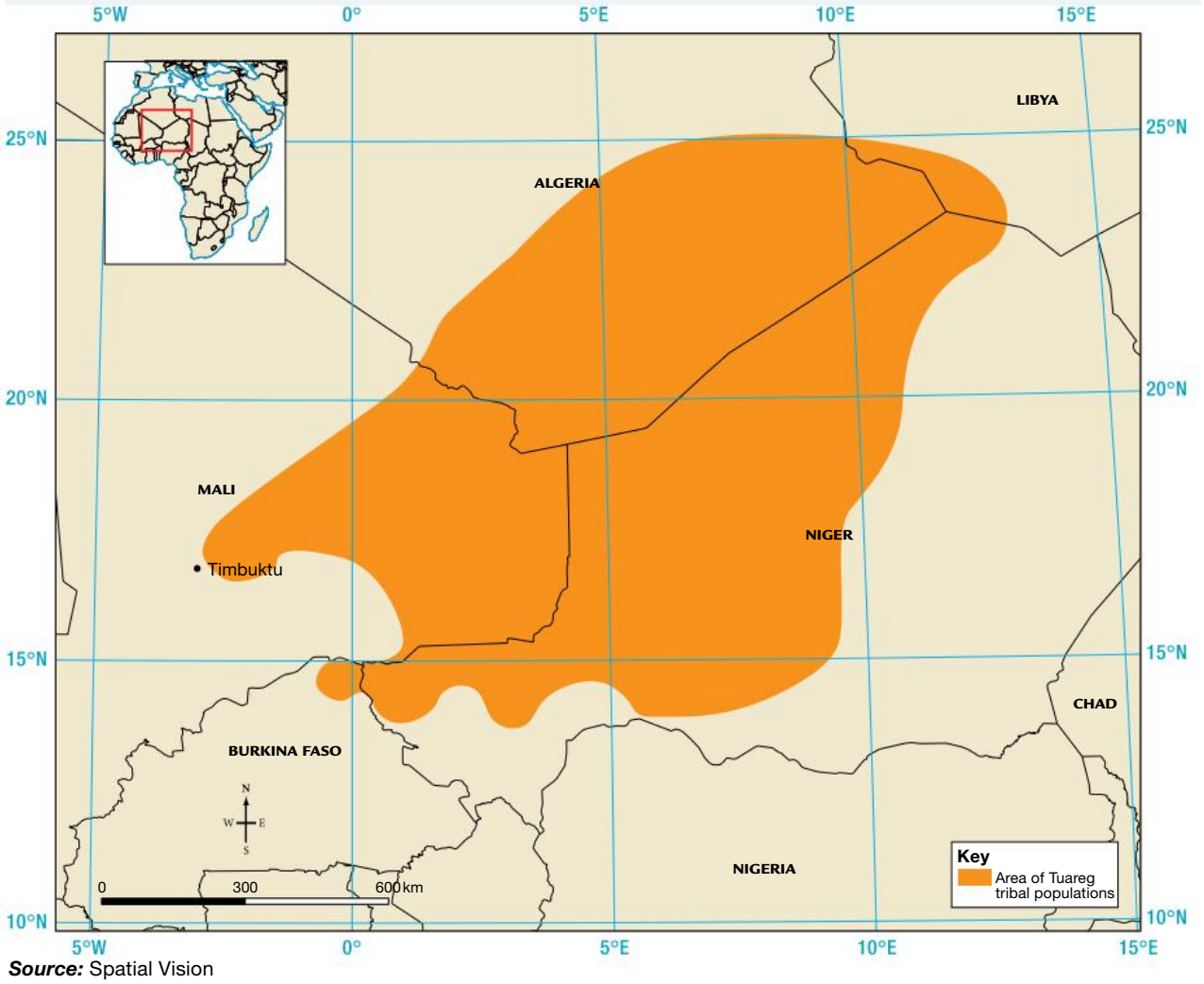
Daytime temperatures are high and night-time temperatures can be cold. Rainfall is very low and unreliable. There can be long periods without rain and there can be sudden heavy downpours. Strong winds sometimes cause sandstorms that turn the sky yellow or orange, reduce visibility and cover everything with sand.

TABLE 1 Average temperature and rainfall, Timbuktu

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Average max. temp. (°C)	31	35	38	41	43	42	38	35	38	40	37	31
Average min. temp. (°C)	13	16	18	22	26	27	25	24	24	23	18	14
Average rainfall (mm)	0.5	0.5	0.5	1	4	20	54	93	31	3	0.5	0.5

Source: http://www.timbuktu.climatemps.com/temperatures.php

FIGURE 1 Tuareg areas



Source: Spatial Vision

The climate means Timbuktu has little vegetation and very little water. Significant plant growth is only found at oases. This means that families have difficulty finding wood for cooking fires or vegetation for their animals. When firewood is unavailable, dried camel dung is used as fuel. When food for the animals is exhausted, the group must move to a new location. They move across the desert, traditionally finding their way by the stars, the moon and the landscape.

FIGURE 2 Tuareg camels and goats



11.12.3 Nomadic herding

Animals have always been the most important possessions of the Tuareg people, and the need for grass and water for the animals is why the Tuareg people move from place to place.

11.12.4 Household possessions

A nomadic way of life means that Tuareg families do not have many possessions, and the few they have must be light and portable.

For example, their housing is usually in the form of tents that have a simple structure. These provide shelter from heat in the daytime and from cold at night-time. Tuareg tents used to be made of skin and woven cloth but now they are often made of nylon. They are always positioned so that the doorway is facing the non-wind side.

The main furnishings in their tents are rugs to cover the ground and to provide a sleeping mat. Sometimes a bed is constructed from palm slats resting on thin logs. Other furniture includes cushions and drawers or chests. A tent and other belongings can be packed up within a few hours.

FIGURE 3 A Tuareg woman making tea outside her family tent in Niger



For cooking, the Tuareg people use an open fire, sometimes with a hotplate. They use only a few utensils such as pots, containers, plates and spoons. Eating utensils are also minimal, and sometimes food is eaten by hand from a communal plate, as is customary across many different cultures around the world.

Tea is the most popular drink, and is the only food that includes sugar. A family will usually have a teapot and small cups, and the making of tea is a ceremony. Tea is offered to visitors and becomes part of business discussions.

11.12.5 Clothing

The Tuareg people almost always wear clothing that covers them from head to toe. The men, who spend more time outside, wear a headscarf to cover their head, neck and much of their face. This is to prevent sunburn, stop the lips from cracking, and slow down the drying out of the mouth. Men over 18 years of age traditionally wear blue headscarves. Their long clothes also provide warmth during the coolest time just before sunrise.

FIGURE 4 Tuareg men are known for their bright blue headscarves.



11.12.6 Changes to way of life

In recent times, the Tuareg people have been forced to change their way of life for a number of reasons:

- Drought has reduced the amount of food available for the animals.
- Private ownership of land has reduced the areas in which the Tuareg can move.
- Political unrest has made some areas unsafe.
- Population growth has placed pressure on the available land.

An increasing number of Tuareg people are moving to the south and becoming semi-nomadic. This means they are in one location for a large part of the year. They are building more permanent buildings, such as **adobe** houses, and using some irrigation

adobe bricks made from sand, clay, water and straw and dried by the sun

to help crops grow. Working for money is becoming more common, and children are sometimes able to attend school. Healthcare, such as the provision of vitamins to improve nutrition, is now reaching more people. Solar panels are being used in some areas to produce power to charge mobile phones, run solar cooking ovens and provide lights in schools.

Some traditions remain. Nomadic herding is still valued as the most important activity, and tents are still the main form of housing. Loose clothing is still popular, and the men are still well known for their blue scarves.

Resources

Interactivity Tuareg treks (int-3094)

11.12 ACTIVITIES

1. Refer to an atlas and complete the following sentence about where the Tuareg people live.
   a. For most of the region where the Tuareg people live, the population per square kilometre is _____.
   b. Annual rainfall is _____.
   c. Agriculture is _____.
   d. GDP is _____.
   e. Average January temperatures are _____.
   f. Average July temperatures are _____.

   Geography concepts: Place, Environment
2. Select another group of people who lead a nomadic way of life (such as the Awa, Penan, Orang Rimba or Tibetan nomads). Your task is to gather information about your chosen group. To guide your research, develop a key question for each of the following criteria: the environment, the people and the lifestyle. Represent your findings in at least three formats (such as a graph, a map, a satellite image, a photo, text or a diagram). Write three clear sentences to compare your group to the Tuareg people.

   HASS skills: Questioning and researching, Evaluating
   Geography concepts: Place, Environment

11.12 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 8	Questions 5, 7	Questions 4, 6, 9

Check your understanding

1. Refer to **FIGURE 1**.
   a. Name the five main countries through which the nomadic Tuareg people move.
   b. On which continent do the Tuareg people live?
   c. Do the Tuareg people live in the northern hemisphere or the southern hemisphere?
2. Where is Timbuktu located?
3. Refer to **TABLE 1**.
   a. What is the average yearly total rainfall in Timbuktu?
   b. What is the average maximum temperature in the coolest month?
4. Identify and explain three ways in which the environment has influenced the traditional way of life of the nomadic Tuareg people.
5. Provide four reasons to explain why animals are highly valued by the Tuareg people. Suggest an item that is highly valued in Australian culture.

Apply your understanding

6. The Tuareg people may be required to change their way of life in the future. What do you think will happen to the Tuareg's nomadic way of life? Consider the influence of ***environmental*** factors (related to the natural world), economic factors (related to businesses and work) and social factors (related to people's welfare, hopes and attitudes).
7. Compare a day in the life of a Tuareg nomad and yourself. Include information on the following.
   a. Where and how you both live
   b. Diet, clothing, housing type, possessions, settlement size, schooling, and travel
8. What are adobe houses?
9. An increasing number of Tuareg people are becoming semi-nomadic. What does this mean?

For sample responses to every question, go to www.jacplus.com.au.

11.13 India, past and present

LEARNING INTENTION

By the end of this subtopic you will be able to explain the changes that have taken place in India over time.

11.13.1 What is Old Delhi like?

Old Delhi is an area within the modern city of New Delhi in India. Old Delhi consists of the original walled city that dates back to 1639. It was founded by the Mughal emperor Shahjahan, and was known then as Shahjahanabad. The local people pride themselves on being a peaceful community in which Muslims, Hindus and Christians have lived together side by side for hundreds of years.

The British began developing the area now known as New Delhi outside the city walls of Old Delhi in about 1911. However, life has continued within the walls of the 6.1-square-kilometre old city, which still has its original 14 gates. This makes it just a little smaller than Lake Burley Griffin in Canberra, but with a population density of over 25 000 people (similar to the capacity of WACA Stadium in Perth) per square kilometre!

FIGURE 1 Building a new multi-storey building inside Old Delhi



FIGURE 2 Even though mobile phones are found everywhere in India, there is still room for a business that offers you a telephone line when you need it. The high buildings in Old Delhi mean that mobile reception is not good in many locations within the city walls.



FIGURE 3 People of different religions have lived in Delhi for centuries. About 80 per cent of the inhabitants of Old Delhi are Muslims, whereas in the whole of Delhi, about 80 per cent of the population are Hindu. A number of **mosques**, temples and Christian churches are crammed into the old city, including (a) the Jama Masjid (Delhi's largest mosque), (b) small but important mosques such as Kalan Masjid, built around 1387, and (c) the Holy Trinity Church.

mosque place of worship for people who follow Islam (Muslims)







FIGURE 4 The bazaars in Old Delhi sell everything from food to bicycles.





FIGURE 5 Old Delhi is a hub of small industries, from metalwork to craft shops and food preparation. Power and telephone lines are draped from building to building.



FIGURE 6 As with many other small shops in Old Delhi, the welder (a) works with old homemade equipment. (b) The cobbler repairs shoes with a minimum of equipment, using his feet as a vice. (c) The tailor uses an old sewing machine, operated by a foot pedal.



FIGURE 7 The narrow streets make rubbish collection impossible, even if local government did offer it. The roofs of lower buildings often become rubbish dumps for those on the higher floors. In Delhi, nearly all rubbish collection is handled by private contractors or by the wastepickers.



FIGURE 8 Getting ready for iftar, the communal Ramadan festival after sunset. The place is full of a range of chaat (tangy and spicy snacks). During Ramadan, communities start to cook a fastbreaking meal in the afternoon so that it is ready for all to eat after sunset. This often takes the form of a neighbourhood banquet, celebrating friendships, family and community.



FIGURE 9 Access to clean water is a major problem in Old Delhi. There is no internal plumbing, although some households are able to obtain water through a courtyard distributor system. In general, water supply is communal in Old Delhi, just as it is in much of rural India and older urban areas. Usually, only the middle class and wealthy can afford to have running water. The courtyards of newer homes sometimes have a water tank on the roof.



FIGURE 10 Schools in Old Delhi exist in small buildings down side alleys. Some schools teach in the English language.



FIGURE 11 With few jobs around, young people learn to be creative in finding a way of making a living. They work in the informal sector. Young boys might sell cool drinks, with cordial made with water from an urn. This is then cooled by ice from a block, which is big enough to take all day to melt.



11.13.2 How is modern India changing?

The multiple realities of India

Modern India is a very complex place. Indians themselves often talk about the 'multiple realities' of India. This means that visitors might see many different pictures of life in India. Some of these may contradict each other, yet all of them are true.

FIGURE 12 In rural areas, many of the poor work in the informal sector. This snake charmer is one of a dying profession, working mainly for tourists and in festivals and markets, despite the fact that it is now illegal. The serpent is sacred in Hinduism, and snake charmers were once thought to have gifts of healing.



A great difference exists between modern India and traditional India. Modern India is in the top ten economies of the world. Since the 1990s, government policies have encouraged industrialisation, which has given jobs to many people and money for them to spend. India has over 1.3 billion people, with an increasing number of middle-class citizens who are highly educated, earning high incomes, and wanting the type of lifestyle that money can bring. In 2018, India had 104 billionaires (in US dollars), and almost 5 per cent of the world's billionaires.

However, the gap between rich and poor is increasing. Economic growth has decreased the number of people living in poverty, but over 40 per cent of the population still lives in very basic conditions. Around 40 per cent of people still work in agriculture, and the rural poor are substantially worse off than other Indians. Incomes for farm workers are well below average.

FIGURE 13 A long drought in the 2000s put great pressure on dwindling water supplies in India, particularly in the countryside. However, urban growth and few environmental controls on local industry have also led to the pollution of small yet important lakes, like this one near Agra.



A large proportion of modern India's economic growth has been in the service sector, where people work in jobs providing skills ranging from gardening and laundry to accountancy. For instance, many businesses in North America, Europe and Australia have 'outsourced' their telecommunications and work to call centres in India. This means that they hire people in India to do jobs that are more expensive to have completed locally. Many global companies now have bases in India.

FIGURE 14 The contrast of modern India: (a) When modern buildings are constructed, bamboo poles are still used as scaffolding. (b)–(d) The growing middle class has created a 'westernised' lifestyle for many Indians, where people place great importance on always buying new goods and services. This can be seen in the advertisements within large shopping centres. (e) Local customs still have a place, however: look at what is on the sign hanging above the front of the McDonald's store. Is this type of direct customer service what you would find at your local McDonald's store?



FIGURE 15 Three methods of transport in modern India



on Resources

Weblinks Wordle
Delhi passport
Indian Premier League

Google Earth Old Delhi

11.13 ACTIVITIES

1. Using the SHEEPT system of classification, construct a table like the following to summarise the major features of Old Delhi and of the lives of the people who live there.

	Social features	Historical features	Economic features	Environmental features	Political features	Technological features
Feature 1						

2. Using the table that you have drawn up, identify five characteristics of Old Delhi that are very different from the place in which you live, and five characteristics that are similar.
Geography concepts: Place, Environment
3. Use Google Earth to view an image of the space of Old Delhi in the present day. Using the Google Earth options, create an image of Old Delhi showing the distribution of the major human features, such as churches and mosques. Print out a copy of the map you have created. **HASS skills: Questioning and researching**
Geography concepts: Place, Environment
4. One of the areas where the growth of the wealthy class in India can be seen is in sport. Use the **Indian Premier League** weblink in the Resources tab to research the structure of the Indian Premier League (IPL) in cricket. Create a map showing where the different teams are based in India. Construct a table of the names of the owners and how they created their fortunes. What conclusions can you draw about the IPL as a symbol of modern India? **HASS Skills: Evaluating**
Geography concepts: Place, Environment

11.13 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 5, 7	Questions 6, 9, 10	Questions 4, 8, 11

Check your understanding

1. Old Delhi consists of the original walled city that dates back to which year?
2. Which three religions have lived peacefully together for hundreds of years in Old Delhi?
3. Old Delhi has an area of _____ square kilometres and a population density of over _____ people per square kilometre.
4. What does the phrase 'the multiple realities of India' mean?
5. What is the population of India?
6. Complete the following sentence:
   The number of people in poverty is decreasing, but over _____ per cent of the population still lives in very basic conditions, and _____ per cent still work in agriculture.

Apply your understanding

7. Classify each of the following features of Old Delhi as social, historical, economic, environmental, political or technological.
   a. More people, rather than machines, are doing jobs.
   b. Emphasis is on wasting nothing in production.
   c. Mosques and churches are important.
   d. No motorised transport is used, except for the occasional motorbike.
   e. Most of the buildings are old.
8. Identify the main feature in the environment of Old Delhi that you believe to be the major problem facing its future. Justify your decision, using information from this subtopic and further information from internet searches and library resources.
9. Compare the living conditions of Old Delhi with those that can be seen in the places illustrated in other subtopics. What similarities and differences do you notice?
10. Compare life in Old Delhi with life in India today.
11. What do you think is the most significant issue facing New Delhi today? Describe what impacts this issue has on people and what could be done to solve the problem.

For sample responses to every question, go to www.jacplus.com.au.

11.14 Thinking Big project: Investigating change over time

Scenario

Have you ever been outside and looked at the landscape in front of you and wondered what this area looked like before humans existed? Have you ever wondered what once stood in the place where your house now stands, or your school? As we've learnt in this topic, it is possible for places to change over time. These changes can be caused by natural phenomena or they can be caused by human activity. You may have even seen some changes in your neighbourhood in your own lifetime. Perhaps new houses have been built in your street or even new shopping strips and parks. Let's have a closer look at these changes and the factors that have caused them.

Task

In this task, you will investigate how your local area has changed over time. You will make a visual presentation of your findings to the class using either a poster, Google Slides, PowerPoint or Prezi. Your presentation should contain a mixture of historical information (using the suggested websites) and demographic data (using the Australian Bureau of Statistics link provided). Demographic data reveals information about the people who live in your local area, including categories such as age, gender and socioeconomic status. You should also attempt to learn what kinds of natural environments used to exist in your suburb.

FIGURE 1 What factors have caused change in your neighbourhood?

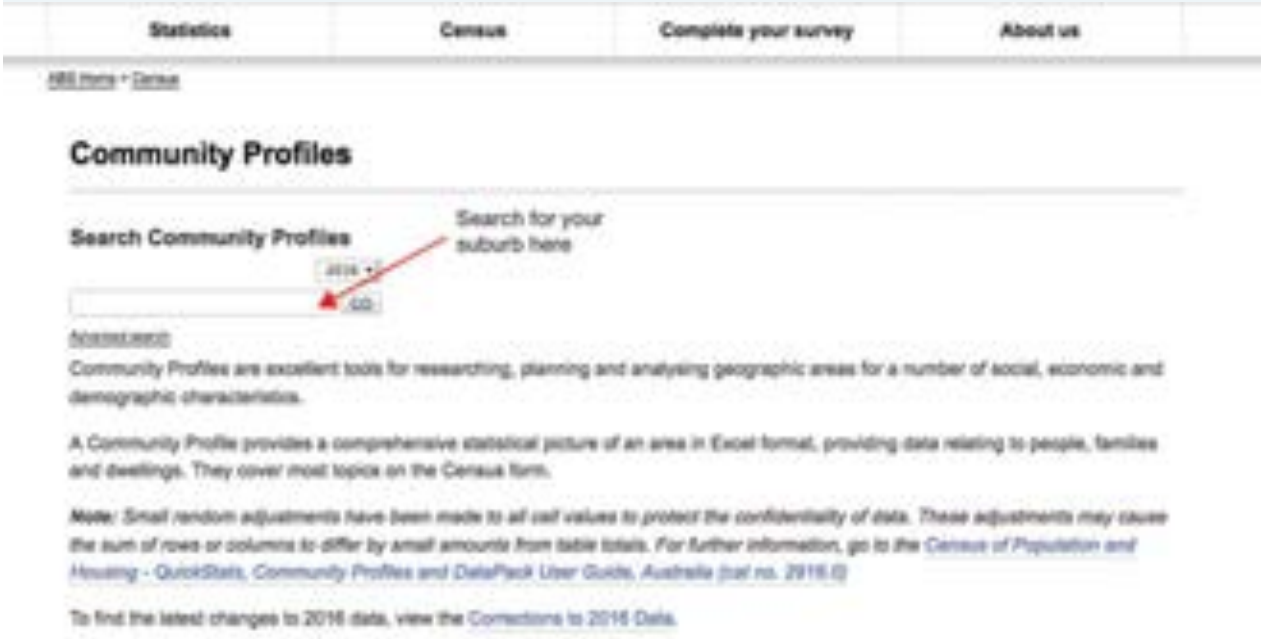


Process

Follow these steps to complete this task:

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in pairs will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum,** where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- Start by researching the history of your local area. The best place to start is your local council website. Most local councils have a designated history page on their website. These pages usually contain excellent historical information, including references to local Aboriginal and Torres Strait Islander communities. Make sure you take detailed notes of the information you find and save any relevant images to use in your presentation.
- In the **Media centre** you will find an assessment rubric and some weblinks that will help you with your research.
- Next, you need to collect demographic data about your suburb from 2001 and compare it with data from 2016 (the most recent census). Use the **ABS** weblink to search for your suburb. Once you have found your suburb and selected the right year, click go. This will bring you to the Community Profile page. Once you are here, click View the Quickstat for your suburb and you'll be taken to a page containing all the demographic data for your suburb.

FIGURE 2 Accessing the ABS Community Profile page for your suburb



- After you have reviewed the data from the suburb profile pages, write a summary of the data you have found and enter your notes into the Research forum. As you will see, there are many different categories to consider. Choose categories that you find interesting and make sure that you make comparisons between 2001 and 2016.
- Now that you have your historical information and demographic data, it is time to create your presentation. You are free to choose the format of your presentation, but make sure that you use a range of different images, including photographs, maps and graphs.
- Present your findings to the class and submit your presentation to your teacher for assessment and feedback.

FIGURE 3 Example Community Profile



on Resources

Thinking Big project Investigating change over time (pro-0238)

11.15 Review

11.15.1 Topic summary

11.2 A sense of place

- A sense of place is personal and will vary from person to person.
- Natural and human features influence a sense of place.

11.3 Why people live in certain places

- Push and pull factors influence where people choose to live.
- These factors include environment, economic (work, housing, universities), social (family) and lifestyle.

11.4 Liveable places in Australia

- Local neighbourhoods can have special meaning to some people.
- Aboriginal and Torres Strait Islander people often identify with their local 'country'.
- Holiday/tourism locations often promote a positive sense of place.
- Identifying most liveable places differs from person to person.

11.5 Australians living in remote places

- Mining and farming are the main activities in remote areas in Australia.
- Australians are generally moving towards cities and major towns.
- A case study of Griffith shows that farming and supporting businesses and social needs are the main attractions to living in the town and surrounding area.
- In general, many rural communities have been in population decline in Australia.

11.6 'Lifestyle' places

- Some people have the opportunity to move to new places to improve their lifestyles.
- These changes are sometimes referred to as sea changes (to coastal areas) or tree changes (to rural areas).

11.7 Growth cities in Australia

- The places people choose to live are determined by push and pull factors.
- The number of people living in urban areas continues to rise.

11.8 Life in a country town

- Country communities, though smaller in size, are crucial to Australia's economy because of the agricultural activity that take place in this areas.
- Because country communities are small, they often have an increased sense of belonging.

11.9 Seasonal places

- Many locations witness changes in population and activity depending on the seasons. Typically, these locations are focused on tourism and recreation.

11.10 Places of change

- Significant changes can occur in towns over time. Often, these changes are related to external factors, such as government decisions and land management issues.
- Changes in tourism patterns can also significantly affect smaller communities.

11.11 Isolated settlements

- Life in isolated places can be challenging, especially in terms of reliable access to resources and medical services. Improvements in information communication technology and transportation have made living in these locations easier.

11.12 A nomadic way of life

- People living nomadic lifestyles have no permanent settlements and travel from one place to another depending on the availability of resources.
- Currently around 30 million people in the world live nomadic lifestyles.

11.13 India, past and present

- Modern India is a complex place with huge differences between socioeconomic groups. As the population of cities continues to grow, these gaps are becoming even more significant.

11.15.2 Key terms

adobe bricks made from sand, clay, water and straw and dried by the sun
aerial photograph a photograph taken of the ground from an aeroplane or satellite
arid lacking moisture; especially having insufficient rainfall to support trees or plants
aspect feature or quality, or the direction in which something is facing
built environment a place that has been constructed or created by people
community a group of people who live and work together, and generally share similar values; a group of people living in a particular region
country the place where an Aboriginal and Torres Strait Islander Australian comes from and where their ancestors lived; it includes the living environment and the landscape
demographic describes statistical characteristics of a population
elevation height of a place above sea level
fly in, fly out (FIFO) describes workers who fly to work in remote places, work 4-, 8- or 12-day shifts and then fly home
horticulture the growing of garden crops such as fruit, vegetables, herbs and nuts
infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines
irrigation water provided to crops and orchards by hoses, channels, sprays or drip systems in order to supplement rainfall
liveable city a city that people want to live in, which is safe, well planned and prosperous and has a healthy environment
location a point on the surface of the Earth where something is to be found
mosque place of worship for people who follow Islam (Muslims)
natural resources resources (such as landforms, minerals and vegetation) that are provided by nature rather than people
neighbourhood a region in which people live together in a community
permafrost permanently frozen ground not far below the surface of the soil
place specific area of the Earth's surface that has been given meaning by people
pull factors positive aspects of a place; reasons that attract people to come and live in a place
push factors reasons that encourage people to leave a place and go somewhere else
region any area of varying size that has one or more characteristics in common
remote describes a place that is distant from major population centres
sea change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town
tree change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush, or on the land as a farmer
wilderness a natural place that has been almost untouched or unchanged by the actions of people

11.15.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Rural, urban, remote or central, the world is full of places. Are any two places the same?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

11.15 Review exercise

Multiple choice

1. What are push factors defined as?
   - **A.** The positive aspects of a place, and the reasons that attract people to live there
   - **B.** The reasons that encourage people to leave a place and go somewhere else
   - **C.** The natural and human features of a location
   - **D.** A combination of reasons for where somewhere lives, mainly positive

2. Which two of the following facilities would you expect to find in Monkey Mia?
   - **A.** High-rise apartments
   - **B.** A general store and service station
   - **C.** Theme parks
   - **D.** Takeaway food stores

3. What are two reasons people want to live in remote locations?
   - **A.** Becoming very lonely living in remote locations
   - **B.** Opportunities for new farming enterprises
   - **C.** Fewer employment opportunities
   - **D.** Wages are quite high in remote locations

4. What is a sea change defined as?
   - **A.** Leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush or on the land as a farmer
   - **B.** Planting trees to improve the vegetation of your community
   - **C.** Leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town
   - **D.** Moving to a seaside suburb

5. Generally speaking, which three of the following 'pull factors' would university students regard as reasons to live in a country town?
   - **A.** A tertiary institution
   - **B.** High unemployment rate
   - **C.** Effective public transport
   - **D.** Inexpensive student accommodation

6. The early settlers in Australia chose to live on the coast and along rivers for a number of reasons. Which of the following would NOT have been a factor?
   - **A.** Good access to sea transport
   - **B.** Milder climate
   - **C.** More scenic landscapes than further inland
   - **D.** Bays and rivers providing safe ports for ships, their main form of transport

7. Which of the following are correct in regards to the services and facilities available in country towns?
   - **A.** There are sporting activities.
   - **B.** There are no cultural activities.
   - **C.** There are no environmental groups.
   - **D.** There are social groups.

8. Which of the following statements is correct in regards to Dawson, Canada?
   - **A.** People cannot live in Dawson because the climate is too harsh.
   - **B.** People live in Dawson because it is a mining and tourism town.
   - **C.** People live in Dawson because it is close to the city and the coast.
   - **D.** Dawson does not serve as a tourism town.
   - **E.** Dawson has poor infrastructure and housing.

9. Why do communities become nomadic?
   - **A.** They are looking for nicer weather.
   - **B.** They are forced out by governments.
   - **C.** Their environment cannot supply enough food, water and animal feed.
   - **D.** They follow the migration of animals.

10. Through how many different countries do the Tuareg people move?
   - **A.** Three
   - **B.** Five
   - **C.** Seven
   - **D.** Nine

Short answer

11. Construct a detailed list of factors (reasons) that influence where people live.
12. What services allow FIFO settlements such as Tom Price to exist?
13. How might the quality of the ***environment*** differ in the following places: Sydney, Monkey Mia, Byron Bay and Melbourne?

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-4287) Reflection (ewbk-4357) Crossword (ewbk-4356) Student learning matrix (ewbk-4343)
Interactivity	A world of people and places crossword (int-7704)



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 11 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

11.1 Overview

Video eLesson
- Choosing a place to live (eles-1619)

11.2 A sense of place

eWorkbook
- My place (ewbk-4349)

Google Earth
- Taj Mahal
- Grand Canyon
- Disney World
- Table Mountain
- Purnululu

myWorldAtlas
- Investigating Australian Curriculum topics > Year 7: Place and liveability > New York City

11.3 Why people live in certain places

eWorkbook
- Why do people live in certain places? (ewbk-4344)
- Where I live (ewbk-4345)

Interactivity
- Push/pull factors (int-3089)

Google Earth
- Baltimore, USA
- Kanowna
- Cossack

myWorldAtlas
- Investigate additional topics > Population > Population of Australia
- Investigate additional topics > Energy > Energy in Australia

11.4 Liveable places in Australia

eWorkbook
- Where do Australians live? (ewbk-4346)
- Human wellbeing (ewbk-4347)
- Living away from the city (ewbk-4348)

Interactivity
- How did they live here? (int-3091)

Weblink
- Nothing like Australia

11.5 Australians living in remote places

eWorkbook
- Topographic map extract — Griffith (doc-17952)
- Living in remote places (ewbk-4349)
- Living in a rural community (ewbk-4350)
- Living in rural places (ewbk-4352)

Interactivity
- Remote living (int-3090)

Weblink
- Soldier settlement

myWorldAtlas
- Investigate additional topics > Population > Population of Australia

Google Earth
- Tom Price township
- Griffith

11.6 'Lifestyle' places

eWorkbook
- Lifestyle places (ewbk-4353)

Weblink
- Development WA: East Perth Power Station
- Map of East Perth Power Station precinct

Google Earth
- Canary Wharf, London
- Prague, Czech Republic
- Rio de Janeiro
- East Perth Power Station

11.7 Growth cities in Australia

eWorkbook
- Topographic map extract — Gold Coast region (doc-11400)

11.8 Life in a country town

Interactivity
- Country town services (int-3092)

Google Earth
- Kellerberrin

11.9 Seasonal places

Interactivity
- Alpine regions — open or closed? (int-3093)

11.10 Places of change

Google Earth
- Tallangatta
- Silverton
- Karratha
- Margaret River

11.11 Isolated settlements

Weblink
- Bureau of Meteorology

11.12 A nomadic way of life

Interactivity
- Tuareg treks (int-3094)

11.13 India, past and present

eWorkbook
- Old Delhi is changing (ewbk-4354)
- India is changing (ewbk-4355)

Weblinks
- Wordle
- Delhi passport
- Indian Premier League

Google Earth
- Old Delhi

11.14 Thinking Big project: Investigating change over time

Thinking Big project
- Investigating change over time (pro-0238)

11.15 Review

eWorkbook
- Reflection (ewbk-4357)
- Crossword (ewbk-4356)
- Student learning matrix (ewbk-4343)

Interactivity
- A world of people and places crossword (int-7704)

To access these online resources, log on to **www.jacplus.com.au**.

12 Liveable places

12.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

What does a place need to have to make it liveable? Is everyone's idea of liveability the same?

12.1.1 Introduction

Your quality of life is influenced by many factors, such as climate, landscape, community facilities, the location of your home, the sense of community identity and links to other settlements. You probably have an idea of a street, town, city or suburb where you would like to live, and your opinion may be quite different from those of others. This is because other people see different factors as important. This chapter will look at how people define and improve liveability.

Resources

- **eWorkbook** Customisable worksheets for this topic (ewbk-4288)
- **Video eLesson** Making places liveable for young people (eles-1621)
- **Google Earth** Kolkata

FIGURE 1 Kolkata is one of the world's mega cities.



12.2 Defining liveability

LEARNING INTENTION

By the end of this subtopic you will be able to define the term 'liveability' and suggest reasons why people's perceptions of liveability differ.

12.2.1 What do people think about liveability?

If you were told that Vancouver or Melbourne was the world's best place to live in, or the world's most liveable city, what would you think this means? Do city councils just brag about how good their city is or can liveability be measured? Is liveability the quality of life experienced by a city's residents?

Here are some examples of what fictional people think about the liveability of their community. They come from different places and they are all trying to explain what liveability means to them.

'I think a liveable city is a city where I can have a healthy life and where I can safely and quickly get around on foot or by bicycle, public transport or even by car — as a last resort. A liveable city is a city for everyone, including children and old people, rich and poor, and people of different religions, races and fitness levels. A liveable city should be attractive, and have good schools, a choice of things to do and fresh air.'
John from Perth



'Liveability is all about the **natural environment**. I think a place is liveable if the air is clean, there is plenty of water in the river and there is a healthy forest nearby. Being able to grow your own food, use renewable energy and live a simple life are all a part of what is important to me and can make a place liveable.'
Joy from Huon Valley, Tasmania



natural environment elements — such as wind, soil, flowing water, plants and animals — that influence the characteristics of an area

'I think that a place is liveable if I have food every day, I do not have to walk more than ten minutes to collect water for cooking and my father has work close by, so he is home for dinner. Liveability means warm weather, enough rain and being able to go to school every day.'
Nafula from Kenya



‘Liveable cities have housing that is close to jobs, services and transport and is available for all income levels. Neighbourhoods are pedestrian-friendly with green spaces and lively retail sectors. They are mostly car-free, and have good schools and public buildings. A liveable city needs lots of different choices — choices in ways to live, places to work, shop and eat, and locations to linger in — whether alone or with other people.’
Alex, property developer from New York



‘Liveability means that I have a good job, good food, a nice house, a newish car, nice neighbours and a community that cares about my family and me.’
Oscar from western suburbs of Sydney



‘A liveable place is somewhere I can have a computer and a television and a bed of my own in my own room. I would like a bike to get to school, three meals a day and two sisters. A liveable place would be clean, safe and modern. My grandmother and aunty would also live with us.’
Jing from a village in rural China



‘A liveable community offers many activities, celebrations and festivals that bring all of its residents together. Every year at Carnevale, my whole neighbourhood comes together to dance the samba. I would never wish to live anywhere else.’
Raul from Rio de Janeiro



‘The place that I think would be the most liveable is Darwin. It has great footy grounds, public transport, good food, good houses, good shops and good schools. Where I live, my house is a dump and I cannot get anywhere unless I walk. I would like to live in Darwin and play football.’
Sam from near Alice Springs



‘The community is what makes a place liveable. Being connected with my neighbours, through the community gardens, food co-op, volunteer network at our kids’ school and the car-share scheme all make me feel a valued member of my community. I like knowing people who care and that we all care for each other.’
Laura from Bristol, United Kingdom



12.2 ACTIVITY

1. **a.** Ask a much older person to describe the living conditions in the community they lived in as a teenager. Record or write down their memories.
   b. Ask this older person how they would have measured liveability when they were young.
   c. Do you think the current liveability of your community is better than that described by the older person? Provide examples to support your view.

HASS skills: Communicating and reflecting
Geography concept: Place

12.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 8	Questions 4, 6, 9	Questions 5, 7, 10

Check your understanding

1. In your own words, define the term ‘community’.
2. What is liveability?

3. Write a statement, similar to those in this subtopic, about the community that you live in and what makes it liveable.
4. Would the statement of liveability in your community be different if you were blind, unemployed, elderly or unable to speak English? Write what you think a community liveability statement would be for two such residents of your community.
5. Carefully read the different opinions about what makes a ***place*** liveable.
   a. Make a list of the common themes mentioned by these people.
   b. Is there a shared common definition of what makes a ***place*** liveable? Discuss.
   c. On a map of the world, locate each ***place*** mentioned in this subtopic.
   d. Does the ***place*** in which each person lives appear to influence their definition of the term *liveability*? Discuss.

Apply your understanding

6. a. Think about your community 50 years from now. How will the characteristics of this ***place*** be different? For example, think about the type of houses, the **distribution** of houses, the amount and type of traffic, the age of the population, the community facilities and other characteristics you think will be significant.
   b. What type of inventions might improve liveability?
7. We have so far described liveability in a general sense. Sometimes living conditions can change quite quickly. Provide examples of how natural events, political events or economic events can influence living conditions.
8. Which viewpoint or viewpoints about liveability do you agree with more than others? Give reasons for your answer.
9. Examine each of the liveability statements and compile a list of factors mentioned. Which factors do you consider to be the top five? Justify your response.
10. Identify three factors that you think are *not* important in determining liveability. Justify your choices.

For sample responses to every question, go to www.jacplus.com.au.

12.3 Where are the most liveable cities?

LEARNING INTENTION

By the end of this subtopic you will be able to:
- identify factors that are considered when determining a city's liveability ranking
- describe the location of the most liveable and least liveable cities
- make connections between places based on liveability factors.

12.3.1 What is liveability?

Everyone likes to be able to tell you they are the best, or in the top ten of some category. Cities are no different. If you look at the official websites for many international cities, they will tell you that they are the safest, wealthiest, fastest-growing or have the best events calendar. Being able to boast that a city is the world's most liveable is great publicity.

Liveability can be defined as 'the features that create a place that people want to live in and are happy to live in'. It is usually measured by factors such as safety, health, comfort, community facilities and freedom.

distribution the way things are spread across an area

12.3.2 Who says which is the most liveable?

Several international organisations have created lists of the world's most liveable cities. These organisations each compare data and produce a table that ranks the liveability of cities. This information is collected for workers considering overseas transfers or for companies that may need to compensate workers who are transferred to a low-ranked city. The figures can also be used to attract migrants or investment. The various rankings compare a large number of cities; however, not all cities in the world are included in each survey.

The criteria used to produce the rankings include:

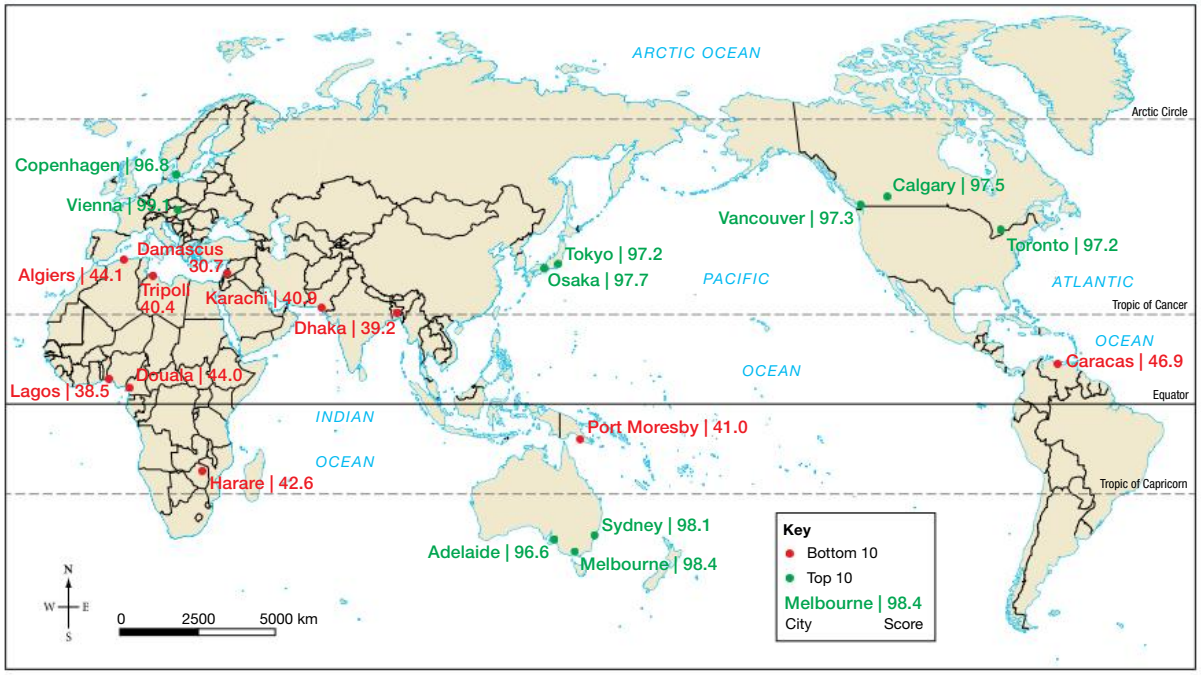
- stability or personal safety (crime, terror threats and civil unrest)
- healthcare
- culture and environment (religious tolerance, corruption, climate and potential natural disasters)
- education
- infrastructure (transport, housing, energy, water and communication)
- economic stability
- recreational and sporting facilities
- availability of consumer goods (food, cars and household items).

FIGURE 1 shows the top ten and bottom ten in the global cities liveability rankings, as released by the Economist Intelligence Unit (EIU) in 2019. These rankings are released each year, so it is possible for you to log on (use the **Economist Intelligence Unit** weblink in the Resources tab) to get the most recent update to the rankings. This survey ranks 140 cities; a score of 100 equates to the perfect or ideal city. In previous years Vienna, Melbourne and Vancouver have shared the top ranking as the world's most liveable city. In 2018 Vienna took out the number one ranking with Melbourne pushed to second. Vancouver's ranking has fallen to sixth.

The map shows that many of the world's top cities have scores that are very similar. The difference in score between the top ten cities is only 2.5 points.

Between 2008 and 2018, the average global liveability score has increased by almost one percentage point. Of the 140 cities included in the liveability survey, half have improved their overall status. Competition at the top of the list is fierce. Four cities have been forced out of the top ten between 2017 and 2018.

FIGURE 1 City liveability rankings



Source: Economist Intelligence Unit (EIU) 2019

What do these top ten liveable cities have in common?

Looking at the locations of the most liveable cities, you can see most are found in Australia and Canada with three each; followed by Europe and Japan with two apiece. They are all mid-sized cities, have quite low **population density**, low crime rates and **infrastructure** that copes quite well with the needs of the local community. They are found in places where there is a **temperate climate**, perhaps with the exception of Toronto and Calgary, which do have very cold winters.

population density the number of people living in a square kilometre

infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines

temperate climate climate with generally warm summers and cool winters, without extremes

The top cities also tend to be modern cities, not much more than 300 years old. They have been planned so that people can travel around them by both public and private transport. They are also found in some of the world's wealthiest or most developed nations.

Australian and Canadian cities perform better than cities in the United States due to US cities' higher crime and congestion rates. The highest ranked United States city is Honolulu at 23.

TABLE 1 Changes in city liveability ratings from 2017 to 2019

City	2017 ranking	2018 ranking	2019 ranking
Perth	7	14	14
Auckland	9	16	12
Vancouver	3	6	6
Copenhagen	4	9	9

on Resources

Interactivity My most liveable country (int-3095)

Weblink Economist Intelligence Unit

Explore more with myWorldAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigating Australian Curriculum topics > Year 7: Place and liveability > **Polluted cities**

12.3 ACTIVITIES

1. Work with a partner or in a group to find the most recent population figures for each of the cities shown on the map in **FIGURE 1**. List your findings. Write one sentence to describe the population of the most liveable cities. Write one sentence to describe the population of the least liveable cities.

   HASS skills: Analysing
   Geography concepts: Place, Space

2. Draw up a table or use a spreadsheet to collect at least five sets of information to compare the top ten and bottom ten in the liveable cities ranking. Use the population data you collected for the previous question as your first set of information. Other possible data sets are number of universities, number of hospitals, population density, any recent violence, traffic issues, the availability of public transport, housing types, presence of slums and water supply and sanitation. Comment on the differences between the most liveable and least liveable cities. Write at least three sentences.

   HASS skills: Questioning and researching, Evaluating
   Geography concepts: Place, Space

12.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4, 7	Questions 2, 6, 8, 9	Questions 5, 10, 11

Check your understanding

1. How many cities are ranked in the EIU liveability ranking?
2. Use the **Economist Intelligence Unit** weblink to find the difference between the score of the top city and the tenth city in the latest survey.
3. Name the three lowest ranked cities in the 2019 liveability ranking.
4. In which type of climatic region are most of the liveable cities?
5. Analyse the information in **FIGURE 1**.
   a. How many of the top ten most liveable cities are found on each continent?
   b. How many of the most liveable cities are found in the northern hemisphere?
   c. Describe the distribution of the least liveable cities in the world.
   d. How many of the least liveable cities are found on each continent?
   e. How many of the least liveable cities are found in each hemisphere?

Apply your understanding

6. London and New York have a similar low ranking. Why do you think these well-known cities are ranked so low?
7. Why might a city suddenly fall down the liveability rankings?
8. What do you think could be done to improve a city's liveability ranking?
9. Suggest some reasons why Vienna might have taken the number one ranking in 2018 after sharing it with both Melbourne and Vancouver for several years.
10. Why do cities in both Australia and Canada outperform cities in the United States in the liveability rankings?
11. Make a list of what you think are the ten most important criteria to judge a liveable city.

For sample responses to every question, go to www.jacplus.com.au.

12.4 Perth — a liveable city

LEARNING INTENTION

By the end of this subtopic you will be able to explain why Perth is ranked highly on the liveability rankings and understand why a city's ranking might change over time.

12.4.1 Perth — pluses and minuses

What makes Perth such a liveable city? Saying that a city of one of the 'most liveable' gives it a ranking, like those given to cars or restaurants. However, as is the case for Perth, that ranking can change. Why?

For a number of years, Perth was considered to be one of the top ten most liveable cities in the world according to the global liveability index developed by the Economist Intelligence Unit. It continues to be ranked in the top twenty with a 2019 score of 95.9 out of a possible 100.

What are some of Perth's positive features, and what are some of its less appealing features?

Perth was awarded the maximum score of 100 for the categories of Healthcare, Education and Infrastructure, a score of 95 for Stability, and a score of 88.7 for Culture and Environment.

FIGURE 1 The balance of good features and not-so-good features.



12.4.2 Is all of Perth the same?

Within all cities, there are some parts that are more liveable than others. People may have higher incomes, larger houses, more and better cars, a view of the sea or the Swan River, and better shops and entertainment facilities. This does not mean that the highly liveable inner suburbs of Perth do not have pockets of poorer housing or homelessness; it is just that they have fewer of them.

FIGURE 2 Perth has a variety of amenities to offer that make it liveable








Like most large cities, Perth has distinct regions, with a clear north-south divide. The far northern suburbs offer the opportunity to experience a coastal community lifestyle on generous blocks of land, with improved road and rail infrastructure enabling access to the CBD. Places like Joondalup have wide appeal to students, retirees, families, and downsizers, due to the range of amenities available within the area. Access to the far southern suburbs such as Rockingham have been improved via express train and bus services to the CBD, and offer affordability for growing families. While Mandurah is still considered a separate city, the urban sprawl of Perth

has grown so much that the two have formed a **conurbation**. This is where cities have merged to form one continuous urban or industrially developed area. Inner city suburbs along the north of the Swan River, such as Northbridge, Leederville and Mt Lawley, are popular with professionals, students and young couples who want access to a cosmopolitan lifestyle. Greater diversity of housing choices can be found in these areas, with their mix of heritage buildings, new homes and high-density apartment complexes. Those along the south banks such as Como and Applecross, offer easy access to the CBD and contain a range of cafés and restaurants, while still feeling relaxed and close to nature.

conurbation an extended urban area, usually made up of a town merging with the suburbs of a city

Resources

Weblinks Best things to do in Perth
A tour around my city of Perth

12.3 ACTIVITY

Using the weblinks provided in the Resources tab, consider Perth through the eyes of a local and through those of a tourist. How do their opinions about the positives of Perth compare? Do they value different features? Present your findings using a Venn diagram. **Geography concept: Place**

12.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Questions
1, 2, 4, 8	3, 6, 7	5, 9, 10

Check your understanding

1. What are two ways of describing the weather in Perth?
2. What is the name of the organisation that ranks the liveability of cities?
3. What is the difference between Perth's inner and outer suburbs?
4. In what categories did Perth receive a perfect score in the 2019 global liveability index?
5. Look at the images of Perth in **FIGURE 2**. List ten liveability factors that these images illustrate.

Apply your understanding

6. Which of Perth's not-so-good features may have had an impact on its ranking within the Culture and Environment category?
7. Why do you think that three of Australia's major cities are ranked in the world's top ten?
8. Explain how Perth's weather can be both a positive and a negative in terms of liveability.
9. In many parts of Perth, high-rise apartments rather than single dwellings on a large block are becoming more common. Suggest reasons for this trend.
10. Explain why Perth has a high dependence on private cars and how this affects liveability.

For sample responses to every question, go to www.jacplus.com.au.

12.5 Liveability and sustainable living

LEARNING INTENTION

By the end of this subtopic you will be able to define what is meant by sustainability and ecological footprint and make links between liveability, sustainability and ecological footprints.

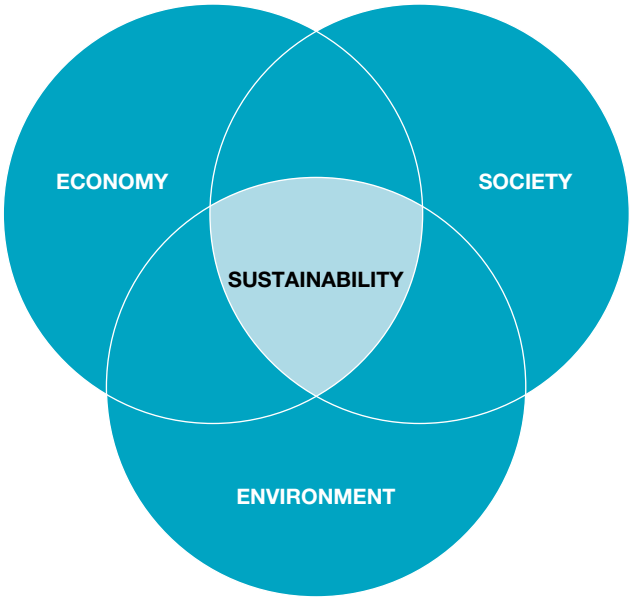
12.5.1 Sustainability

Australia's major cities consistently rate among the most liveable. Liveability, however, is not always the same as sustainability. Sustainability considers how well a community is currently meeting the needs and expectations of its population and how well it will be able to continue providing for its population in the future.

Indicators that a place is sustainable include:

- low working hours to meet basic needs
- easy access to education
- satisfactory and affordable housing
- plenty of recycling and composting
- reliable transport
- low emissions and high air quality
- **biodiversity**
- high renewable energy use and low non-renewable energy use
- good water, forests and marine health
- ability to respond to disasters.

FIGURE 1 To achieve sustainability, a city's environmental, economic and social aspects must all be considered.



Sustainable cities index

This annual index considers 50 leading cities and ranks each against a range of indicators. These are organised under the headings of people (society), planet (environment) and profit (economy).

TABLE 1 Top ten sustainable cities by indicator 2018

Ranking	People	Planet	Profit
1	Edinburgh	Stockholm	Singapore
2	London	Frankfurt	London
3	Paris	Zurich	Hong Kong
4	Taipei	Vienna	New York
5	Stockholm	Copenhagen	Munich
6	Prague	Oslo	Edinburgh
7	Seoul	Hamburg	San Francisco
8	Amsterdam	Berlin	Boston
9	San Francisco	Munich	Zurich
10	Madrid	Montreal	Seoul

Source: © Arcadis Sustainable Cities Index 2018, compiled in partnership with Centre for Economics and Business Research

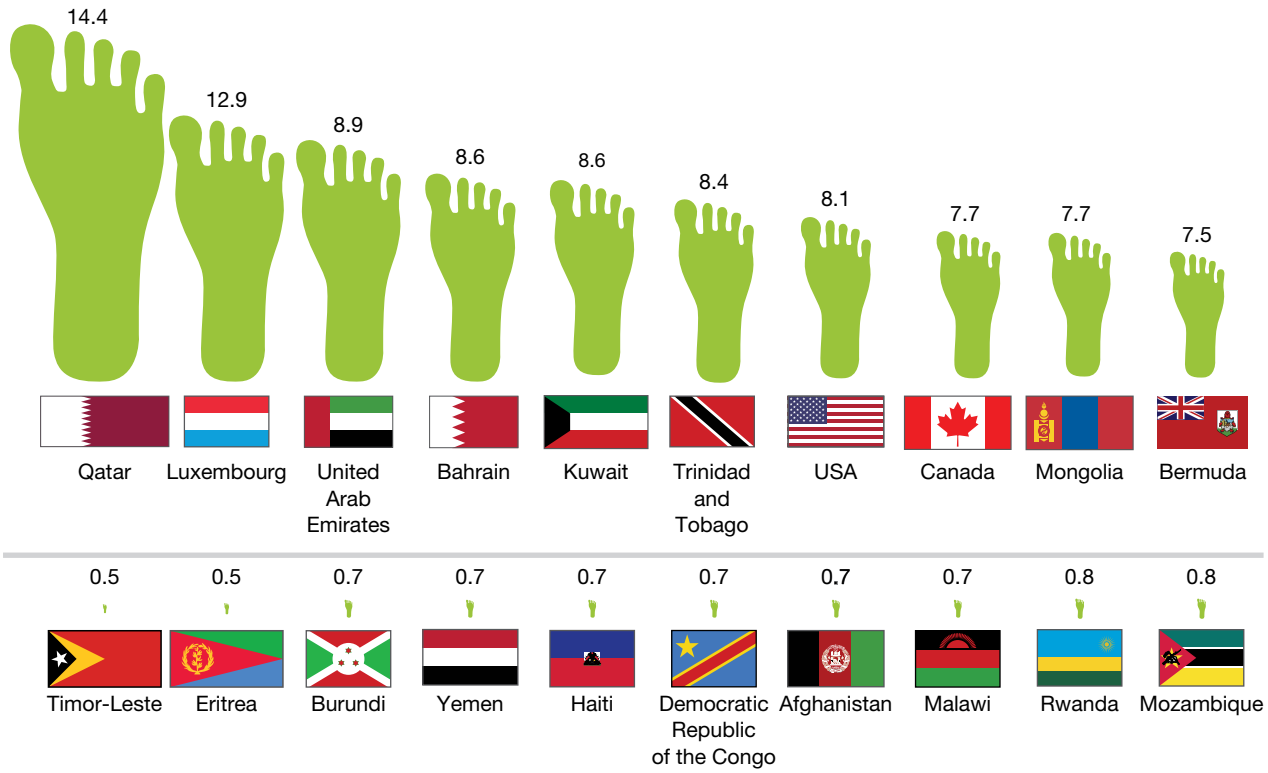
biodiversity the variety of life in the world or in a particular habitat or ecosystem

Ecological footprint

Everything we do and consume has an impact on the environment. Land is cleared to grow plants and animals; fish are caught in the sea; water is diverted for homes, businesses and farms; and most transport is powered by non-renewable resources. An **ecological footprint** calculates the land area (hectares) that would be needed to sustain an individual (expressed as per capita). It is used to compare the amount of various resources used per capita in countries around the world.

Generally, if you live in a high-income country such as Australia, you are likely to have an ecological footprint that is much larger than a person who lives in a low-income country such as Chad. The average ecological footprint of all people on Earth is 2.84 hectares. The average Australian footprint is about 8.8 hectares. To enjoy a sustainable way of life, the population needs to stay within the Earth's carrying capacity (meaning the maximum number of individuals of a population that the environment can support), and the average footprint should not be more than 1.7 hectares. **FIGURE 2** shows that developed countries such as Qatar, Luxembourg, the United States and Canada far exceed this figure. In Australia, we are using resources and generating waste more than five times faster than the Earth can regenerate and absorb them. As more countries develop industries and improve their standard of living, clever responses will be needed to ensure that everyone can enjoy a high standard of liveability.

FIGURE 2 Top ten countries with the biggest and smallest ecological footprints (hectares per capita) per person, 2016



Government policy can influence the ecological footprint through power generation, transport, water, industry support, rubbish collection and building regulations. Individuals can influence the ecological footprint through what they eat and buy, how they use water and power, whether they recycle and compost, and how they build their houses and travel.

ecological footprint the total area of land that is used to produce the goods and services consumed by an individual or country

DISCUSS

How important and ethical is it to include all aspects of sustainability (environmental, social and economic) when classifying a place and its level of liveability? **General capability: Ethical understanding**

Explore more with myWorldHistoryAtlas

Deepen your understanding of this topic with related case studies and questions.

- Investigating Australian Curriculum topics > Year 7: Place and liveability > **Christie Walk**
- Investigating Australian Curriculum topics > Year 7: Place and liveability > **Mawson Lakes**

12.5 ACTIVITY

Find one image that shows living conditions in a country with an ecological footprint of over seven hectares per capita and one image that shows living conditions in a country with an ecological footprint of less than one hectare per capita. Refer to **FIGURE 2** for possible examples.

Annotate your images to explain how the living conditions have an impact on the ecological footprint.

HASS skills: Communicating and reflecting
Geography concepts: Place, Environment

12.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 3, 4, 6	Questions 1, 7, 8	Questions 5, 9, 10

Check your understanding

1. What are the three aspects that are considered in a definition of ***sustainability***?
2. List three indicators that a place is sustainable.
3. Define the term 'biodiversity'.
4. Refer to **TABLE 1** and your atlas. Answer the following questions.
   a. There are 23 cities in the table. How many are located in the continent of Europe?
   b. Which other continents are represented?
   c. Is any city represented in all three lists of sustainability indicators?
5. Refer to **FIGURE 2** and locate and describe the distribution of countries with an ecological footprint of seven or more hectares per capita. Refer to pattern, directions, continents and latitude.

Apply your understanding

6. What do you think will happen to the global ecological footprint if liveability improves on every continent?
7. Refer to the list of things in section 12.5.1 which indicate that a ***place*** is ***sustainable***. Categorise each indicator as applying to society, economy or ***environment***. Suggest one more possible indicator for each category.
8. Consider the ways in which resources have been used to improve the liveability in your area. Which aspects would you be prepared to ***change*** a little so that others might improve the liveability of where they live?
9. Explain why high-income countries have a much larger ecological footprint than low-income countries.
10. Explain the term 'carrying capacity' and compare the Earth's carrying capacity to its current ecological footprint.

For sample responses to every question, go to www.jacplus.com.au.

12.6 Less liveable cities

LEARNING INTENTION

By the end of this subtopic you will be able to identify factors that lead to a city being described as less liveable and describe the impact of these factors on people and places.

12.6.1 Port Moresby

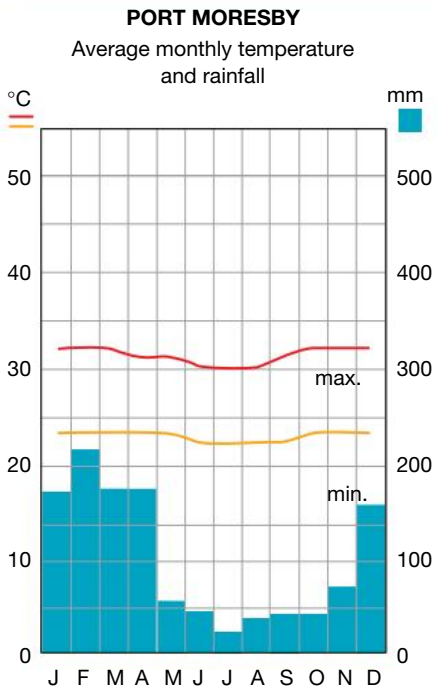
The United Nations measures people's quality of life using the Human Development Index (HDI). In 2000, Papua New Guinea was ranked 133 in the world; in 2019 its ranking had dropped to 155 (out of 189). Its largest city, Port Moresby, faces many challenges to meet the needs of its people and improve the standard of living.

FIGURE 1 Location map of Port Moresby



Source: Spatial Vision

FIGURE 2 Climate graph for Port Moresby



Environment

Port Moresby, the capital of Papua New Guinea (PNG), is located on the south-eastern coastline. Its population is approximately 374 500, and it is the largest city in PNG.

Safety

The crime rate in Port Moresby is very high, and the city has a reputation as one of the most dangerous in the world. Crimes are often very violent, and gang-based crime is common. There are not enough police, and many crimes are never solved. Travellers are advised to be very careful, to not wear obviously expensive jewellery and to avoid travelling at night.

Health

The government in PNG spends little on preventative measures such as clean water. It also spends little on healthcare. For instance, not all pregnant women can give birth in a hospital, which leads to many complications in childbirth.

Education

School facilities in PNG are quite poor, and attendance rates are very low, particularly for girls. Poor bus services, lack of interest and inability to pay school fees all influence the attendance rate. Only a small proportion of students complete Year 12. The **literacy rate** of 64.2 per cent is quite low by world standards.

Economy

The government in PNG applies a social security tax to both companies and employees, which is used to fund healthcare and welfare benefits. Unemployment rates are very high and most work is found in the **informal sector**. Many businesses in this sector involve selling food and other goods. About 40 per cent of the population lives on less than $1.25 a day. Fortunately, many families can take advantage of the good growing conditions to produce food to eat and sell.

Life is difficult for girls, and there is much discrimination. Not all girls get access to school; their literacy rate is lower than that of boys; child-bearing begins at a young age; and the level of violence against women is among the highest in the world.

literacy rate the proportion of the population aged over 15 who can read and write

informal sector jobs that are not officially recognised by the government as official occupations and that are not counted in government statistics

FIGURE 3 Sick children in a ward in Port Moresby General Hospital



Infrastructure

FIGURE 4 Port Moresby is a mixture of high-rise urbanised landscapes and village landscapes.



Formal settlement

- Street layout planned
- Rubbish collection, power, water and sanitation available
- Cost of housing and services is very high.
- Public transport
- Street lighting
- Public buildings (such as museums) and gardens
- Sealed roads

Informal settlement

- The number of these settlements is growing to meet the needs of increased migration to the city.
- Found materials are sometimes used in housing construction.
- Some houses are built over water to avoid disputes over land.
- Streets unplanned
- Street lighting
- Housing does not always withstand heavy rain and wind.
- Poor access to power, water and sanitation
- Many households plant food crops.

12.6.2 Dhaka — a less liveable city?

Dhaka is the capital city of Bangladesh. Some regions of Dhaka are similar to Australian suburban areas, with solid housing structures, shopping centres, high car ownership, and high expenditure on cars, household possessions, personal services and technology. However, it is the incidence of poverty and unplanned urban growth that leads to the city being ranked as one of the least liveable in the world.

Environment

Dhaka is located in Asia at latitude 23.43°N.

As you can see in **FIGURE 5**:

- there is a distinct dry season
- eighty per cent of rain falls in the wet season (the monsoon)
- it is often hot and humid
- approximately 2000 mm of rain falls per year
- it is warm to hot all year.

Dhaka is only 2–13 metres above sea level. Snow-melt from the Himalayas feeds the rivers. This area is at high risk from climate change because increase in snow- and ice-melt or rainfall will add to river flow. There are many rivers that flow near Dhaka. There is a high risk of flooding. During the monsoon, there are often strong winds, which also cause damage.

Infrastructure

The population of Dhaka is more than 18 million, and it is one of the most densely populated cities in the world. Dhaka's population has an annual growth rate of around 4.2 per cent. People migrate to the city in the hope of finding work in the growing industrial sector. The huge influx of people has led to unplanned urban growth on vacant land, and about half the population live in slums. This has created one of the most densely populated cities in the world. The government does not provide infrastructure to these slum areas.

FIGURE 5 Climate graph for Dhaka

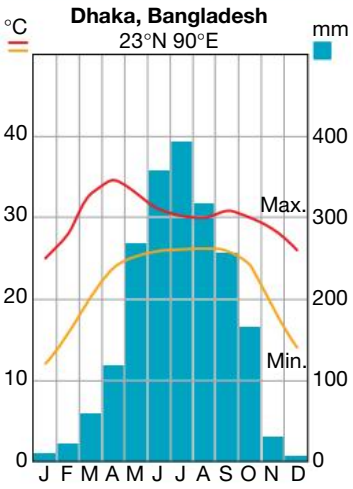


FIGURE 6 Location of Dhaka

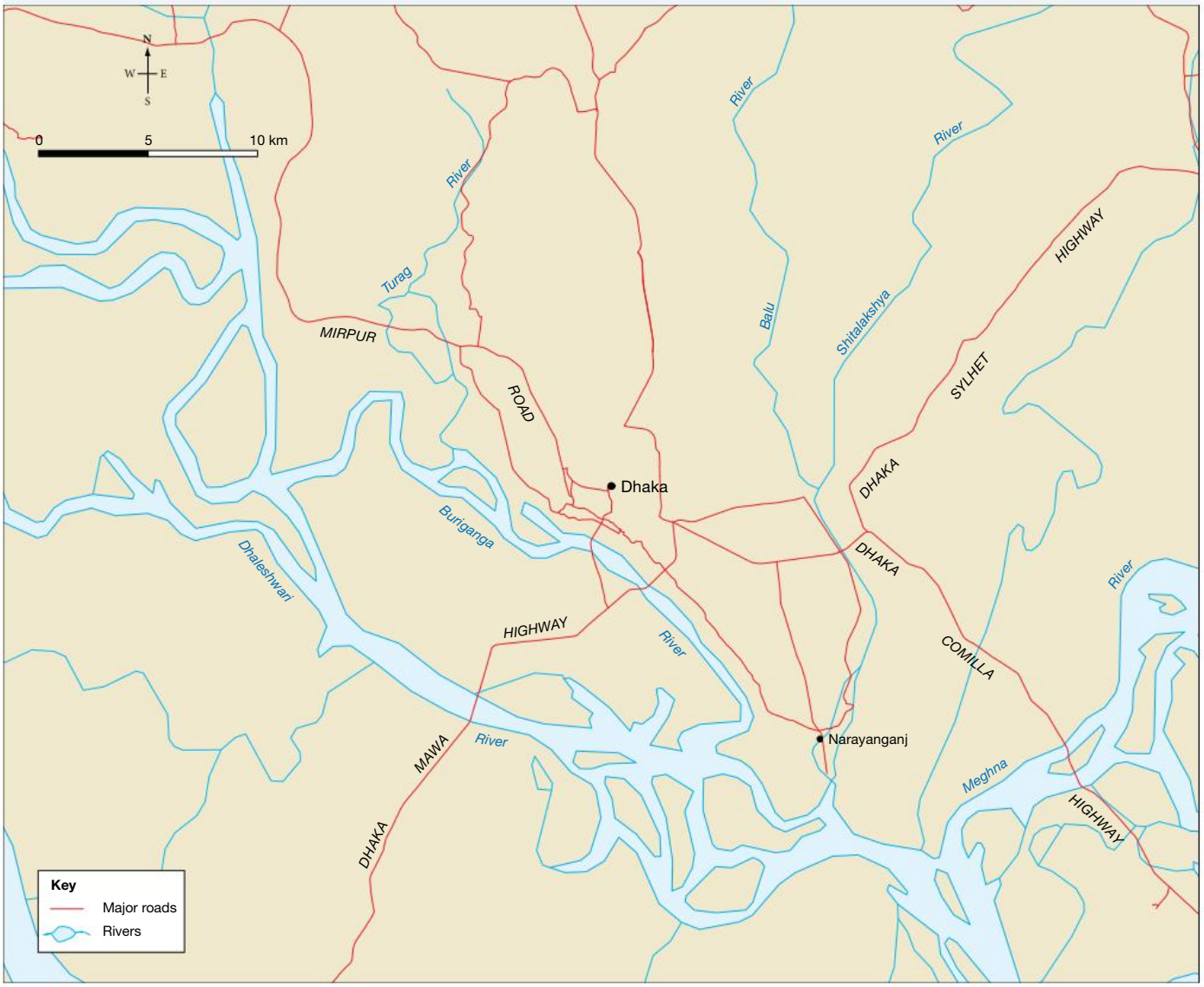


Source: Spatial Vision

TABLE 1 Humidity levels in Dhaka

	Jan.	Feb.	Mar.	Apr.	Ma.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Humidity %	54	50	45	56	72	80	80	79	79	73	67	64

FIGURE 7 Map showing many rivers that flow through and around Dhaka



Source: © OpenStreetMap contributors

Safety

Crime rates are high in the poor areas of Dhaka. There is gangster violence; land grabbing; violence against women and children; arson; and crimes related to gambling, drugs, alcohol and illegal weapons. There are not enough police officers, and they cannot be relied on to protect citizens.

FIGURE 8 A communal water pump in a slum region



Education

Primary education is compulsory, but the government is unable to provide enough schools and resources for the increasing population. Many students do not attend school all the time because their families need them to earn money. In spite of the tough conditions, the education rate in the city is slightly higher than in rural areas, and the national literacy rate is about 73 per cent.

Economy

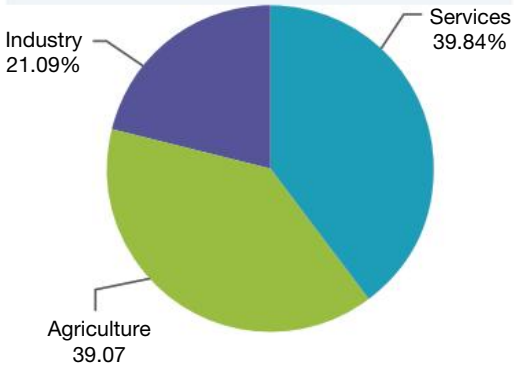
Most jobs are found in the informal sector; examples include rickshaw driver, street vendor and garment worker. Women are excluded from trades and transport, and most find work as servants or in agriculture. (Food is grown on vacant land within and around the city.) The pay in these types of jobs is low, and most or all household members need to work.

FIGURE 9 This woman has to walk through floodwaters to collect drinking water. Poor areas have no drainage, and floodwater quickly spreads into houses and over paths.



Child labour is common. It is estimated that 8 per cent of children under the age of ten are working, predominantly in the manufacturing sector. Between the ages of 8 and 14 it is estimated that almost 50 per cent of children have full-time jobs. Children as young as six have been found working instead of attending school. In 2016 about 24.3 per cent of the population lived below the poverty line, surviving on less than $1.90 per day. This is an improvement on the 2010 rate, when 31.5 per cent of the population was classed as living below the poverty line. Even with these disadvantages, many people think the city offers a better quality of life than the rural areas do.

FIGURE 10 Employment by sector in Bangladesh



Healthcare

Healthcare is mainly provided through hospitals, which are located in the **formal** part of the city. There is a shortage of hospital beds, equipment, doctors and nurses. There are no medical facilities in the slums, and often families cannot afford to pay for treatment. Private charity groups do offer some programs, particularly for maternal health.

formal describes an event or venue that is organised or structured

FIGURE 11 Children as young as seven undertake exhausting work. This child is earning $1 a day.



on Resources

Interactivities	Environmental quality (int-3096) Safe as houses (int-3097)
Weblink	Slum life
Google Earth	Port Moresby Dhaka

12.6 ACTIVITIES

1. Find an image of an informal settlement in a country other than PNG, such as the favelas in Rio, Brazil. What are the advantages and disadvantages of informal settlements?

   HASS skills: Questioning and researching
   Geography concepts: Place, Sustainability

2. The population density of Dhaka is approximately 40 000 people per square kilometre. Select one square kilometre of a residential region near your school. Estimate the number of people who live in that ***space***.

   HASS skills: Evaluating
   Geography concept: Space

3. Choose one of the other least liveable cities (see subtopic 12.3) and find out how the natural environment creates challenges and provides benefits there. Consider the city's location, climate and landscape.

   HASS skills: Analysing
   Geography concepts: Place, Sustainability

4. Use the **Slum life** weblink in the Resources tab to watch a video showing life in slums. Explain how slums are part of the process of city growth.

   HASS skills: Communicating and reflecting
   Geography concepts: Place, Sustainability

12.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Questions
1, 2, 3, 5, 7, 8, 10	4, 11, 12, 13	6, 9, 14, 15

Check your understanding

1. Refer to **FIGURE 1**. At what latitude is Port Moresby?
2. Why don't all children attend school in Port Moresby?
3. In which sector of the economy do most people find work?
4. How does environmental quality (such as climate) influence living conditions in Port Moresby?
5. Why are travellers advised to be careful in Port Moresby?
6. Refer to **FIGURE 3**. Which is the biggest health issue facing Port Moresby? Why?
7. In which continent is Dhaka?
8. When is the monsoon season in Dhaka?
9. How does the natural ***environment*** influence life in Dhaka?

Apply your understanding

10. What is the difference between the population of Port Moresby and the biggest city in your state or territory?
11. a. Compare the literacy rate in PNG and Australia.
    b. Compare the life expectancy in PNG and Australia.
    c. Compare the HDI ranking of PNG and Australia.
12. Compare the population of Dhaka with the population of Australia.
13. How is life in the Dhaka slums affected by the lack of resources that are normally provided by government, such as water, healthcare, education and safety?
14. Why do very young children enter the workforce?
15. Why does Dhaka continue to grow even though it rates poorly in terms of liveability?

For sample responses to every question, go to www.jacplus.com.au.

12.7 Improving liveability

LEARNING INTENTION

By the end of this subtopic you will be able to:

- make links between hunger and liveability
- identify reasons for the unequal distribution of food across the world
- explain how assistance from other countries can improve liveability.

12.7.1 Distribution of hunger

A basic human requirement is food, and access to enough food is a strong measure of liveability. Even in a world where there is plenty of food and millions of people are overweight, about one person in eight does not have enough to eat.

There are approximately 815 million **undernourished** people, or one in ten in the world today. Many children in poorer countries are underweight and do not get enough food to be healthy and active.

Three-quarters of all hungry people live in rural areas, mainly in the villages of Asia and Africa (see **FIGURE 1**). Most of these people depend on **agriculture** for their food. They rarely have other sources of income or employment. As a result, they may be forced to live on one-quarter of the recommended calorie intake and a small amount of water each day.

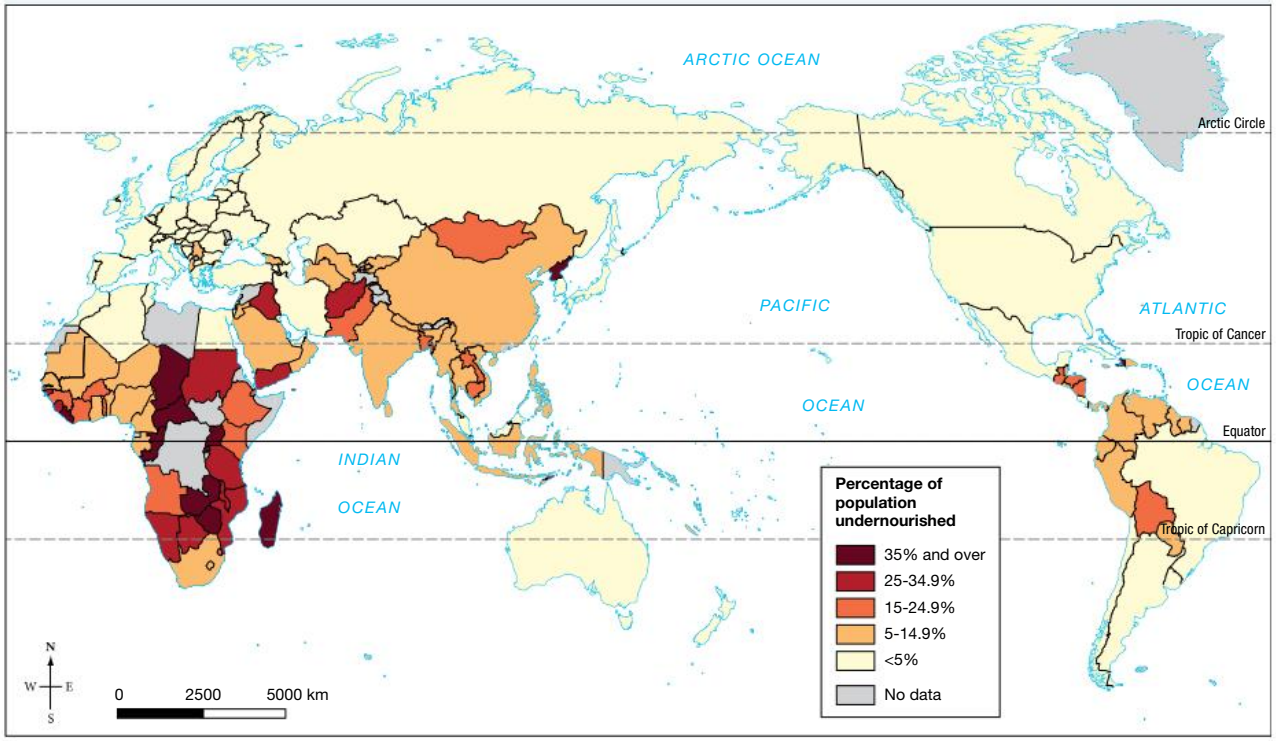
If enough rain does not fall at the right time of year, crops will not grow well and there will be little grass for **livestock**. However, rainfall is not the only factor contributing to hunger. **FIGURE 2** summarises causes of hunger.

undernourished not getting enough food for good health and growth

agriculture the cultivation of land, growing of crops or raising of animals

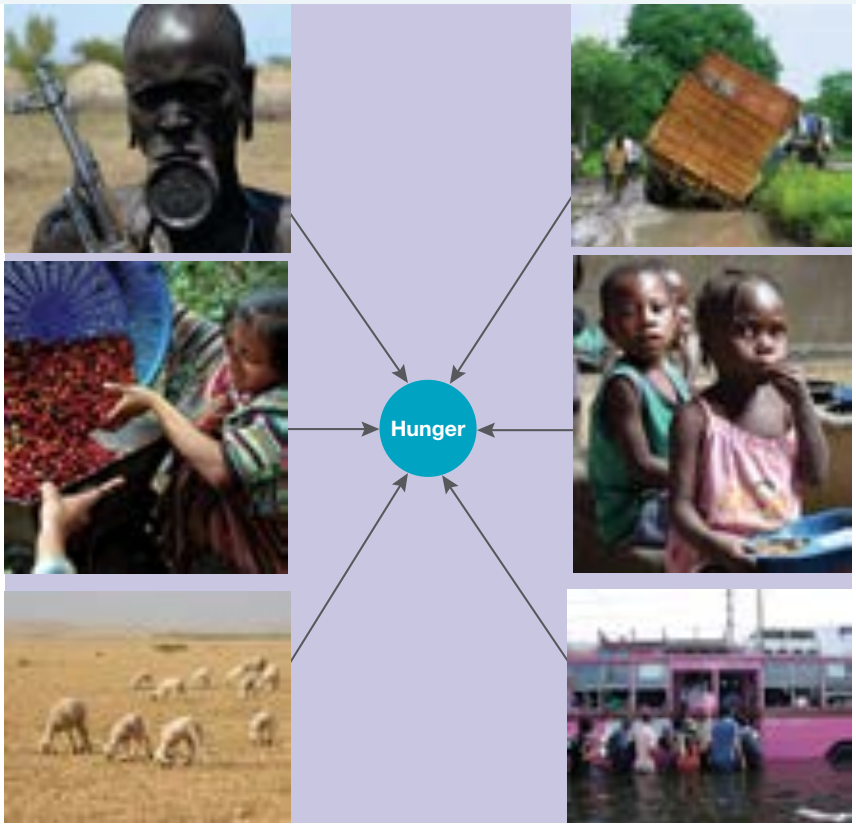
livestock animals raised for food or other products

FIGURE 1 Distribution of hunger, 2018



Source: Food and Agriculture Organisation

FIGURE 2 Causes of hunger



12.7.2 Impact of hunger

A lack of energy and poor health caused by a lack of food are made even worse by poor nutrition.

TABLE 1 The impact of hunger is felt by individuals, families, communities, regions and whole countries.

Social impacts	Economic impacts	Environmental impacts
People become unwell.	Food production declines.	Soil is overused.
Many people (particularly children) die.	The population of cities grows.	Too much land is cleared.
Fathers leave in search of work.	Poverty increases.	Soil fertility and local biodiversity decline.
There is political unrest.	The government cannot afford new infrastructure.	

12.7.3 Ending hunger

There is a range of organisations that focus on reducing hunger. Sometimes food is provided for immediate consumption and sometimes projects are undertaken to increase food production in the future. Actions can happen on a range of scales:

- Individuals in any country can join groups or donate to organisations that work to reduce hunger.
- The government of the affected country can provide assistance to the poor or improve infrastructure.
- Other countries can provide financial and food aid or consider the impact of their own policies.

12.7.4 Sustainable Development Goals

Many countries cannot afford to provide infrastructure for their growing population. The underlying cause of very low liveability is poverty. Reducing poverty is fundamental to improving living conditions in many parts of the world.

United Nations Development Goals

The United Nations (UN) is an organisation with members from 193 countries. In 2000, 189 countries signed a pledge to free people from extreme poverty by 2015 (Millennium Development Goals 2000–2015). In 2015, a new pledge was signed with 17 goals, each with specific targets to be reached over 15 years (Sustainable Development Goals 2015–2030).

TABLE 2 UN Development Goals

Millennium Development Goals 2000–2015	Examples of achievements of MDGs	Sustainable Development Goals 2015–2030	
Eradicate extreme poverty and hunger	Fewer people live in extreme poverty.	No poverty	Industry, innovation and infrastructure
Achieve universal primary education	Primary school enrolments have increased.	Zero hunger	Reduce inequality
Promote gender equality and empower women	Many more girls are attending school.	Good health and wellbeing	Sustainable cities and communities
Reduce child mortality	More babies are surviving.	Quality education	Responsible consumption and production
Improve maternal health	More mothers have access to healthcare when giving birth.	Gender equality	Combat climate change
Combat HIV/AIDS, malaria and other diseases	Vaccination has reduced incidence of measles.	Clean water and sanitation	Conserve and use ocean resources sustainably
Ensure environmental sustainability	Safe water is available to more people.	Affordable and clean energy	Protect and use Earth's resources sustainably
Develop a global partnership for development	Huge increase in number of people with phone and internet	Decent work and economic growth	Provide access to justice and promote peaceful societies

Australian government and NGOs

The Australian government recognises that we are **global citizens**, and it supports an overseas aid program through its Department of Foreign Affairs and Trade. Overseas aid helps improve outcomes in health, education, economic growth and disaster response in many locations.

The Australian government runs projects to improve living conditions, often working with other countries or with **non-government organisations** (NGOs). NGOs also run programs on their own. Well-known NGOs include World Vision, CARE Australia and Australian Red Cross.

global citizens people who are aware of the wider world, try to understand the values of others, and try to make the world a better place

non-government organisations non-profit groups run by people (often volunteers) who have a common interest and perform a variety of humanitarian tasks at a local, national or international level

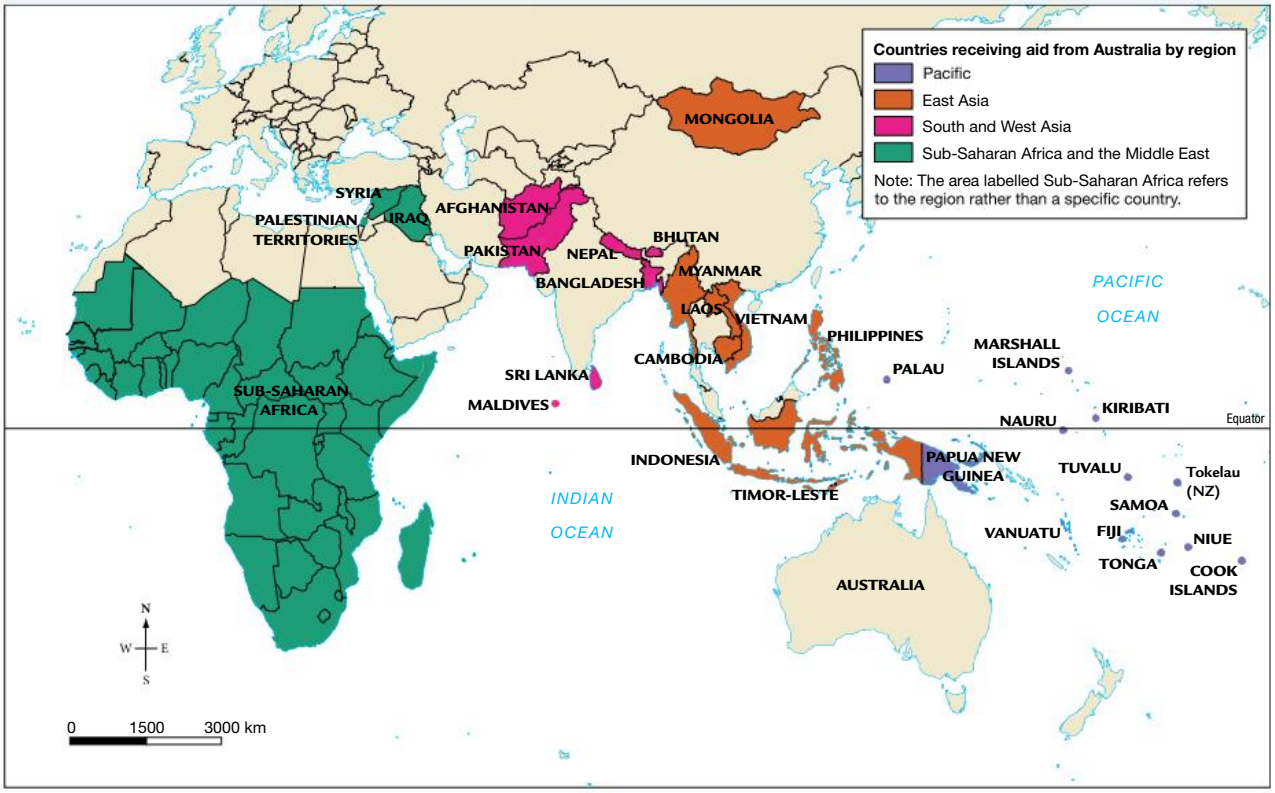
appropriate technology technology designed specifically for the place and the people who will use it. It is affordable and can be repaired locally.

Small changes, big results

Simple and **appropriate technology** can make an enormous difference to people's lives in developing countries (see **FIGURE 5**).

In addition, a small amount of money can sometimes make a big difference to an individual or community group. Microfinance, or microcredit, is a system of lending small amounts of money, perhaps $150. The money is used to invest in something that can generate income. A person might buy an animal for milking and breeding, equipment for basket-making, stock for a store, or materials for jewellery-making. The loan must be repaid, but at a low interest rate, and further loans can be taken out.

FIGURE 3 Countries receiving assistance from Australia



Source: Department of Foreign Affairs and Trade

FIGURE 4 Examples of projects to improve liveability (a) A child immunisation clinic on the Kokoda Track (b) Building schools and improving education in Indonesia (c) Planting grasses in Fiji to stabilise sea banks.



FIGURE 5 Appropriate technology (a) Electricity in Nepal is not available to all houses, so a solar lamp increases the opportunities to read. (b) In South Africa, people push hippo rollers, which make it easier to collect water from distant wells and bring it home.





12.7 ACTIVITIES

1. Work with a partner to find an example of a project that is trying to solve the immediate issue of hunger and an example of a project that is trying to make food production ***sustainable***. Describe where the project is taking place and which organisation manages the project. Create an outline of the project. Refer to **FIGURE 2** and explain which of the causes of hunger will be reduced by the project.
   HASS skills: Questioning and researching
   Geography concept: Sustainability
2. Prepare a report about the work of one NGO involved in programs that aim to improve liveability in an overseas country. Include background information about the location of the project (country and locality); statistical data about living conditions (such as life expectancy, access to safe water, doctors per 100 000 people); and ***environmental*** conditions. Describe the NGO and its project and how it is aiming to improve liveability.
   HASS skills: Analysing
   Geography concept: Environment
3. Choose one of the Sustainable Development Goals. Use a visual organiser to explain how achieving this goal will improve liveability. Consider the flow-on effects and the impact on people, the economy and the ***environment***.
   HASS skills: Communicating and reflecting
   Geography concept: Environment

12.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 7	Questions 3, 6, 8, 9	Questions 4, 10, 11

Check your understanding

1. Refer to **FIGURE 1**.
   Which region has the largest number of hungry people? Name three countries in this region.
2. Copy and complete the following sentence to make it accurate. 'Most of the world's hungry people live in _____ villages in _____ and _____.'

3. Refer to **FIGURE 1**. In 1990–1992 there were about one billion people who did not get enough food. How many people suffered from hunger in 2018? Is this an increase or decrease? By how many million has it changed?
4. How can poor roads contribute to hunger?
5. Which organisation developed the Millennium Development Goals and the Sustainable Development Goals?
6. How many countries are in there in the world? What percentage of countries supported these sets of goals?

Apply your understanding

7. Consider **TABLE 1**. Provide one more example for each category of impact — social, economic and environmental.
8. Study the images in **FIGURES 4** and **5**. Which of the Sustainable Development Goals have been addressed in these projects?
9. Refer to **FIGURE 3**. Describe the distribution of places that receive aid from Australia. Think in terms of region, such as Asia, East Asia, the Middle East, South Asia, West Asia, Pacific, Africa and the Caribbean.
10. Explain how simple technology and microfinance are transforming lives in developing countries.
11. Explain why addressing issues related to hunger is an essential component of improving liveability.

For sample responses to every question, go to www.jacplus.com.au.

12.8 Liveable communities and me

LEARNING INTENTION

By the end of this subtopic you will be able to identify strategies that can be employed at the local level to enhance the liveability of places.

12.8.1 Liveability studies

A study of a region's liveability will reflect its natural characteristics and human characteristics. All communities would like a safe, healthy and pleasant place to live, a sustainable environment, the chance to earn a liveable wage, reliable infrastructure and opportunities for social interaction.

The findings of a liveability survey will be influenced by a range of factors.

- Where a person lives influences their access to services, employment and environmental features, and their address may influence their perception of the quality of the region.
- Different age groups have different views and needs.
- Current economic conditions influence a person; for example, a major employer may have closed or opened.
- Environmental conditions affect a person; for example, a region may be experiencing drought.
- Government policies influence infrastructure, housing assistance and grants to local sports clubs.

To find out about the liveability of an area, a number of themes need to be investigated. Some of these can be gained from **census** statistics, while others can be gained only through surveys and fieldwork.

In any community there will usually be agreement about some things that improve liveability. All groups accept that safe water, sealed roads and a reliable power supply are important. If a community wants to obtain certain kinds of items on its liveability 'wish list', it sometimes needs help from national, state or local government. Examples of such items include major roads, railways and desalination plants. Sometimes, though, a wish-list item is best obtained by an individual or community. This is the case when setting up sporting clubs, youth groups and local music events.

census a regular survey used to determine the number of people living in Australia. It also has a variety of other statistical purposes.

TABLE 1 Matching liveability indicators to key themes

Measure	Examples of indicators	
Social	• Population characteristics (gender, age) • Education (primary, secondary, tertiary) • Health (life expectancy, health-centre attendance, length of walking tracks, smoking rates, weight, chronic diseases) • Safety (perception, crime rates, road deaths and injuries, work safety)	• Volunteering • Voting • Aged care accommodation • Access to public transport • Membership of clubs and organisations • Diversity (ethnicity)
Environmental	• Biodiversity • Planning for the future • Water access • Waste management • Ecological footprint	• Public spaces • Household recycling • Weather • Land clearing
Economic	• Employment • Variety of businesses • Income • Financial stress • Housing types	• House ownership • Infrastructure • Internet access • Power • Car ownership

Community wish list

- Playgrounds
- Paths for prams
- Primary schools
- Single-person housing
- Family housing
- Friendly community
- Shopping nearby
- Paths for scooters
- Health services
- Public transport
- Neighbourhood house
- Parks and gardens
- Public seating
- Recognition of those from non-English-speaking backgrounds
- Financial security
- University of the Third Age

FIGURE 1 Community wish list: some aspects of liveability are common to all groups and some are desired by particular groups.



FIELDWORK TASK

Looking at your school environment

Geographers are particularly interested in:

- the location of things
- the distance between things
- the distribution patterns we can see when we produce a map
- the movement between places
- the connection between places
- the changes that happen over time.

How can you apply these concepts when finding ways of improving your school environment? Work in pairs to gather the data needed for the following fieldwork task. Each student will complete a report of findings.

FIGURE 2 A modern school environment



Step 1**:** Study the distribution of resources and landscapes over space in the schoolyard.

- Obtain an outline map of the schoolyard.
- Walk around the schoolyard and identify different categories of land use. Design a key for your map and mark in the land uses on your map.
- As you walk around the schoolyard, also note the landscape (slopes, swamp, bare ground, concrete and so on). Record the information about the landscape on your map. You may add to your key or annotate the map. You may also wish to use an overlay. (See the SkillBuilder in topic 9.) You could also add images.
- Describe the distribution of land uses in the schoolyard. Can you identify regions? Mark these on your map. Consider using an overlay. Is there any interconnection between the landscape and land use?

Step 2**:** Study the patterns of movement in the schoolyard.

- Choose two places that students often walk past.
- Record the number of students who pass and the direction of travel in two 5-minute sessions.
- Add this information to your map. Which are the busiest walkways in the schoolyard?

Step 3**:** Make recommendations for improvements to the schoolyard. Based on the information you have gathered, describe:

- pleasing aspects of the schoolyard
- disappointing aspects of the schoolyard
- your three most effective suggestions for improving the schoolyard.

Mark the location of the proposed changes on your map. You may include images of proposed changes.

Conduct a short survey of ten other students to find out what they think about your three suggestions for improving the schoolyard.

When conducting your survey, there are three types of questions you need to ask: those that seek an opinion, those that seek a fact and those that seek a suggestion.

- To seek opinions, try to ask for a rating. For example, There should be more seats in the schoolyard. Do you (a) strongly disagree? (b) disagree? (c) neither agree nor disagree? (d) agree? (e) strongly agree?
- To seek facts, ask for a structured response. For example, How often do you use the seating by the oval? (a) Every day (b) 1–3 times a week (c) A few times a month (d) A few times a year (e) Almost never.
- To seek suggestions, use open-ended questions. For example, What sorts of plants do you think should be planted along the front fence?

Create one question for each of your suggestions. Cover each type of question. Ensure you have your map with you when you ask the questions.

Collate, or gather, the survey data for each question. For each question, count the number of responses that are the same, and present the result in words, in a table or in a graph. (You might choose a bar graph, for example: see the SkillBuilder in topic 9.) There might be a clear trend in the responses or there might be variety in the responses.

To what extent do your survey findings support your suggestions? Describe the result.

12.8.2 Transport strategies

People in towns and cities are always looking for strategies to improve their living conditions. A community is made up of people from a range of age groups, a number of different land uses, a range of needs and a variety of interests. Ideas and plans for improvement may be overarching or targeted.

The movement of people within and between neighbourhoods is an important issue in towns and cities. The humble bicycle is now seen as a way of increasing mobility, reducing traffic congestion, reducing air pollution and boosting health. Bicycle tracks encourage recreational riding for all ages (see **FIGURE 3**) and dedicated bicycle paths along main routes (see **FIGURE 4**) encourage people to commute by bicycle, rather than car, to work and school.

In 1965, a group in Amsterdam, the Netherlands, introduced the idea of bike sharing — public bicycles that are hired, usually for short trips. This first attempt was not a success, but the idea persisted. Modern bike-sharing systems have overcome problems of theft and vandalism by using easily identifiable specialty bicycles, monitoring the bicycles' locations with radio frequency or GPS, and requiring credit-card payment or smart-card-based membership to check-out bicycles. In some places, bicycles can be located on your mobile phone, and there are more links between bicycles and existing public transport. Between 2014 and 2018 bike-sharing programs doubled in size. More than 1600 programs are in operation, providing almost 18.2 million bikes to 20 million registered users.

FIGURE 3 Recreational riding along a trail mainly designed for bicycles



FIGURE 4 Special bicycle lanes increase the safety of bike riding.

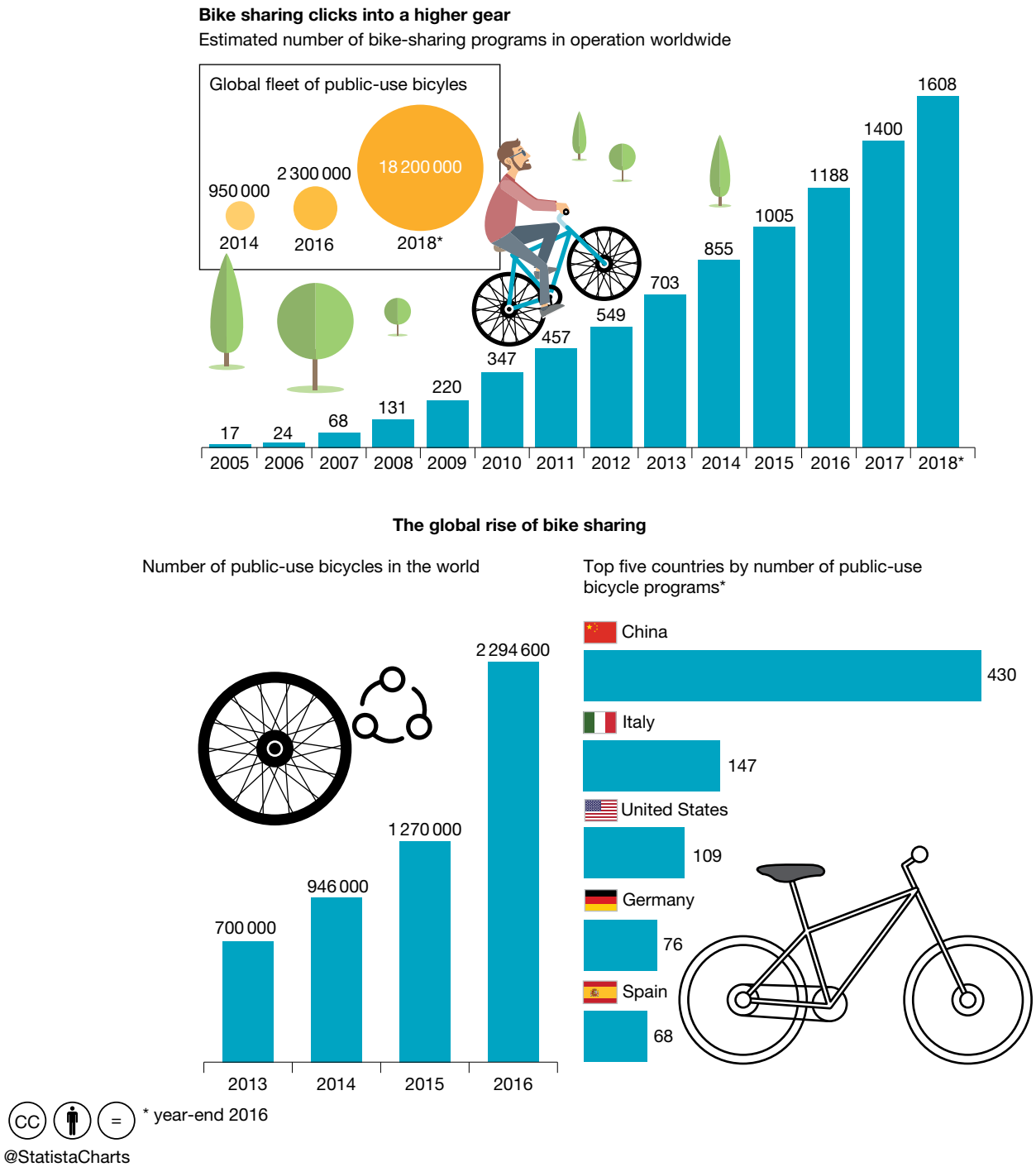


Copenhagen was rated as the world's most bike-friendly city in 2014 and has retained this position every year since. Beijing is the world leader in bike-share programs, with 2.4 million share bikes and 11 million registered users. Bike-sharing programs are an example of a popular strategy that is aimed at improving liveability for a range of ages and locations within a community.

An example of a successful bike-sharing scheme is in Paris. The Vélib was introduced in 2007 and quickly doubled in size. By 2012, bicycle trips in the city had grown by 41 per cent. The program continues to grow; an additional 20 000 bikes have been added and the number of share stations expanded to 1400. One-third of the new bikes will have an electric motor with a range of around 50 kilometres when fully charged. These new bikes will also feature a basket with a carrying capacity of 50 kilograms.

It is anticipated that these new bikes will overcome problems associated with maintaining a share-bike program in hilly or uneven terrain, where commuters will ride a bike downhill in the morning, but then elect to return home using alternative transport; leading to a surplus of bikes in one area and a lack of them in others. Bike sharing is part of a plan to reduce car traffic and pollution in Paris, which includes closing streets to cars on weekends, reducing speed limits, encouraging bus travel and extending bicycle lanes.

FIGURE 5 Bike sharing is on the rise globally.



RESEARCH TASK

Teenage spaces in your community

A community is made up of a number of groups that interconnect. Teenagers are an important part of any community.

1. Produce a pie graph to show the population of your community. Refer to the latest census data provided by the Australian Bureau of Statistics. Show the percentage of each of the following categories: less than 13 years old, teenagers, adults and elderly.
   Participation by teenagers in the community will be influenced by values, abilities and interests.
2. a. Find and read a news article in the local media that is about teenagers. Note the source and date and summarise it in three dot points. For example, is it about an issue that relates to only teenagers, a space used by teenagers, an achievement by teenagers, a complaint about teenagers or a positive story about teenagers?
   b. As a class or in a small group, brainstorm a list of the ways in which teenagers participate in the community. Divide the agreed list into the following categories: informal, formal, social, cultural and physical.
3. a. Find a map of your local area and use dots to show the spaces that are most attractive to teenagers. Ensure that your map satisfies all mapping conventions (BOLTSS).
   b. Describe the distribution pattern of attractive places. Is the pattern linear (in a line or lines), clustered (in small groups) or scattered?
   c. Think about the pattern you have mapped and your knowledge of the region. Are most of your favourite spaces indoors or outdoors? To what extent is there a connection between the pattern on your map and other features in your neighbourhood? Are your favourite spaces in places that are strongly influenced by the natural environment or the built environment?
   d. Add an overlay to your **base map** and use dots to show the least favourite spaces for teenagers. Describe the pattern shown on your overlay map. To what extent is there a connection between the pattern on your overlay map and other features in your neighbourhood?
4. Provide up to three examples of ways you participate in communities bigger than the local neighbourhood. For each example:
   a. Describe the scale of that community. Does it cross local council borders, state borders or national borders?
   b. Refer to a relevant map (for example, in your atlas or a street directory) to find out the direction and distance from that place to where you live. Add an arrow to your map pointing in the correct direction. Add a label to the arrow to describe the activity and the distance.

Improving your community

5. a. Identify a space in your neighbourhood that you think could be improved for teenagers. It may be one that is currently attractive, or it may be a least favourite space.
   b. Provide an image (photograph, diagram or map) of this space. Annotate the image to describe its current characteristics.
   c. Identify the key concerns about this space. You might think about safety, tolerance, sustainability, access, inclusiveness, services, environmental quality, health and respect.
   d. How would you improve this space?
      - To help you think of suggestions, use your research skills to find out about ways in which liveability has been improved for teenagers in other parts of the world. Consider European countries in particular.
      - Discuss the ways in which the European ideas are relevant, or not relevant, to your community.
      - Provide a planning suggestion for each of the concerns you raised in question 5(c).
   e. Provide a new image to show the impact of your proposals. This could be a diagram, sketch, annotated photograph, model or whatever helps communicate what the impacts might be.
   f. Which are your two most important suggestions? What criteria did you use to choose these suggestions? Which suggestion is most likely to be implemented? Why?
   g. Compare your suggestions to the ideas of others in your class. What are the common elements? What would you put in a master plan for teenage spaces in your community?

on Resources

Weblink Bike sharing

Google Earth Amsterdam

base map the map underneath an overlay

12.8 ACTIVITIES

1. Find a local news story about a ***change*** to liveability in your area. Is the ***change*** economic, social or environmental? Is the ***change*** predicted to be positive or negative? Will the ***change*** be permanent?
   HASS skills: Questioning and researching
   Geography concept: Change
2. Find out about a bike-sharing scheme in Australia or overseas. Describe its location and the region it covers. Provide three other key facts about the scheme.
   HASS skills: Questioning and researching
   Geography concept: Place
3. Some cities provide schemes to encourage people to ride bikes. Find out about the success of bike incentive schemes in European cities. Include the name of the city, the date of the scheme, summary of the scheme and evidence of success or failure.
   HASS skills: Analysing
   Geography concepts: Place, Sustainability

12.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 10	Questions 4, 6, 7	Questions 2, 8, 9

Check your understanding

1. What are the three themes used when investigating liveability? Why do you think these are chosen?
2. Refer to **TABLE 1** and identify two aspects that could be placed in a different theme. Justify your suggested ***change***. Suggest one more indicator that should be included. In which theme would it belong?
3. What is the name of the official survey used to gather information about people in Australia, and how often is it conducted?
4. What are three advantages of increasing bicycle riding?
5. What problems were faced by the first bike-sharing scheme?

Apply your understanding

6. Refer to **FIGURE 1** and use an organiser like a Venn diagram to compare and contrast the liveability wish lists for young families and older people.
7. How could the improvement in liveability for one age group actually help the liveability of another age group? Provide an example.
8. Refer to **FIGURE 5**.
   a. Suggest a reason for the rapid increase in the number of share bikes in cities around the world.
   b. Why do you think China is the fastest growing market for share bikes?
   c. Copenhagen has been rated the most bike-friendly city in the world but does not appear in the top five countries for bike-share programs. Research the city of Copenhagen and suggest a reason for this.
   d. How might the introduction of electric bikes encourage more people to use share bikes?
   e. What problems might the use of electric bikes cause?
9. Refer to **FIGURE 1**. Which three items from the community wish list do you think are most needed in the area you live in? Give reasons for your answer.
10. Would a bike-sharing scheme be a viable option in your area? Give reasons for your answer.

For sample responses to every question, go to www.jacplus.com.au.

12.9 Thinking Big research project: Liveable cities investigation and oral presentation

Scenario





Every year the Economic Intelligence Unit ranks 140 major cities based on five key indicators:

- *Stability* — relates to the amount of crime, terror threats and potential military conflict
- *Healthcare* — relates to the availability and quality of healthcare in both the public and private sectors
- *Culture and environment* — includes climate, freedom from censorship, sport and corruption
- *Education* — relates to the availability and quality of education in both the public and private sector
- *Infrastructure* — relates to the provision of services and structures in the community and includes road networks, public transport, housing, telecommunications, water quality and energy. Both quality and reliability are considered.

The city that receives the number 1 ranking is the most liveable city in the world, while the city ranked Number 140 is the least liveable city.

Task

Your task is to prepare a PowerPoint presentation that examines what it means to be a liveable city and how this is determined. What do you notice about the cities that are considered the most and least liveable?



As part of your investigation you will need to investigate a top ten most liveable city and a top ten least liveable city. You will need to compare them against the key indicators used to rank cities. Finally, you will present your findings to the class.



Follow the steps detailed in the **Process** section to complete this task.

Process

- Open the projectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in small groups will enable you to share responsibility for the project.
- Navigate to the **Research forum,** where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find a number of weblinks. Use the **Liveable cities** weblink to watch the introductory video on liveable cities.
- Refer to the **Liveable cities — The Economist Intelligence Unit** weblink; which lists the ten most liveable cities and the ten least liveable cities.
- Select one city from each list to investigate.
- In the **Media centre** you will find an assessment rubric to guide your work, check the criteria before you begin.
- Read the relevant subtopics and access the suggested weblinks before branching out and conducting additional research. Don't forget to compile your bibliography as you progress through the task (use the bibliography template).
- When compiling your presentation, make sure you answer the following questions:
  - What is meant by the term 'liveable city'?
  - How is this determined?
  - What do you notice about cities that are considered most liveable and least liveable? (Do they have anything in common?)
- Investigate your chosen cities. Find out how they rate in each of the five indicators listed in the scenario: stability; culture and the environment; healthcare; education and infrastructure.
- Find images to illustrate your presentation.
- Once your research is complete, compile your presentation and present your findings to the class.
- Check thoroughly to ensure correct spelling and grammar, and that you have completed all elements required. When you're happy with your work, submit your completed task to your teacher for assessment.



on Resources

ProjectsPLUS Liveable cities investigation and oral presentation (pro-0239)

12.10 Review

12.10.1 Key knowledge summary

12.2 Defining liveability

- Different people have different perceptions of liveability.
- Perceptions of liveability are coloured by a person's background, stage in life and expectations.

12.3 Where are the most liveable cities?

- Cities around the world are ranked against a set of criteria to create the liveable city index.
- Melbourne, Vienna and Vancouver have for several years shared the number 1 ranking; however, in 2018 Melbourne dropped to second place, Vancouver to sixth and Vienna has taken the top spot.
- Changes to the top ten rankings are largely the result of improvements made in cities that are pushing to move up the rankings.
- There is more than one ranking index, but one that is widely used and relied on for this subtopic is produced by the Economist Intelligence Unit.

12.4 Perth — a liveable city

- Perth has featured in the top twenty of most liveable cities for many years.
- Some factors, such as weather, work both for and against Perth as a liveable city.

12.5 Liveability and sustainable living

- Liveability and sustainability are different.
- High-income countries feature strongly in the list of liveable cities; however, these cities also have a high ecological footprint.
- A high ecological footprint means we are using resources at a faster rate than they can be regenerated by the Earth.

12.6 Less liveable cities

- Less liveable cities tend to be in developing countries.
- Extreme poverty is an issue in these places, with many living below the poverty line.
- Literacy levels are low, though showing some improvement.

12.7 Improving liveability

- For those living below the poverty line, liveability will not improve until they have access to enough food.
- While some people do not have enough to eat, others have too much.
- Hunger has social, environmental and economic impacts.
- The United Nations has identified poverty as the underlying cause of low liveability.
- Australia provides aid to many countries around the world.

12.8 Liveable communities and me

- People have different perceptions of liveability and this is coloured by their stage in life and where they live.
- Bicycle-sharing schemes are increasing and are a way of reducing traffic congestion, reducing pollution and improving health.
- Beijing in China has more share bikes than any other community.
- Paris is introducing electric bikes to its bike-sharing system.

12.10.2 Key terms

agriculture the cultivation of land, growing of crops or raising of animals
appropriate technology technology designed specifically for the place and the people who will use it. It is affordable and can be repaired locally.
base map the map underneath an overlay
biodiversity the variety of life in the world or in a particular habitat or ecosystem
census a regular survey used to determine the number of people living in Australia. It also has a variety of other statistical purposes.
conurbation an extended urban area, usually made up of a town merging with the suburbs of a city
distribution the way things are spread across an area
ecological footprint the total area of land that is used to produce the goods and services consumed by an individual or country
formal describes an event or venue that is organised or structured
global citizens people who are aware of the wider world, try to understand the values of others, and try to make the world a better place
informal sector jobs that are not officially recognised by the government as official occupations and that are not counted in government statistics
infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines
literacy rate the proportion of the population aged over 15 who can read and write
livestock animals raised for food or other products
natural environment elements — such as wind, soil, flowing water, plants and animals — that influence the characteristics of an area
non-government organisations non-profit groups run by people (often volunteers) who have a common interest and perform a variety of humanitarian tasks at a local, national or international level
population density the number of people living in a square kilometre
temperate climate climate with generally warm summers and cool winters, without extremes
undernourished not getting enough food for good health and growth

12.10.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

What does a place need to have to make it liveable? Is everyone's idea of liveability the same?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question, outlining your views.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4288)
Reflection (ewbk-4369)
Crossword (ewbk-4368)
Student learning matrix (ewbk-4358)

Interactivity Liveable places crossword (int-7705)

12.10 Review exercises

Multiple choice

1. Which of the following is a way in which liveability can change?
   - **A.** Over a number of years
   - **B.** Over seasons
   - **C.** After an extreme event
   - **D.** All of the above

2. Why is infrastructure so important for improving liveability? Select all possible options from the answers below.
   - **A.** It provides roads for transport.
   - **B.** It adds to the visual appeal of a city.
   - **C.** It provides hospitals for healthcare.
   - **D.** It provides clean water for drinking.

3. What three aspects does the concept of ***sustainability*** include?
   - **A.** Political
   - **B.** Social
   - **C.** Economic
   - **D.** Liveability
   - **E.** Environmental

4. The general connection between the ecological footprint and liveability is that regions that rank highly in terms of liveability have a _____ ecological footprint.
   - **A.** Small
   - **B.** Large
   - **C.** Non-existent
   - **D.** Medium

5. What are three aspects of the typical Australian way of life that contribute to high resource use?
   - **A.** Fossil fuel-powered transport
   - **B.** Solar-powered houses
   - **C.** Many possessions that require electricity
   - **D.** Electric cars
   - **E.** Single-use products

6. What sorts of jobs do people from the poorer regions of Port Moresby and Dhaka have access to?
   - **A.** Jobs in the mining industry
   - **B.** Jobs in the corporate industry
   - **C.** Jobs in the informal sector
   - **D.** Jobs in the formal sector

7. How many Sustainable Development Goals are there?
   - **A.** One
   - **B.** Three
   - **C.** Ten
   - **D.** Seventeen

8. Which of the following is a small change that can make a big positive difference to living conditions?
   - **A.** A solar light to make it possible to do homework
   - **B.** A long walk to school
   - **C.** Moving to a slum area
   - **D.** Girls staying home to tend the fire

9. For most poor farmers in developing countries, growing a cash crop and selling for export does not help decrease hunger. Identify which of the following helps explain why this is so.
   - **A.** It adds land to food production.
   - **B.** Growing for export means locally produced food crops become less common and so more expensive.
   - **C.** It makes more sense for poor farmers to grow cash crops.
   - **D.** They don't want to eat what they grow.

10. What is one of the advantages of increasing bicycle riding?
   - **A.** Increasing traffic congestion
   - **B.** Reducing public transport use
   - **C.** Reducing people's health
   - **D.** Reducing air pollution

Short answer

11. How does the place in which you live influence your view of what makes a satisfactory standard of liveability?
12. Provide at least three examples that show the influence of the environment on living conditions.
13. What are the advantages and disadvantages of the informal sector of the economy?
14. What are the advantages and disadvantages of informal housing?
15. How can geography skills help in projects that aim to improve liveability?



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 12 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

12.1 Overview

Video eLesson
- Making places liveable for young people (eles-1621)

Google Earth
- Kolkata

12.3 Where are the most liveable cities?

Interactivity
- My most liveable country (int-3095)

Weblink
- Economist Intelligence Unit

My World Atlas
- Investigating Australian Curriculum topics > Year 7: Place and liveability > Polluted cities

12.4 Perth — a liveable city

Weblinks
- Best things to do in Perth
- A tour around my city of Perth

12.5 Liveability and sustainable living

My World Atlas
- Investigating Australian Curriculum topics > Year 7: Place and liveability > Christie Walk
- Investigating Australian Curriculum topics > Year 7: Place and liveability > Mawson Lakes

12.6 Less liveable cities

Interactivities
- Environmental quality (int-3096)
- Safe as houses (int-3097)

Weblink
- Slum life

Google Earth
- Port Moresby
- Dhaka

12.8 Liveable communities and me

Weblink
- Bike sharing

Google Earth
- Amsterdam

12.9 Thinking Big research project: Liveable cities investigation and oral presentation

ProjectsPLUS
- Liveable cities investigation and oral presentation (pro-0239)

12.10 Review

eWorkbook
- Reflection (ewbk-4369)
- Crossword (ewbk-4368)
- Student learning matrix (ewbk-4358)

Interactivity
- Liveable places crossword (int-7705)

To access these online resources, log on to **www.jacplus.com.au**.

HISTORY

HISTORY CONCEPTS AND SKILLS

13 History concepts and skills 464

THE ANCIENT WORLD

14 The ancient world: c. 60 000 BCE to c. 650 CE 494

DEPTH STUDY 1: INVESTIGATING THE ANCIENT PAST

15 Investigating the ancient past 544

DEPTH STUDY 2: INVESTIGATING ONE ANCIENT SOCIETY

16 Ancient Egypt 574

17 Ancient Greece 626

18 Ancient Rome ..... online only

19 Ancient India ..... online only

20 Ancient China 682



13 History concepts and skills

13.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

13.1.1 Links with our times

Although the ancient civilisations disappeared a long time ago, much evidence of the ancient past has been left behind. In many cases, our modern society can trace aspects of its origins back to people or civilisations who existed thousands of years ago.

We can thank the ancient Egyptians for some aspects of modern architecture and the art of writing; the ancient Greeks for developments in medicine, mathematics, science and philosophy; the ancient Romans for their influence on art and architecture and our modern political and legal system; and the ancient Chinese for many technologies, including the compass, paper and printing, and gunpowder.

In many ways, how our societies operate now is very similar to those that existed thousands of years ago. We, as historians, can study the evidence that these societies have left behind to examine similarities such as art and religion, using currency, laws and regulations, trade routes, writing and language. It's hard to believe that we, in modern society, could have things in common with warriors who fought to the death in arenas packed with thousands of people. However, when you look closely, you can likely start to see more similarities than what you first thought!

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4289)

Video eLesson Investigating the past (eles-1057)

SOURCE 1 This ancient Egyptian papyrus is a source of information about the people and society in ancient Egypt and is useful for historians.



13.2 Concepts in History

LEARNING INTENTION

By the end of this subtopic you will be able to identify the eight historical concepts and explain why they are important.

13.2.1 Why we study history

History is a journey of discovery through time. Often it will excite you, and sometimes it will shock and amaze you. Sometimes it will seem as though the people of past societies were from another planet. At other times, their actions and ideas will be as familiar to you as those of your friends and neighbours.

SOURCE 1 Terracotta models of actors' masks used in plays performed in ancient Greece around 2200 years ago. The actual masks have not survived because they were made of materials such as wood, linen and leather.



What is a historian?

Our own times have many links with the past. For example, many people in modern societies attend performances of plays. This art form originated in some city-states of ancient Greece, where it was an important aspect of their culture. Historians research past civilisations, cultures and societies. They try to build a picture of how people in earlier times lived and acted. Historians try to make sense of past ideas, customs and beliefs, the ways people were ruled and how they made their living. Historians enquire into the past by examining sources. Historians also try to understand and explain how people's lives were shaped by other people and events, what they thought about their times and how they brought about changes in their own world.

In this topic, we will look at the following concepts:

- Sources — these are any written or non-written materials that can be used to investigate and give us information about the past.
- **Evidence** — this is the information we get from sources that is useful to our investigations.
- Continuity and change — where we consider the parts of life or society that have stayed the same and those that have changed over a period of time.
- Cause and effect — where we look at the relationship between historical events or actions; for example, when one event or action happens because of the other.
- Perspective — this involves considering a person's point of view, and how they see and understand what is going on around them.
- Empathy — where we look at the the past from the point of view of a person or group.
- Significance — where the importance given to events of the past is considered.
- Contestability — this looks at the debate over how we interpret the past; for example, because of a lack of evidence or different views.

evidence information that indicates whether something is true or really happened

DID YOU KNOW?

The ancient Greeks invented the dramatic genres of tragedy and comedy. The remains of their theatres can be seen today at several places such as Delphi, Athens and Epidaurus.

13.2.2 The value of history

Some people question the need to understand the past. But there are many very good reasons for studying history. Knowledge of history helps us to understand our **heritage**. We start to understand where our ideas, languages, laws and many other aspects of our lives came from. We can also develop more open minds and learn to appreciate cultures that are different from our own. Conservation work similar to that shown in **SOURCE 2** is one of the key responsibilities of archaeologists.

SOURCE 2 Conservation work on the Parthenon in Athens, a temple built in ancient Greece in the fifth century BCE (Before Common Era)



History, the present and the future

Perhaps you already know that we can never understand the time we live in or what the future may hold if we do not understand the journey that brought us to this point. Human societies did not appear in the present as if from nowhere. They developed over many thousands of years. By understanding the past, we might just be able to avoid repeating past mistakes and make our world a better place in the future.

History, work and leisure

The kinds of skills you will learn while studying history are also important in many careers. These skills will help you to:

- carry out research
- draw conclusions and make decisions based on evidence
- recognise the difference between fact and opinion
- understand that there is usually more than one way of thinking about any problem
- think critically
- communicate effectively.

heritage everything that has come down to us from the past

A knowledge of history is important in our everyday lives too. And history gives many people great personal pleasure. How much more enjoyment do people derive from travel, books and movies when they know about the history that shaped the places they visit, or the stories they read or watch on a screen?

History and democracy

In Australia, we live in a democratic society. This means we have the right to choose our political representatives and leaders through voting. We cannot vote responsibly, however, unless we can make our own judgements about the ideas these leaders put forward. To do that, we need to know something about the past.

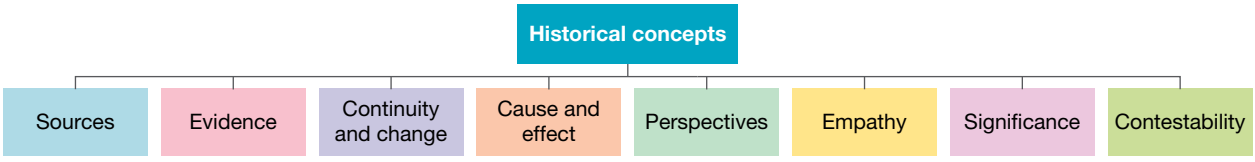
DISCUSS

How may understanding our past help us avoid repeating mistakes? **General capability: Ethical understanding**

13.2.3 What are history concepts?

You will learn eight historical concepts throughout your History unit, as shown in **SOURCE 3**. You will become familiar with these concepts by investigating how we have found out about the ancient past, both here in Australia and in other countries across the world. You will also investigate where the earliest societies developed and why they developed in the ways that they did. You will become more proficient with these concepts as you learn other History units in subsequent years.

SOURCE 3 The eight historical concepts



13.2.4 Sources

Historians gather information from sources. Sources are any written or non-written materials that can be used to investigate and provide information about the past. It is important to make use of sources from the time we are studying to judge how reliable they are and explore the different points of view, or perspectives, of people from the past. This also involves questioning later sources that are interpretations of that time.

Primary and secondary sources

Historians can use two types of sources to investigate events from the past. **Primary sources** were created or written in the period of time that the historian is investigating. **Secondary sources** are reconstructions of the past written or created by people living at a time after the period that the historian is studying.

Depending on the event and place, primary sources might include bones, stone tools, letters, newspapers, art, photographs or many other traces. For most periods in history, we can divide primary sources into written and archaeological sources. Written primary sources can include such things as poems, songs, letters, myths and legends. They might have been written on paper, painted on stone walls or inscribed in stone, metal or clay in ancient languages. Archaeological sources are objects that were made in the past. They include many kinds of artefacts such as tools, weapons, pottery, coins, games, toys and jewellery. Some **artefacts** have written sources inscribed on them. Archaeological sources also include works of art such as sculptures and paintings, and constructions such as tombs, temples and, sometimes, entire cities.

primary sources objects and documents that were created or written in the period of time that the historian is investigating

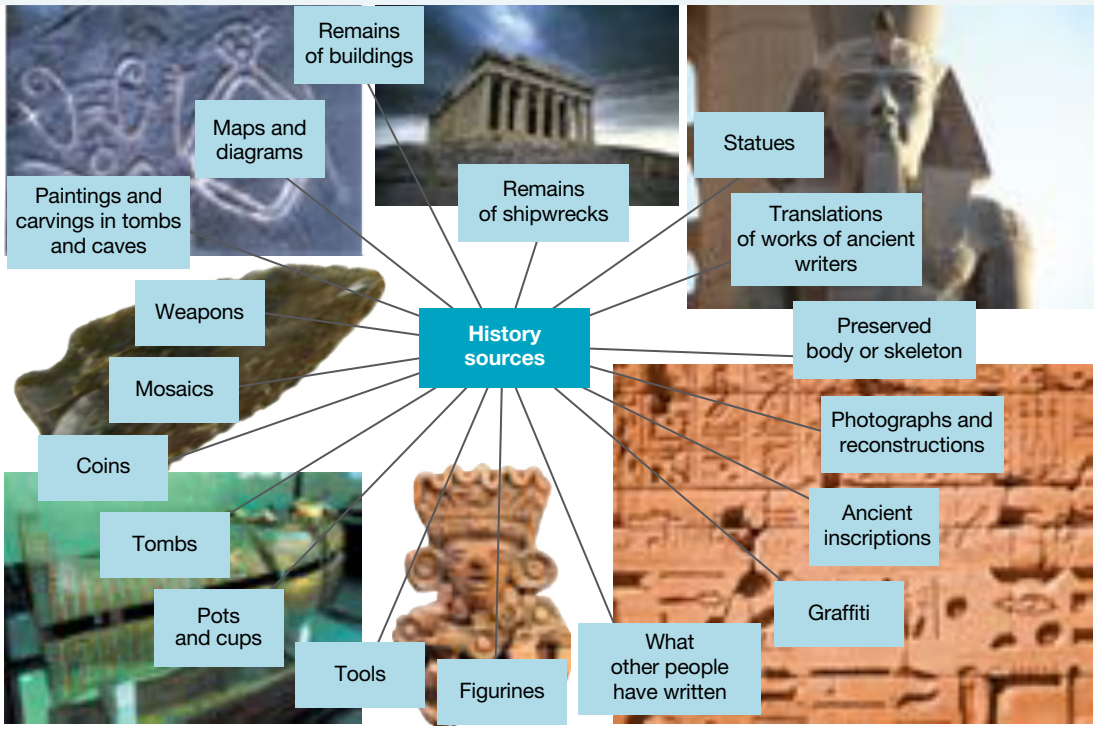
secondary sources reconstructions of the past written or created by people living at a time after the period that the historian is studying

artefact an object made or changed by humans

Secondary sources can include books, articles, websites, models, timelines, computer software and documentary films. To create secondary sources, historians often:

- locate information in primary sources
- interpret that information
- use it to explain what happened.

SOURCE 4 Some types of primary sources



13.2.5 Evidence

Evidence refers to the available facts that indicate whether something is true or that it really happened. Evidence can come from primary sources and from secondary sources. Evidence is what historians use to discover when events have happened, how they happened and why they happened. Sources provide historians with the evidence they need to prove or disprove events from the past.

Analysing evidence

Historical sources are valuable but they do not explain themselves. When using historical sources as evidence, historians need to ask questions of each source, such as where did the source come from (origin) and why was it created (purpose)? A source may be fact or someone's opinion — that is, it could be **biased**. One way to test sources for reliability is to compare them with other sources. If this evidence leads to the same conclusion, we call it supporting evidence. If it leads to different conclusions, we have contradictory evidence. When we use sources to try to find out about the past, we have to ask some questions. For example:

- What type of source is this?
- Who wrote or created this source and when was it written or created?
- Why was this source written or created?
- What evidence does the source provide?
- What was happening at the time the source was written or created?
- Can I trust the source?

Using evidence from sources, historians form a **hypothesis** (a possible theory to explain what happened). To test the hypothesis we look for evidence that

biased one-sided or prejudiced; seeing something from just one point of view

hypothesis (plural: hypotheses) a theory or possible explanation

supports it. We also look for other evidence that contradicts it. We need to be careful. We have to ask: What other information do I need to support my theory?

Just as in the investigation of a crime today, we look at what contributed to an event and how those things fit together. We ask questions that begin with who, what, where, when, how and why. In this way, history is like any other kind of investigation, but it is more difficult because our evidence often has gaps. We usually cannot find all the clues we need. It can be like trying to solve a jigsaw puzzle when many pieces have been lost.

13.2.6 Continuity and change

When studying different societies, historians can see that some aspects of life have remained the same over time, while other aspects of life have changed dramatically. Historians study the changes and the things that have remained the same because it is important to be able to identify when a change has occurred and when things have continued unchanged. As a history student, you will need to be aware of continuity and change, cause and effect, and long-term causes and short-term triggers. This concept is known as identifying **continuity and change**.

Change refers to something that is different from what has occurred in the past. This may occur over a long period of time and, in this case, it may be difficult to detect the precise moment of change. Change can also occur dramatically or suddenly. Such changes are often associated with single events and are referred to as turning points in history. Continuity refers to the things that endure, relatively unchanged, over time. You will find that many things remain the same across long periods in history. Sometimes these continuities have lasted into modern times.

We can make comparisons between and among historical events occurring at the same time, between and among historical periods and between present time and the past.

SOURCE 5 The ruins of an ancient house at Sardis, located in present day Turkey.



SOURCE 6 A modern suburban house in Western Australia



Sequencing, chronology and timelines

Historians often use sequencing of events and create timelines to study the changes that have happened over time. We can make comparisons between and among historical events occurring at the same time, between and among historical periods and between the present time and the past. The causes of change, or reasons change has been resisted, can also be investigated.

Chronology involves recording events in order of time. It is an important skill because historians need to know the order in which events occurred so they can get a sense of what happened. A story will make more sense if we start at the beginning and work towards the end. For example, your morning routine is likely to consist of waking up, getting dressed, eating breakfast, and then brushing your teeth. After this you might travel to school and then attend your first class for the day. This is an example of chronology; it is the sequence of events that occurs during your morning.

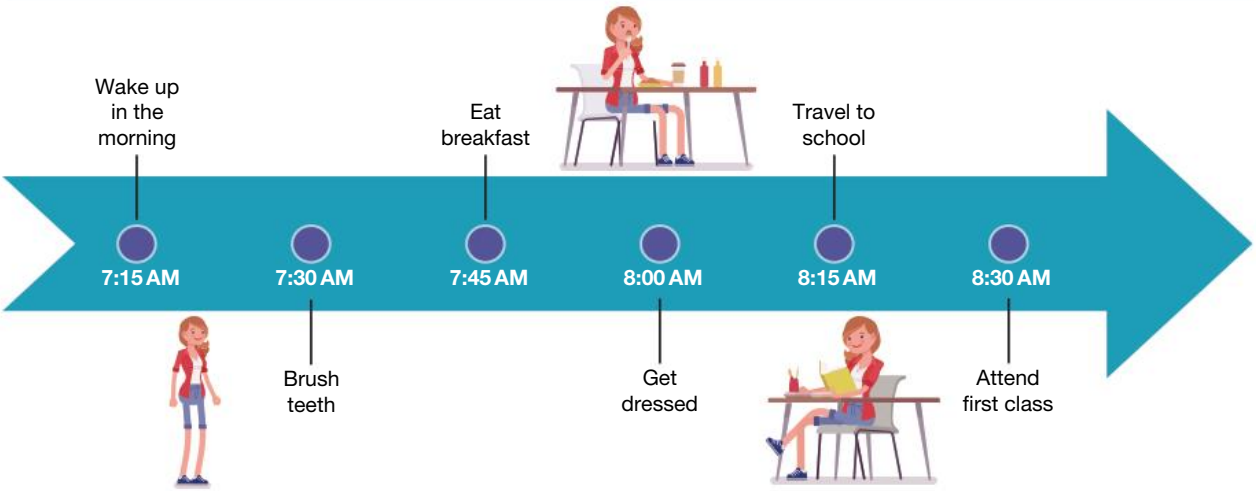
A historian will use a **timeline** to see how one event might have contributed to another. A timeline representing the sequence of events in your morning can be seen in **SOURCE 7**.

continuity and change the concept that while many changes occur over time, some things remain constant

chronology a record of past events in order of time, from Latin *chronos* meaning time and *logos*, meaning to work out

timeline a diagrammatic tool representing a period of time, on which events are placed in chronological order

SOURCE 7 A simple timeline representing the sequence of events during a typical morning



13.2.7 Cause and effect

History involves much more than putting events in order and understanding the sequence and flow of events. Historians use sequencing and timelines to examine and investigate how one event could be connected to another. Once the events have been placed into chronological order, investigating how one event has caused another event and how events are connected becomes easier. We can also look at the developments that have happened in both the short term and over a longer period of time.

In history, events do not simply occur without reason. Every event will have a cause, and is likely to be the cause of subsequent effects or consequences. Being able to identify patterns of **cause and effect** is an essential skill for historians that allows them to explain how and why things happened in the past. This skill can also make it possible to predict what may take place in the future.

Causes may include people, societies, politics, beliefs, economics or any other historical factor. Likewise, effects can include impacts on people, societies, politics, beliefs, economics or any other historical factor. It is important to understand that not all causes leading to a specific event are equally significant — some causes may have more influence than others.

SOURCE 8 Ancient Spartan ruins at the archaeological site outside the modern Greek town of Sparti



The ability to analyse cause and effect requires a good understanding of sequencing chronology. We can identify series of historical events and developments over time, both in the short term and in the long term. Some causes occur immediately before an event began, while others may have existed for several years, decades or centuries before the event. Some effects occur immediately after an event or action, while others may occur years, decades or centuries following the event or action.

For example, ancient Greece was made up of a number of city-states (or poleis), which were independent settlements with their own governments. Greek city-states shared a common language and religion. Two powerful and well-known city-states were Athens and Sparta. People living in ancient Greece did not consider themselves

cause and effect the concept that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences

to be Greek but, rather, citizens of their city-state; for example, Athenians or Spartans.

The development of Greek city-states was caused by a number of factors. One major cause was the geography of Greece. The country's mountainous landscape, isolated valleys, numerous islands and largely unnavigable rivers meant that settlements were isolated from each other. Fertile farmland was rare and overland travel was difficult. This meant that Greek settlements turned to the sea for contacts and trade between each other.

SOURCE 9 The Temple of Hephaestus located at the north-west side of the Agora of Athens, Greece



The development of Greek city-states also resulted in a number of effects. One positive effect was the rise of democracy in Athens. Athens introduced democracy in 508 BCE, which was a system of government by which citizens decided how their city-state would be run. City-states also resulted in the arts and sciences flourishing in ancient Greece. One negative consequence of the city-states of Greece was the frequent wars that occurred between the various city-states.

13.2.8 Perspective

Historians often come across many different versions of the same event. This is because of perspective, which is the different points of view that people may have of an event. Imagine you and some of your friends were asked to describe what happened at lunchtime. You would probably all have a different version of the events, depending on what things you saw and what you consider to be important. People in the past may have had different points of view about an event, depending on their age, gender, social position and their beliefs and values. We try to understand the **perspectives** of people in the past by exploring their points of view, attitudes and values. Historians also have perspectives, and this can influence their interpretation of the past. Often, we can get a sense of the way people thought and felt through primary sources, such as diaries, or through visiting museums and historical sites.

Empathy

It is important for historians to empathise with the people they study. This means trying to understand how people thought and felt at different times in the past. Using empathy, we work with all the evidence we have in order to imagine what the past was like for people who were there at the time. We need to consider such questions as:

- Who were these people?
- Where did they live?
- How did they live?
- What mattered to them?
- What did they believe in?
- What did they see, hear, taste, smell and feel?
- What did they fear and what did they hope for?
- Did they have feelings similar to or different from ours?
- Did they all think and feel the same as one another, or did they have differing perspectives?

perspective point of view or attitude

To show empathy means that the historian can understand the past from the point of view of a particular individual or group, taking into account the unique circumstances of that person or group. Understanding the motivations, values and attitudes that are causes of their actions is also important.

At different points throughout this book you will be asked to put yourself in the situation of someone in the past. This is not a creative writing task where you can let your imagination run wild. Rather, you will be using historical imagination. This requires using your imagination but basing your ideas on evidence.

How should we judge people in the past?

When we learn about some of the things people did in the past, it is natural that we make moral judgements. For example, we now see slavery and torture as cruel. What we should try to avoid is judging people in the past by beliefs or standards that did not exist in their time. It would be wrong, for example, to judge a Roman army officer as being particularly cruel because he allowed his prisoners of war to be sold as slaves. At that time, he would have been upholding the laws and attitudes of his society. However, some ancient Romans were cruel even by the standards of their own time. We should also remember that in the future, people may think that many kinds of behaviour we consider normal are, by their standards, wrong.

SOURCE 10 The ruins of the Colosseum in Rome



DISCUSS

What might a gladiator decide to do if other gladiators suggested that, instead of continuing to kill each other for the amusement of Romans, they band together, overpower their guards and make a bid for freedom?

Consider in your discussion how his decision might be influenced if this gladiator was:

a. expecting to be killed in his next fight
b. confident of winning his next fight and expecting to be given his freedom in the near future
c. from a cultural group that was hostile towards other groups represented among these gladiators
d. disgusted with having to kill his fellow gladiators for the entertainment of Romans.

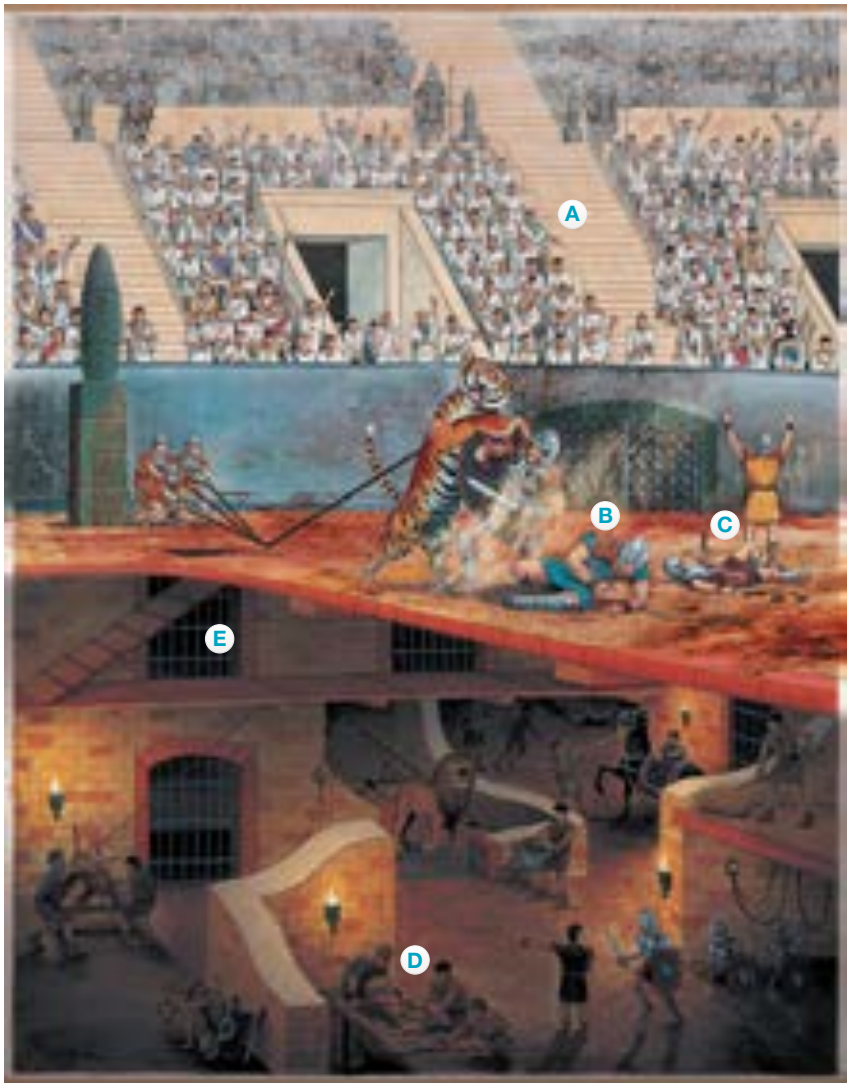
General capability: Ethical understanding

13.2.9 Significance

Historical **significance** relates to the importance that is assigned to particular aspects of the past. These aspects may include events, individuals or groups, developments in the past, ideas or movements, and historical sites. There is far too much history to study or learn all of it. We need to make judgements about what is important and what is less important. For this reason, this is an essential, yet challenging, historical skill.

significance the importance assigned to particular aspects of the past; for example, events, developments, movements and historical sites

SOURCE 11 The Colosseum was a vast amphitheatre in ancient Rome. To entertain Roman crowds, slaves trained to be gladiators were forced to fight, often to the death, against other gladiators or against wild animals that had been tormented to make them ferocious. Most gladiators were men but at least a few were young women. This artwork shows what happened below the arena as well as what happened above ground.



- **A** The Colosseum was a vast amphitheatres in ancient Rome. This enormous elliptical stadium was 189 metres long, 156 metres wide and 48 metres tall. It had four levels of seating and a capacity of up to 80 000 spectators. The 80 entrances, 76 of which were available for use by ordinary spectators, allowed the crowds to enter and leave quickly.
- **B** To entertain Roman crowds, slaves trained to be gladiators were forced to fight, often to the death, against other gladiators or against wild animals that had been tormented to make them ferocious.
- **C** Most gladiators were men but at least a few were young women. They wore elaborate armour, partly for protection and partly for show.
- **D** The floor of the fighting area was made of wood and covered in sand. Trapdoors with a lift and pulley system were used to provide spectators with an element of surprise, or to quickly dispose of the dead bodies and carcasses.
- **E** Below the Colosseum was a maze of tunnels, cells and dungeons. The cells and dungeons were used to contain the criminals, gladiators and animals, while the network of tunnels was used to transport the entertainment in and the remains out.

When we try to establish the significance of an aspect of the past, we have to consider a number of questions. For example:

- How relevant was it to people living at that time?
- How many people were affected?
- How did it change people's lives?
- How long were people's lives affected?
- How important and long lasting were the consequences?
- How relevant is it to the contemporary world?

Once we know the answers to some of these questions, we can then, as historians, put ourselves in the shoes of those we are studying and try to understand why or why not an aspect may be significant. Don't forget that aspects that happen quickly or that do not last a long time can still be significant.

DISCUSS

What aspects of your life as a student do you consider to be significant? Some things to consider could be access to technology, the physical state of the space you use, the resources you can access or the subjects that you are studying.

Do you think that the things you consider to be significant were important 10, 50 or 100 years ago? Do you think they will be significant 50 years from now? **General capability: Critical and creative thinking**

13.2.10 Contestability

Wherever historians find sources and whatever methods they use to test their hypotheses and interpret the past, there will always be differing interpretations that are debated and contested. The issue of **contestability** is an important concept in the study of history.

Historical debates are ongoing. They occur when, for example, there is a lack of evidence or when different perspectives (points of view) lead to different conclusions. In some cases, little evidence may remain of an event and the historian has to use what evidence is available to fill in the gaps with what could have reasonably happened. This means that their interpretation of the event could be contested or debated. In other cases, several different perspectives of the same event may be available to historians, and all the perspectives could have some evidence to support them. In these cases, the historian needs to examine the evidence available and make a reasonable judgement as to what events occurred and how they occurred, but this could still be contested. Debates are ongoing in many areas, including the causes of particular wars and the roles of particular individuals, groups and ideas in bringing about significant changes.

contestability when particular interpretations of the past are open to debate

13.2 ACTIVITIES

1. Imagine you are a spectator at the Colosseum in Rome. Choose one of the perspectives listed and then use the information from **SOURCE 10** and **11** as evidence to write a short paragraph about what you can see from where you are sitting. Share your article with your classmates and discuss the different perspectives that you can identify.
   Perspectives to choose from:
   - Noble
   - Referee
   - Animal handler

   History concepts: Evidence, Perspectives

2. In small groups, come up with a list of ten events, places or people that you consider to be the most significant in world history. Rank them in order of historical significance and then share your responses with your classmates.
   After you have shared your responses, discuss some of the reasons each of the lists is unique and what would cause the lists to be similar or different. **History concept: Significance**

13.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 7, 10, 13, 17	Questions 3, 5, 8, 14, 18	Questions 4, 6, 9, 11, 12, 15, 16

Check your understanding

1. What is heritage?
2. Identify the eight historical concepts you will be learning about.
3. Describe the difference between primary sources and secondary sources.
4. Provide two examples of written sources and two examples of archaeological sources.
5. Explain what the term 'bias' means and why we might not be able to trust a primary source.
6. Describe a way to test primary sources for reliability.
7. Complete the following sentences by choosing words from the box.

Contestability	theory	debate	contradict	evidence

   a. A hypothesis is a _____ or possible explanation that has to be tested by looking for _____ that might support it and other evidence that might _____ it.
   b. _____ is the situation when particular interpretations of the past are open to _____.
8. What does it mean to empathise with the people you study?
9. Identify the questions you might consider when trying to understand the perspectives of people in the past.

Apply your understanding

10. The masks in **SOURCE 1** are held in the National Archaeological Museum in Athens, Greece. Each year the museum attracts millions of visitors from around the world. What might you be able to understand about ancient Greece just by using this source as evidence?
11. Look closely at **SOURCE 2**. Each year, many countries donate money for conservation work to preserve the remains of this ancient Greek temple. Why do you think so much effort goes into conserving such traces of the past?
12. Today we live in a world where people are sometimes killed over differences in religion. How might a knowledge of history help bring understanding between different religions?
13. Look at the mind map in **SOURCE 4** and describe each of the types of sources pictured around the mind map.
14. Suggest what we might learn about the past from old graffiti or one of the other types of primary sources listed in the mind map.
15. Why would it be wrong to think that primary sources are more reliable than secondary sources?
16. Explain what types of evidence you could use to support the hypothesis that the ancient Romans were a civilised society.
17. Make a list of some primary sources that could be used to create a history of your school (a secondary source). Beside each source in your list, write down what you think you could find out by using it as evidence.
18. Using the internet and/or other information sources, find the meaning of the word *sympathy*. Explain how empathy is different from sympathy.

For sample responses to every question, go to www.jacplus.com.au.

13.3 Ages, time and chronology

LEARNING INTENTION

By the end of this subtopic, you will be able to sequence historical events, developments and periods.

13.3.1 Dividing the past

At Year 7 level we will be investigating **prehistory** and **ancient history**. Because prehistory covers many tens of thousands of years, we usually describe prehistoric changes over millennia (blocks of 1000 years). Historians studying later times sometimes concentrate on particular centuries (blocks of 100 years) or even decades (blocks of 10 years).

To make sense of the past, we divide it into ages or periods that have something in common. Prehistory is the prehistoric period (the time before people invented writing as a means of recording activities and events). It ended at different times in different parts of the world. For example, in China it ended thousands of years ago, while in Australia it ended a little over 200 years ago. We also use the terms Stone Age, Bronze Age and Iron Age. These refer to materials people had learned to shape into tools and weapons in prehistoric and ancient times. Ancient history covers the time from the earliest **civilisations** around 3000 BCE to around 650 CE.

Counting time

In Australia, the system we have traditionally used to count years is one that was first used in Christian countries in AD 525. In this system, AD stands for **anno Domini** (**Latin** for 'in the year of our Lord'). The year AD 2012 means 2012 years since the birth of Christ. However, although this system is still commonly used throughout the world, many historians now use the term CE (Common Era) instead of AD. The dates are the same: 2012 CE is the same year as AD 2012. We count forward, so 50 years later the year would be AD 2062 (or 2062 CE).

BC means 'before Christ', and for these years we count backwards. So 500 BC would be 300 years earlier than 200 BC. Historians now commonly use the term BCE (Before Common Era) in place of BC.

BP and *circa*

In prehistory many dates are uncertain. It is common to use BP (Before the Present) to indicate about how long ago something happened. For dates BP, the year 1950 CE is agreed upon as 'the present'. When dates are uncertain we put 'c.' before them because it stands for *circa* (Latin for 'around').

To convert years BP to years BCE, it is close enough to simply subtract the current date and round it off. For example, in the year 2000 CE, a date of 8000 BP would be (8000 minus 2000) — that is, c. 6000 BCE.

Other ways of counting time

There are other ways to count time. For example, Islamic countries start counting from the time of the flight of the prophet Mohammed from Mecca. This occurred in the year Christian countries call 622 CE.

prehistory the period before writing was invented

ancient history the period from the beginning of civilisation to the fall of the Roman Empire

civilisation term used to describe societies that have towns and features such as complex forms of government and religion

anno Domini latin for 'in the year of our Lord'

Latin the language of ancient Rome and its empire

DID YOU KNOW?

There is an easy way of working out what century a particular date is in. The first 100 years after the birth of Christ is called the first century CE. The first 100 years before the birth of Christ is called the first century BCE. To work out what century a date is in, you simply add one (1) to the number of hundreds in a date. Therefore, the year 2011 is in the twenty-first century CE. The year 705 BCE is in the eighth century BCE.

SOURCE 1 A timeline showing some events from 3000 BCE to modern times













PREHISTORY

ANCIENT HISTORY

MEDIEVAL HISTORY

MODERN HISTORY

BCE

3000

c. 2900 BCE
Earliest known writing recorded in Mesopotamia.

c. 2550 BCE
Great Pyramid built at Giza in Egypt.

2000

2000 BCE
Knossos palace built on Crete.

This timeline is divided into 1000-year sections.

1279 BCE
Rameses the Great becomes pharaoh of Egypt.

1100 BCE
Decline of Mycenaean civilisation on Greek mainland

Key dates and brief descriptions of events are given.

1000

776 BCE
First known Olympic Games

The timeline is broken to show a break in the time scale.

753 BCE
Rome founded.

356 BCE
Alexander the Great is born.

221 BCE
First Qin emperor unifies China.

146 BCE
Rome conquers Greece.

BCE
CE

Where appropriate, a timeline is divided into eras.

392 CE
Christianity becomes official religion of Roman Empire.

632 CE
Death of Mohammed

900 CE
Most Mayan cities in decline (South America)

1000

1340 CE
Black Death reaches Europe.

1500 CE
World sea exploration begins.

1789 CE
French Revolution

2000

CE

Brackets are used to mark a specific period of history.

13.3 ACTIVITY

Using **SOURCE 1** as a model, create a timeline of your life up to the present. Include the important events of your life. Use the terms CE, century and decade. Then explain how your timeline helps you to present an overall picture of your life so far.

HASS skills: Questioning and researching
History concept: Continuity and change

13.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6, 7	Questions 2, 5, 8	Questions 3, 9, 10, 11

Check your understanding

1. What is prehistory?
2. Explain how the prehistoric period differs from ancient times.
3. Explain how Islamic countries measure time.
4. What is the difference between AD and BC?
5. Identify the terms that historians commonly use in place of:
   a. AD
   b. BC.

Apply your understanding

6. The year 2019 is in the twenty-first century CE. Work out in which century each of the following years occurs: 705 CE, 1890 CE, 315 BCE.
7. Calculate the number of years between 195 BCE and 755 CE.
8. Write the meaning of the following terms: millennia, centuries, decades, ages, BC, AD, BCE, CE and BP.
9. Look closely at **SOURCE 1**, the timeline. Use it to find dates for the earliest known writing and the first known Olympic Games.
10. Why do you think the date for the building of the Great Pyramid has 'c.' (for 'circa') before it?
11. We use the terms Stone Age, Bronze Age and Iron Age to refer to periods of time in which people used those materials as their most advanced materials. Work in small groups to suggest an appropriate name (based on materials) for the age in which we now live.

For sample responses to every question, go to www.jacplus.com.au.

13.4 Skills in History

13.4.1 What skills will you build this year?

This year, you will continue to build your ability to use the four broad categories of skills in the Humanities and Social Sciences. The following summaries are to remind you of these four key skills.

1. Questioning and researching involves locating relevant and detailed information and/or data from a range of appropriate sources. In Year 7 History this includes primary and secondary sources related to the ancient world, such as artefacts, written sources and archaeology.
2. Analysing involves interpreting information to identify the main features or ideas, and then examining the information closely to determine how the parts relate to the whole. In Year 7 History this includes looking for patterns of change over time, such as looking at how ancient societies developed over time. You will also build your ability to identify the causes and effects of historical events.
3. Evaluating means examining your interpretations of information to draw evidence-based conclusions. It requires taking into account ambiguities and multiple perspectives in a source, and proposing potential responses to contemporary challenges or issues. In Year 7 History this includes drawing conclusions about the impact of significant individuals and the ways life was diverse for different groups in society.
4. Communicating your ideas means presenting information in a range of formats to suit the intended audience and purpose. This includes essays, oral presentations, debates, tables and cartoons. Reflecting on your skills is also an important part of the process. In Year 7 History this might include writing from the perspective of different people living in ancient societies, role-playing the life of a hunter-gatherer, sketching ancient weapons, or creating a timeline of key events and people.

13.4.2 SkillBuilders in the topic

In addition to these broad HASS skills, you will learn a range of essential practical skills as you study History. The SkillBuilder topics in this topic will tell you about the skill, show you how to apply the skill and let you practise the skill with tasks related to the topics covered in this subject.

The SkillBuilders you will use in Year 7 are as follows:

- SkillBuilder: Sequencing events in chronological order
- SkillBuilder: Developing a hypothesis

13.5 SkillBuilder: Sequencing events in chronological order

LEARNING INTENTION

This SkillBuilder shows you how to sequence events in chronological order. Sequencing events is part of the analysing HASS skill.

13.5.1 Tell me

What is a timeline?

A timeline is a diagrammatic tool for placing events in chronological order (the order in which they happened). A simple chronology would be one, for example, that showed in sequence, or time order, key events of a day in your life.

Why are timelines useful?

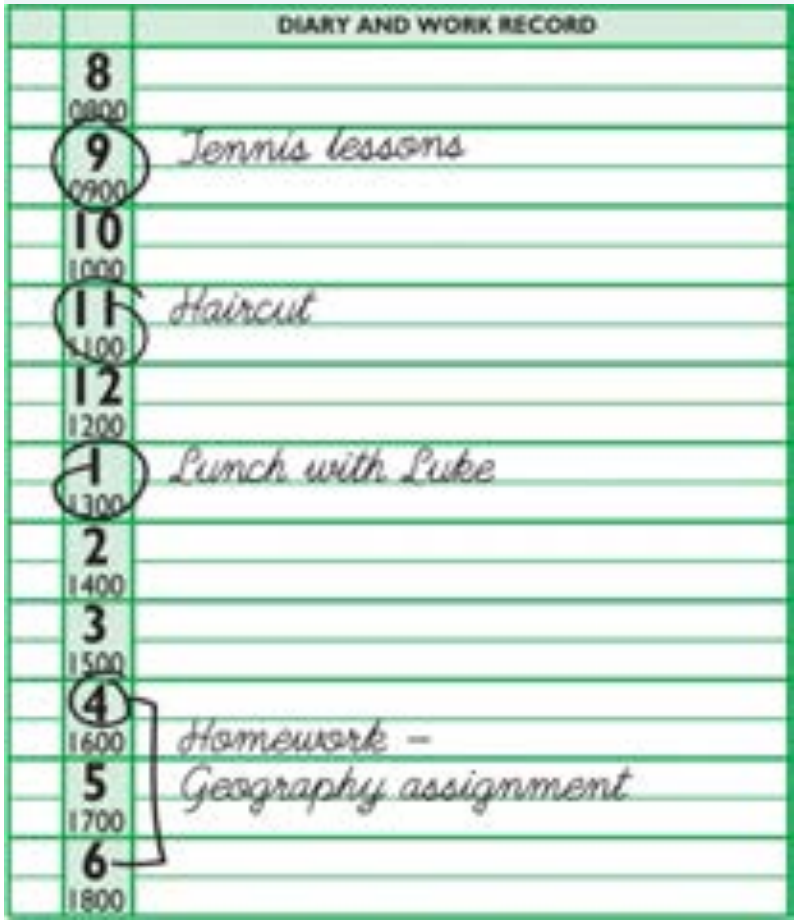
Timelines are useful because they can help us make sense of events in the past. Timelines are particularly useful in the study of history. Creating a history timeline will help to:

- understand the order in which events occurred
- describe the time distances between events
- identify what has changed over time
- identify what has stayed the same over time
- analyse how one event might relate to other events
- compare what might have been happening in different places at the same time
- assess if one event might have led to another event (cause and effect).

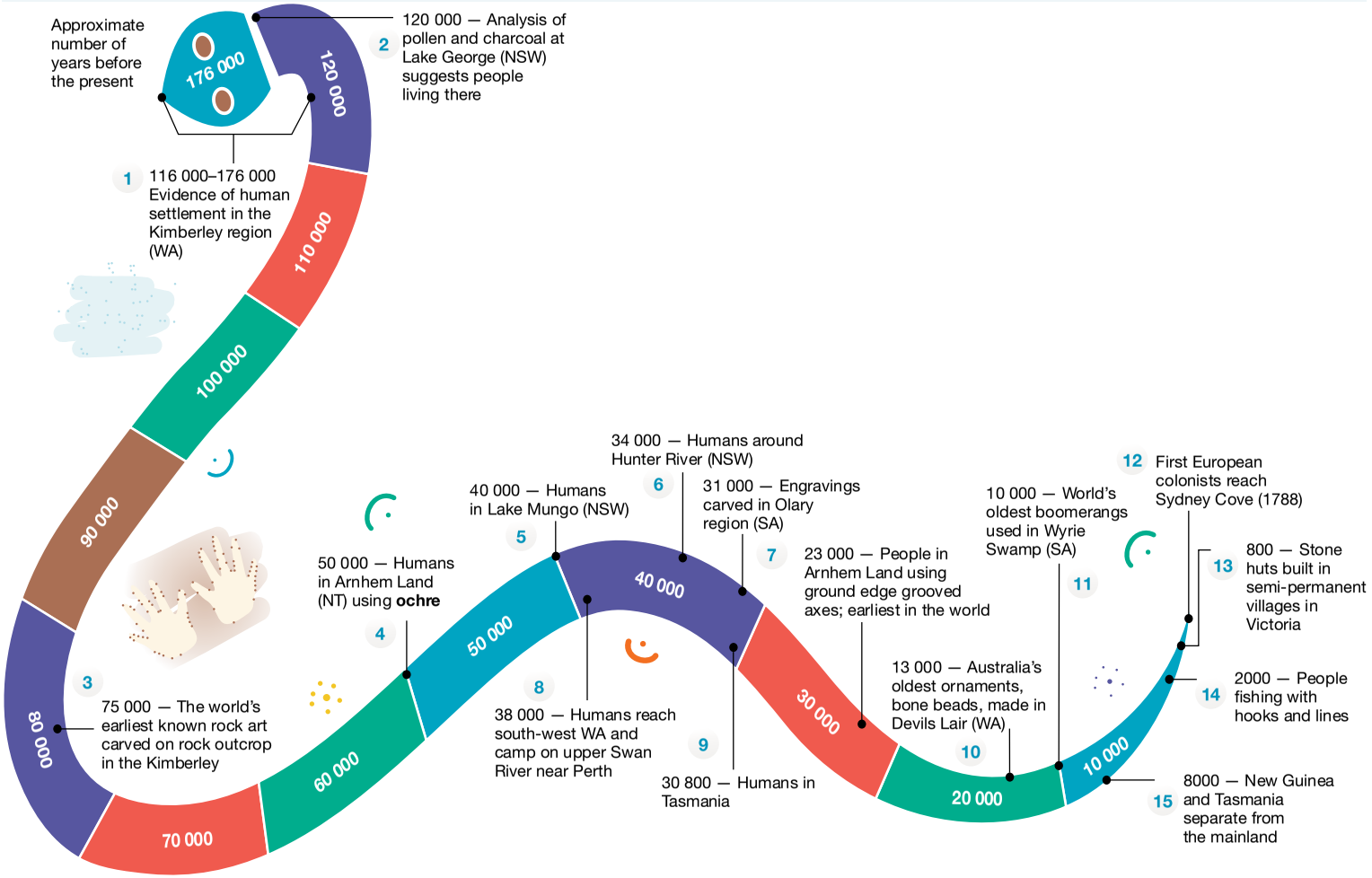
Generally, timelines are constructed using a sequence of dates with the addition of descriptive labels. The timeline may span thousands of years (see **SOURCE 2**) or cover a very short period (see **SOURCE 3**). In print, timelines may be as simple as a horizontal or vertical line, or highly visual with use of colour and images. Using digital technology, online timelines can be interactive, where users can click on a date and see a descriptive label, an image or even hear an audio narrative or sound effects.

SOURCES 2, **3**, **4**, **5** and **6** show some examples of highly visual timelines that could be presented in printed history text books.

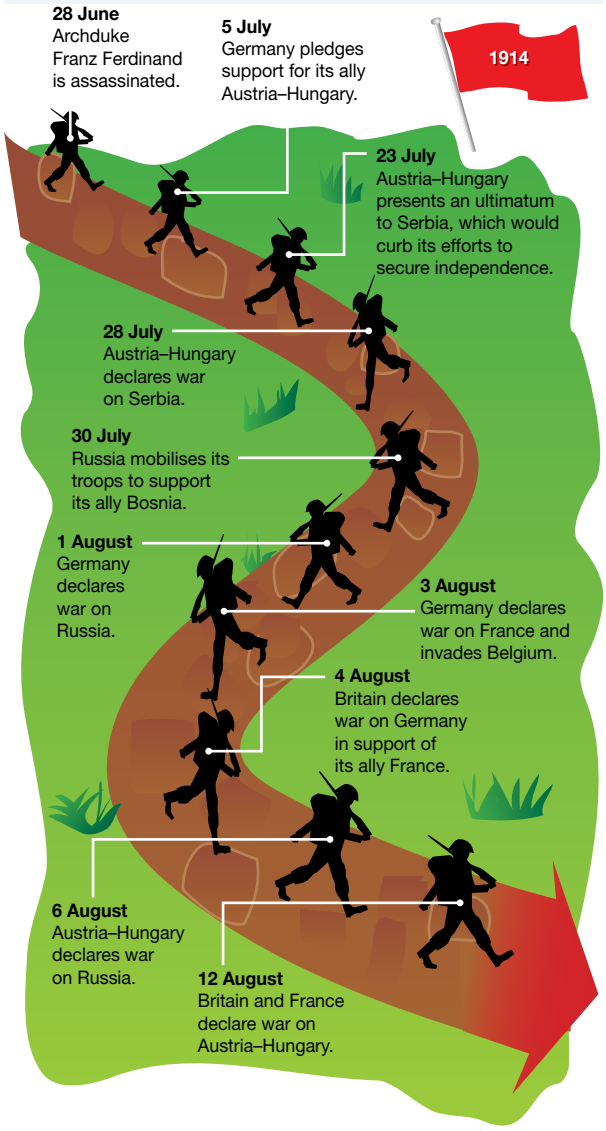
SOURCE 1 A simple chronology



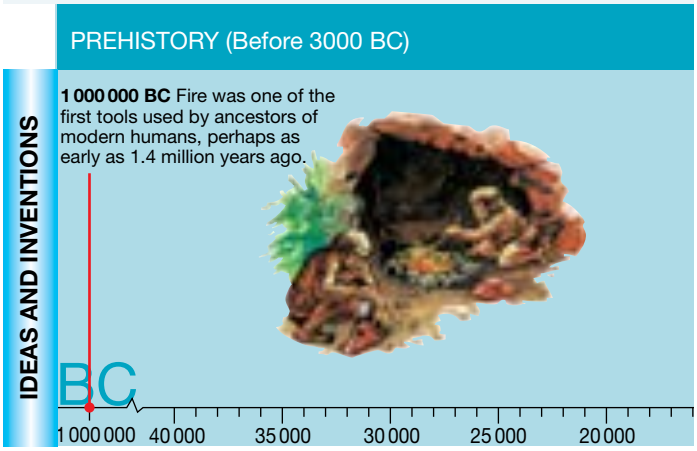
SOURCE 2 An example of a timeline that covers a long span of time



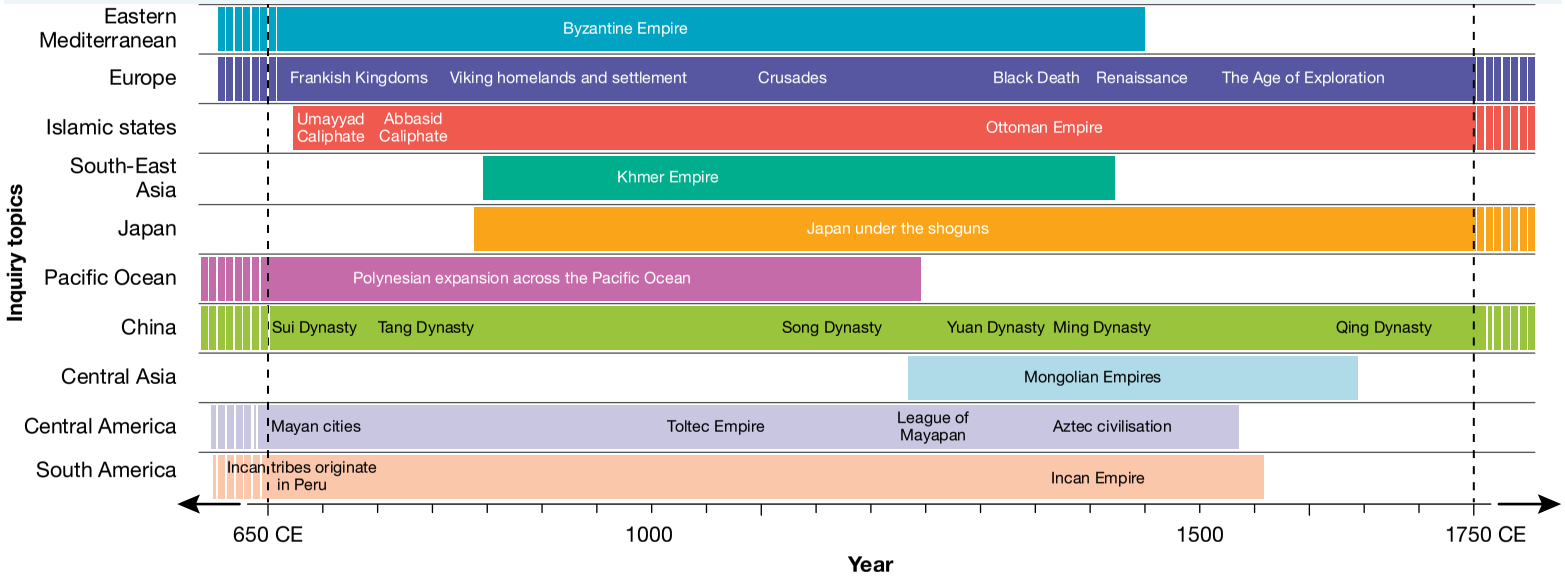
SOURCE 3 An example of a timeline that covers a short span of time



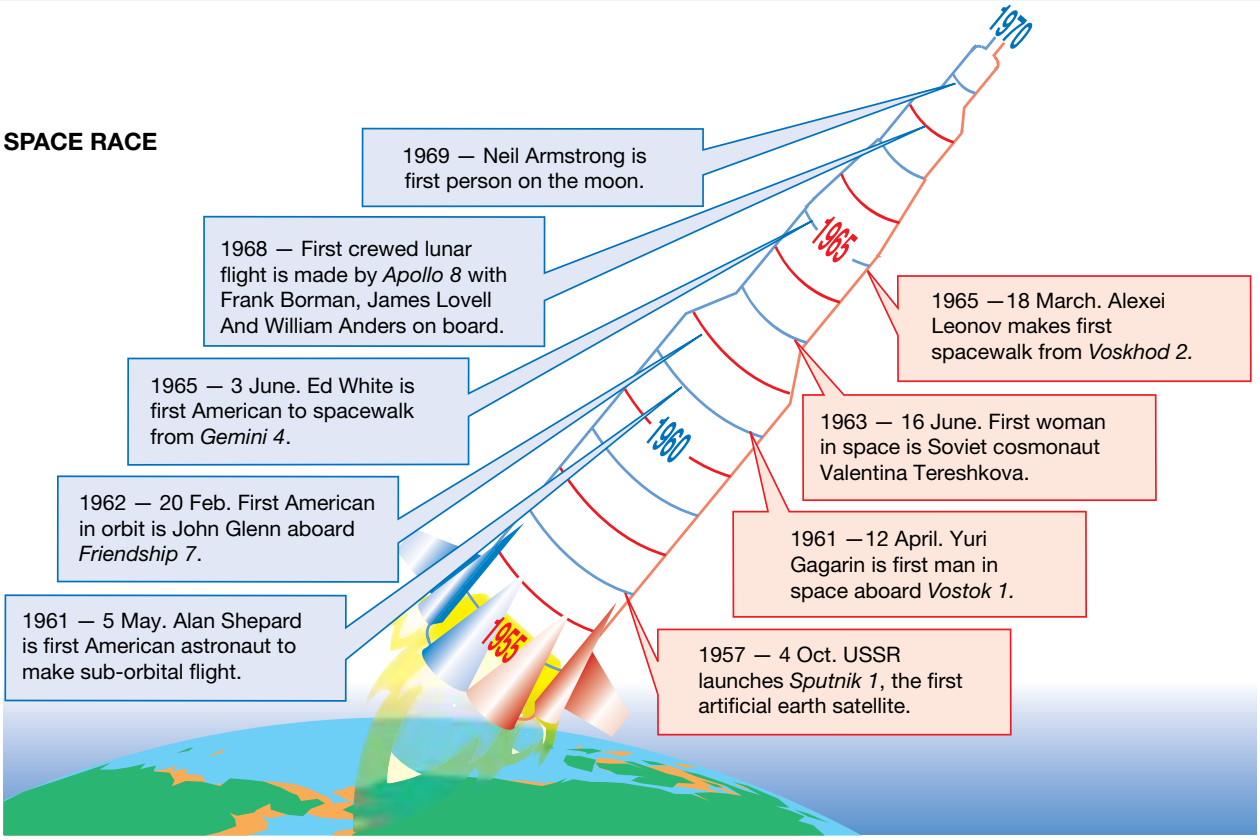
SOURCE 4 An extract from a timeline that provides some illustrative material to accompany descriptive text labels



SOURCE 5 An example of a horizontal timeline that uses coloured bars to compare significant events in different places at the same point in time



SOURCE 6 An example of a timeline that uses a drawing of an object related to the subject or theme of the timeline



13.5.2 Show me

How to create a timeline

Timelines can cover very short or very long periods of time. They have the following features and requirements:

- They can focus on just a few months or years.
- They can focus on big, sweeping changes over thousands of years.
- In most cases, they are divided up into equal blocks of time, such as decades or centuries. This is not essential, but it helps us to see not only the order of events but also how close or how far apart they were.
- A break in the timeline (using a zig zag line, for instance) can show a long span of time between one date and the next.
- To make equal blocks of time you need to use a scale — for example, 1 centimetre = 10 years.
- Timelines can be horizontal (across the page) with the earliest dates on the left and later dates to the right.
- Alternatively, they can be vertical (down the page), in which case the dates usually run from the earliest at the top to the latest at the bottom.
- Often, we have only approximate dates for events in ancient history. In those cases, we put 'c.' in front of the date. This stands for the Latin word *circa*, which is Latin for 'around' or 'about'.

Step 1

Study the timeline shown in **SOURCE 7**. Look at the way this timeline has been constructed.

- It is a vertical timeline.
- It has been divided into centuries.
- A scale of 1 centimetre = 1 century has been used.

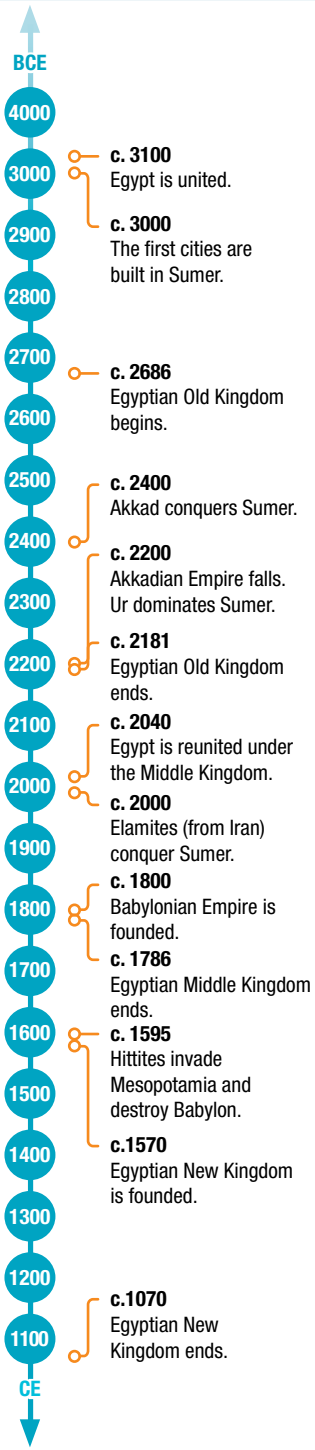
Step 2

A completed timeline has a clear title.

The title should state:

- the time period covered
- the subject or theme
- the beginning and end dates.

SOURCE 7 Timeline of the rise and fall of kingdoms and empires in Egypt and Mesopotamia between 3000 BCE and 1000 BCE



13.5.3 Let me do it

Complete the following activities to practise this skill.

13.5 ACTIVITIES

1. Construct a timeline of the rise and fall of civilisations in east and south Asia between 2500 BCE and 200 BCE.
- Use a vertical timeline.
- Divide it into centuries.
- Decide on the scale you will use.

Key events for your timeline

c. 2500 BCE	Cities are built by the Indus Valley civilisation.
c. 2100 BCE	According to Chinese legends, the Xia dynasty begins ruling China.
c. 1600 BCE	The Shang dynasty is established in China. The Indus Valley cities are abandoned and India is invaded by Aryans.
c. 1100 BCE	Iron begins to be used in India.
c. 1045 BCE	The Zhou overthrow the Shang and start the Zhou dynasty.
c. 770 BCE	The Eastern Zhou dynasty begins in China.
c. 500 BCE	Iron begins to be used in China.
475 BCE	The Warring States period begins in China, starting centuries of conflict.
327 BCE	India is invaded by Alexander the Great (of Macedonia and Greece).
304 BCE	India is united under the Mauryan Empire.
221 BCE	China is united under the Qin dynasty.
206 BCE	The Qin dynasty is overthrown in a peasant revolt. The Han dynasty begins.

Your timeline will help you to analyse and compare events. For example, you could use it to answer questions such as:

- Which of these two cultures was the first to build cities?
- Which was the first to use iron?

HASS skills: Analysing

2. Answer the following questions based on the timeline you have drawn:
- **a.** What time span does your timeline cover (i.e. how many years in total are covered by your timeline)?
- **b.** Which Chinese dynasty shown on your timeline was the earliest?
- **c.** How many years elapsed between the establishment of the Shang and Qin dynasties?
- **d.** Did the Indian or Chinese civilisation use iron first? What period of time separated the introduction of the use of iron in the two civilisations?
- **e.** Identify three significant events during the period of time illustrated on the timeline for:
  - **i.** China
  - **ii.** India.
- **f.** What statement could you make about the length of Chinese dynasties over the period shown on your timeline?
- **g.** What event of significance for ancient Indian civilisation occurred during the period of the Shang dynasty in China?
- **h.** What might have been a consequence for Indian civilisation of the invasion of Alexander the Great? (*Hint:* Look for an event that happened relatively shortly after his invasion.)

HASS Skills: Questioning and researching
History concepts: Significance

13.6 SkillBuilder: Developing a hypothesis

LEARNING INTENTION

This SkillBuilder shows you how to develop a hypothesis. Developing a hypothesis is part of the questioning and researching HASS skill.

13.6.1 Tell me

Interpreting the evidence of life in ancient Australia: Lake Mungo

In their work of studying the ancient past, archaeologists are dealing with evidence that is in tiny pieces. They must rely on the physical landscape and archaeological evidence to tell the story. Some material from ancient Australia has survived but some has not. Shell, bone and teeth will endure; animal hides, plant fibres, feathers and hair will not.

Archaeologists are involved in the work of detectives as they:

- search for evidence
- analyse the evidence, separating relevant from irrelevant information
- draw conclusions based on the evidence
- combine the evidence with background knowledge to develop a hypothesis.

Lake Mungo is a site of enormous archaeological importance because it provides some understanding of life as it may have been over 40 000 years ago. Our understanding of life at Lake Mungo is built from archaeological evidence and the stories and culture passed down through thousands of generations of Aboriginal peoples who lived in the area.

When they first arrived in Australia, Europeans formed a belief that Aboriginal and Torres Strait Islander peoples were all nomadic hunters and gatherers. Their ideas were built on misinterpretations of evidence and a biased belief that no Aboriginal and Torres Strait Islander peoples settled in the one place or cultivated (farmed) the land or waterways. Their hypothesis, however, was not correct. Historians today know differently: Aboriginal and Torres Strait Islander peoples managed land and sea resources very carefully for thousands of years, and there is archaeological evidence of permanent settlements and farming techniques. This is the perfect example of how bias can influence historical interpretations. Many Europeans came to the colonies of Australia with fixed ideas about our First Nations peoples, and interpreted the evidence they saw to fit their hypothesis, rather than drawing conclusions based on the evidence itself.

What is a hypothesis?

A hypothesis is an explanation, made on the basis of limited evidence, and is a place to begin a more detailed study or investigation. Anyone who develops a hypothesis is making a guess, based on the evidence they have. When a hypothesis is well supported with solid evidence we call it a *theory*.

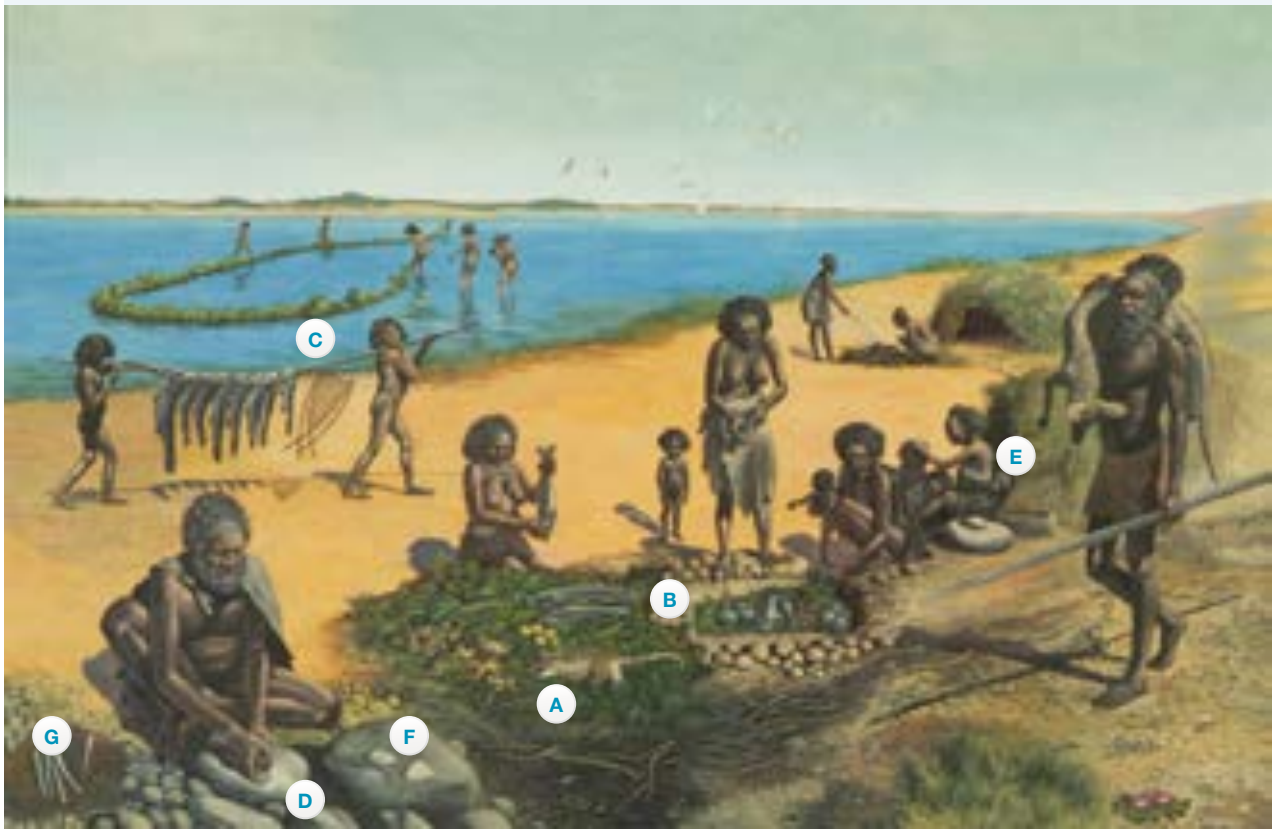
The difference between theories and hypotheses is known as the *contestability* of history. It reminds us that history is about interpreting the evidence. How the past is understood and interpreted is influenced by the point of view of the historian. If we look at people and events from our own modern Australian point of view we can sometimes misunderstand what has happened. We all have a cultural background that influences us. Our understanding of the world is shaped by many things such as our nationality, values, beliefs, personal experiences and interests.

Archaeologists study the evidence that has survived to explain and understand ancient life. Because the archaeological evidence of Lake Mungo is limited, archaeologists have developed more than one hypothesis to explain the nature of Lake Mungo life long ago.

13.6.2 Show me

Look carefully at **SOURCE 1**, an artist's reconstruction of Pleistocene life at Lake Mungo. This image is a visual hypothesis of what Lake Mungo life may have been like, using details from one written source, published in 1977. The image suggests that Aboriginal people from the Pleistocene Period near Lake Mungo lived in much the same way as First Nations people in south-east Australia at the time of European settlement, two thousand generations later. Is there evidence to support this hypothesis?

SOURCE 1 An image of life during the Pleistocene Period at Lake Mungo, by Giovanni Caselli. The visual reconstruction was based on material in Bernard Wood's book *The Evolution of Early Man*, published in 1977.



- **A** Remains of animal species such as bandicoot, rat, kangaroo, wallaby, wombat and small marsupials such as **bettong** were found in the fireplaces at Mungo. Fireplace evidence suggests that hunters returned to the community site for cooking and eating. Remains of birds, emu eggs and frogs were also found at the site.
- **B** Remains of shellfish and golden perch have been found, as have the shallow fireplace ovens. Perch were probably caught in deeper lake water as indicated in the image of people fishing in the background.
- **C** Fish traps and fish netting were also probably used. The fish trap shown was not found at the Lake Mungo site and is based on artefacts found in south-east Australia dating from a much later period.
- **D** The stone tools shown do not closely correspond with the style of tools found at the Pleistocene Period Lake Mungo site. Grinding stones, as shown, were not found at Lake Mungo, with no evidence of the collection of seeds for grinding before 15 000 BP. Grinding stones found in south-east Australia from much later periods were flat, unlike the rounded stone in the image.
- **E** The clothing and physical appearance of the people are based on images of Aboriginal people from more recent times. Cloaks, body decoration and headbands have not been found. Necklaces made from animal teeth and bones have been found.The baskets and spears are based on artefacts found in the region from much later time periods.
- **F** Axe heads have not been found at the Pleistocene site.
- **G** Bone artefacts similar to those shown have been found in excavation. Archaeologists think these may have been used for sewing or fishing, but definitive evidence has never been found.

bettong small nocturnal marsupial, resembling a small wallaby, with brown-grey fur on top and white on the underside

SOURCE 2 Excerpt from Bernard Wood's *The Evolution of Early Man*, describing ancient life at Lake Mungo

Recent research in Australia has shown that thriving communities were established there nearly 30 000 years ago. These people lived on narrow strips of land between land, lakes and the huge sand dunes that stretched out into the desert. Fish bones, shell remains and animal bones are evidence that they learned to exploit the lakes as well as the land. Hearths where they cooled their food have been excavated, and it is the carbon from charred bones that has provided the dating evidence.

The following steps will help you analyse the evidence and establish your own hypothesis and investigate the various Lake Mungo hypotheses that archaeologists have put forward:

1. *Begin with a question*. For example, 'What is the key feature of the Lake Mungo lifestyle during the Pleistocene Period?'
2. *Based on your question, write a central statement that becomes your hypothesis*. For example, 'The people of the Pleistocene Period lived in small hunting and foraging family units'. Your central statement, or hypothesis, should be arguable.
3. *Investigate your thesis*. Consider the other possibilities to explain the nature of Pleistocene life at Lake Mungo; for example, 'The people of the Pleistocene Period lived in large communities supported by managing a wide area of land'.
4. *Conduct research into the culture and oral histories of that place.* Explore the culture passed down through the thousands of generations of people who lived on this Country. Find reliable sources that provide the perspective of the Willandra Lakes Elders Council.
5. *Conduct research into theories developed by archaeologists*. Peter Hiscock, for example, investigated the Lake Mungo site to develop his own visions and theories about life during this period. Hiscock's study of the evidence challenges the Lake Mungo theory expressed in **SOURCES 1** and **2**.

The annotations in **SOURCE 1** provide you with questions to consider when assessing the usefulness of the source as evidence of the Pleistocene lifestyle.

13.6.3 Let me do it

Complete the following activities to practise this skill.

13.6 ACTIVITIES

1. Form a hypothesis about life at Lake Mungo and use the steps outlined to write a paragraph explaining why your hypothesis is correct, based on your preliminary research. Refer to the information in **SOURCES 1** and **2**, and the Mungo National Park **Weblink** in your Resources panel to help develop your hypothesis.
   Present your Lake Mungo hypothesis to your class in a creative way. **SOURCE 1** is a visual representation of a hypothesis. You could present your hypothesis as a poster, short speech or story.
2. What evidence do archaeologists need to study in the process of developing their understanding of life in ancient Australia?
3. What is the correct meaning of the term 'hypothesis'?
4. Why have archaeologists developed more than one hypothesis to explain and understand ancient life at Lake Mungo?
5. What is the difference between theories and hypotheses known as?

HASS skills: Questioning and researching

on Resources

Weblink Mungo National Park

13.7 Review

13.7.1 Key knowledge summary

13.2 Concepts in History

- Historians investigate and interpret the past.
- History helps us to understand our heritage and appreciate other cultures.
- History helps us to understand the present and what the future may hold.
- History provides us with essential skills.
- You will learn eight historical concepts throughout your history course.

Source

- Sources are any written or non-written materials that can be used to investigate and provide information about the past.
- The two types of sources are primary sources, which come directly from the time of the event, and secondary sources, where are written or created after the event has already happened.

Evidence

- Using historical sources as evidence relates to analysing sources to judge how reliable they are, and exploring the different points of view, or perspectives, of the people from the past.
- Using evidence from sources, historians can form a hypothesis (a possible theory to explain what happened).

Continuity and change

- Identifying continuity and change is being able to recognise that while many changes occur over time, some things remain constant.
- Historians often use sequencing of events and create timelines in order to study the changes that have happened over time.
- Historians divide the past into ages and periods.

Cause and effect

- Using chronological order and timelines helps us to recognise cause and effect.
- Analysing cause and effect relates to understanding that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences.

Perspective

- Perspective is the different points of view that people may have of an event.
- We try to understand the different perspectives of people in the past by exploring their points of view, attitudes and values.
- Historians also have their own perspectives, which can influence the way they see the past.

Empathy

- Historians try to discover how people thought and felt in the past.
- We should avoid judging people from the past by the standards of our own age.
- Using historical imagination requires using your imagination, but basing your ideas on evidence.

Significance

- Determining historical significance is being able to make judgements about the importance assigned to particular aspects of the past; for example, events, developments, movements and historical sites.
- Historians will often have differing opinions about how significant certain things are.

Contestability

- When attempting to interpret the past, differing interpretations will always exist, and these can be debated and contested.
- Sometimes evidence is available that supports different versions of events and, in these cases, historians must make a judgement, based on the evidence, as to what most likely happened.

13.3 Ages, time and chronology

- Historians divide the past into ages and periods.
- In Australia, we count time using a system that was developed in Christian countries, but there are other systems.
- Using chronological order and timelines helps us to recognise cause and effect.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4289)
Reflection (ewbk-4377)
Student learning matrix (ewbk-4370)

13.7.2 Key terms

ancient history the period from the beginning of civilisation to the fall of the Roman Empire
anno Domini latin for 'in the year of our Lord'
artefact an object made or changed by humans
bettong small nocturnal marsupial, resembling a small wallaby, with brown-grey fur on top and white on the underside
biased one-sided or prejudiced; seeing something from just one point of view
cause and effect the concept that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences
chronology a record of past events in order of time, from Latin *chronos* meaning time and *logos*, meaning to work out
civilisation term used to describe societies that have towns and features such as complex forms of government and religion
contestability when particular interpretations of the past are open to debate
continuity and change the concept that while many changes occur over time, some things remain constant
evidence information that indicates whether something is true or really happened
heritage everything that has come down to us from the past
hypothesis (plural: hypotheses) a theory or possible explanation
Latin the language of ancient Rome and its empire
perspective point of view or attitude
prehistory the period before writing was invented
primary sources objects and documents that were created or written in the period of time that the historian is investigating
secondary sources reconstructions of the past written or created by people living at a time after the period that the historian is studying
significance the importance assigned to particular aspects of the past; for example, events, developments, movements and historical sites
timeline a diagrammatic tool representing a period of time, on which events are placed in chronological order

13.7 Review exercises

Multiple choice

1. We study history in an effort to learn about what?
   - **A.** Our past
   - **B.** Our heritage
   - **C.** Our future
   - **D.** Our grandparents
2. What are historical sources?
   - **A.** Written materials that provide information about the past
   - **B.** Non-written materials that provide information about the past
   - **C.** Stories from people who lived during the time of the event we are studying
   - **D.** All of the above

3. How can we, as historians, test the reliability of evidence from sources?
   - **A.** Compare them with other sources that are available
   - **B.** Ask a teacher
   - **C.** Ask Google
   - **D.** Check for bias
4. Why do historians make use of chronology, sequencing and timelines?
   - **A.** To investigate how events have happened from start to finish
   - **B.** To investigate the relationship between different events
   - **C.** To investigate what has changed about society and what has stayed the same
   - **D.** All of the above
5. What must historians be able to do to identify cause and effect?
   - **A.** Place events in chronological order
   - **B.** Create timelines
   - **C.** Identify patterns of cause and effect
   - **D.** Explain the relationship between two events
6. Why do different perspectives of events occur?
   - **A.** Differing values and attitudes
   - **B.** Differing age and gender
   - **C.** Differing social status
   - **D.** All of the above
7. What does demonstrating empathy when investigating ancient history mean?
   - **A.** Understanding that soldiers and war were considered necessary to the empire
   - **B.** Acknowledging that skilled craftsmen built complicated structures
   - **C.** Collecting evidence that many women worked only in the home
   - **D.** Understanding the social hierarchy that existed at the time
8. What does determining historical significance mean an historian can do?
   - **A.** Explain all the important events that have taken place in history
   - **B.** Make judgements about what is more important and what is less important
   - **C.** Decide what is important and what is not
   - **D.** Argue that one event is more significant than another
9. When do historical debates occur?
   - **A.** Many sources of evidence are available about the same event.
   - **B.** Some sources of evidence contradict other sources.
   - **C.** Evidence is missing about an event an historian is investigating.
   - **D.** All of the above
10. Why is gaining confidence and expertise with history skills important?
    - **A.** Learning about our past can help us to predict what may happen in the future.
    - **B.** Critical thinking and effective communication skills are important to employers.
    - **C.** Knowledge of our own history is important to our everyday lives.
    - **D.** All of the above

Short answer

11. Explain what a historian is doing when identifying continuity and change.
12. Outline the difference between short-term causes and effects and long-term causes and effects.
13. Think of something that happens in our own time that some people believe is wrong. An example could be the way some countries are wealthy while in others children die of starvation and preventable diseases. Do you think that at some time in the future people might consider ours to have been an unjust age? Give reasons for your answer.
14. List three features of a well constructed timeline.
15. In your own words, define the term ‘contestablity’.

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 13 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

13.1 Overview

Video eLesson
- Investigating the past (eles-1057)

13.5 SkillBuilder: Sequencing events in chronological order

eWorkbook
- SkillBuilder: Sequencing events in chronological order (ewbk-4254)

13.6 SkillBuilder: Developing a hypothesis

eWorkbook
- SkillBuilder: Developing a hypothesis (ewbk-4255)

Weblink
- Mungo National Park

13.7 Review

eWorkbook
- Reflection (ewbk-4377)
- Student learning matrix (ewbk-4370)

To access these online resources, log on to **www.jacplus.com.au**.

14 The ancient world: c. 60 000 BCE to c. 650 CE

14.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Without planes and ships, how (and why) did early humans spread across the world from Africa?

14.1.1 Links with our times

You might have seen travel brochures that advertise 'the journey of a lifetime'. This topic is also a journey; it will take you through many human lifetimes, and we will be travelling through not only space but also time! We start in the Old Stone Age, beginning when the ancestors of every modern human being on our planet lived in Africa. We will follow the pathway of people who walked out of Africa, probably less than 100 000 years ago. Our next big stop begins around 11 000 years ago, when people in the Middle East changed to a new way of life based on farming. Gradually, farming spread to many places, enabling people to live in settled communities and build great monuments, such as Stonehenge, between 3000 and 2000 BCE. Along the way, we will encounter some amazing discoveries that have helped us to imagine the world in ancient times.

on Resources

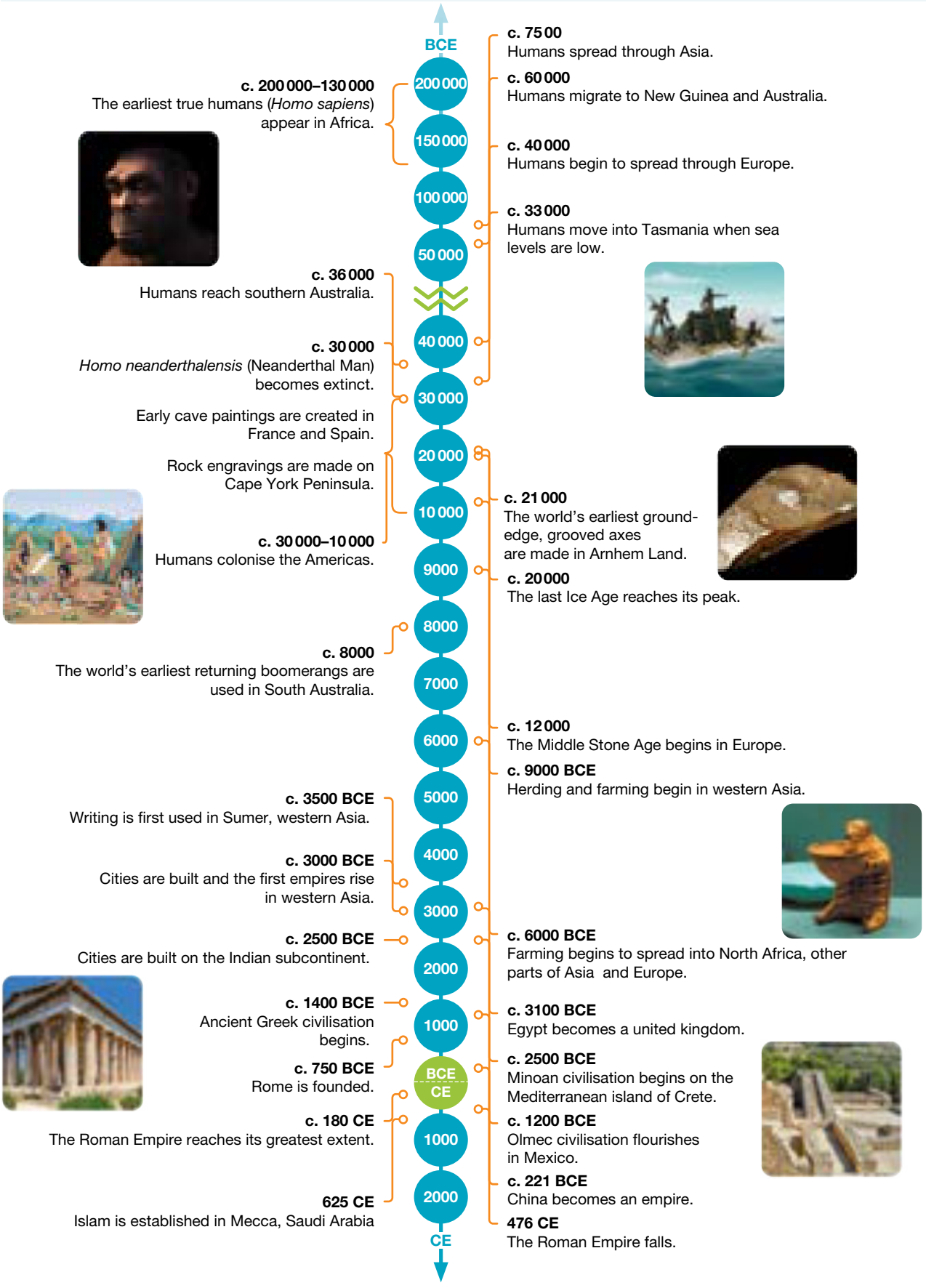
- **eWorkbook** Customisable worksheets for this topic (ewbk-4290)
- **Video eLesson** The ancient past (eles-2456)

SOURCE 1 Remnants of the ancient past can still be seen today. This Neolithic burial chamber is in Wales in the United Kingdom.



int-4291

SOURCE 2 A timeline of the ancient world



14.2 Examining the evidence

LEARNING INTENTION

By the end of this subtopic you will be able to describe the evidence that exists about the ancient world.

14.2.1 How do we know about the ancient world?

Our survey of ancient times includes two very different worlds: the prehistoric world, or Old Stone Age, and the ancient world, when people adopted new ways of life based on farming. For Old Stone Age societies, we have no evidence from written records because there was no writing. So we do not know the name of even a single person who lived in prehistoric times. We have almost no evidence from buildings because Old Stone Age people were **hunter-gatherers**, who lived **nomadic** or semi-nomadic lives and rarely required permanent dwellings. Clothes made of animal skins and tools made of wood do not normally survive for thousands of years. Also there were far fewer people living in Old Stone Age times to leave traces behind. Despite these problems, you will realise that there are primary sources, including weapons, tools and cave paintings (see **SOURCE 1**), that can provide us with clues to unlock some of the secrets of the Old Stone Age.

SOURCE 1 An Old Stone Age painting of bison, from Lascaux cave in southern France



SOURCE 2 One side of the Standard of Ur. It is a box decorated on all four sides with scenes from life in Sumer. It was made in about 2600 BCE and was part of the treasure in a royal tomb found in the ancient Sumerian city of Ur. This side is called the 'war side' because it shows scenes of warfare, in contrast to the peaceful activities depicted on the 'peace side'.



In contrast, societies that experienced the **Neolithic Revolution** left many primary sources. The growth of towns and cities, the rise of governments, laws and organised religions, the use of metals and the emergence of arts and crafts left many clues. Archaeologists have unearthed vast amounts of evidence that is now displayed in museums around the world (see **SOURCE 2**). These artefacts include brilliantly carved wall panels, pottery, tombs and statues.

Life in large, organised communities began writing to make records of trade, contracts, laws and taxes, but writing soon found other uses. The Sumerians were the first to keep written records of their stories, legends and poems (see **SOURCE 3**). Most of what we know about their literature comes from copies of their stories that were made by people who conquered them and who also wrote on clay tablets. As you study each of the following sources, you can begin to imagine the richness of the cultures in the ancient world.

hunter-gatherers people who live by hunting animals and gathering plants

nomadic moving about from place to place

Neolithic Revolution the beginning of the New Stone Age

SOURCE 3 From *The Epic of Gilgamesh*, one of the best known stories of ancient Sumer. In this story, a man named Utnapishtim tells Gilgamesh the story of how he, his family and helpers built a great boat to save themselves and pairs of animals when their gods decided to flood the world.



All my family and kin I made go aboard the ship.

The beasts of the field, the wild creatures of the field,

All the craftsmen I made go aboard.

…

Six days and nights

Blows the flood wind, as the south-storm sweeps the land.

When the seventh day arrived,

…

The sea grew quiet, the tempest was still, the flood ceased

…

And all mankind had returned to clay.

When the seventh day arrived,

I sent forth and set free a dove.

The dove went forth, but came back;

Since no resting-place for it was visible, she turned round.

Then I sent forth and set free a swallow

The swallow went forth, but came back;

Since no resting-place for it was visible, she turned round.

Then I sent forth and set free a raven.

The raven went forth and, seeing that the waters had diminished,

He eats circles, caws, and turns not round.

14.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4, 6	Questions 2, 7, 8	Questions 5, 9, 10

Check your understanding

1. Identify one primary source of evidence for Old Stone Age societies.
2. Explain why more primary sources are left by societies that experienced the Neolithic Revolution than by those that experienced the Stone Age.
3. List three examples of primary source evidence for Neolithic civilisations.
4. Define the term *nomadic*.

5. Why do we have much more evidence for ancient Neolithic societies that adopted new ways of life based on farming? Write a short response that gives at least two reasons.

Apply your understanding

6. Write a short paragraph explaining three things that **SOURCE 1** could tell us about Old Stone Age people.
7. Look closely at **SOURCE 2**. The top panel of the Standard of Ur shows the Sumerian king with armed warriors.
   a. Describe the scenes in the middle and bottom panels.
   b. What evidence does this source provide for the nature of war in ancient Sumer?
8. Read the first six lines of **SOURCE 3** and explain in your own words the events it describes.
9. In the last ten lines of **SOURCE 3**, the narrator tells what happened each time he released a bird. What do you think this means?
10. Write a one-page summary of all that you have discovered about ancient societies from just these three sources.

For sample responses to every question, go to www.jacplus.com.au.

14.3 Out of Africa

LEARNING INTENTION

By the end of this subtopic you will be able to describe the first humans and identify where they first came from.

14.3.1 The world of the hunter-gatherers

Scientific evidence suggests that the human story begins in Africa. The evidence tells us that several different human-like **species** emerged in Africa between about 2 million and 200 000 years ago. Members of some of these species, including *Homo sapiens*, the species to which all modern humans belong, migrated out of Africa. The period during which modern humans first emerged is referred to as the Old Stone Age. It was the age of the hunter-gatherers, the time before many peoples began farming.

Imagining the distant past

DID YOU KNOW?

In 2011, scientists used evidence from DNA to rewrite the story of early *Homo sapiens*' migrations. They concluded that the ancestors of Aboriginal and Torres Strait Islander peoples most likely left Africa and the Middle East at least 20 000 years earlier than the ancestors of Asians and Europeans.

Imagine living in a world where everything you now take for granted has never existed. You live in caves or shelters covered in bark or skins. If you live in a warm climate, you probably need no clothes. In a cold climate, your clothes are the skins from animals your family has hunted.

All your food comes from these animals and from roots, seeds, fruits or berries gathered in the wild. Your only warmth and light at night comes from fires you make by scratching **flint** or rubbing sticks to ignite dry leaves or grass.

Each day a great ball of fire crosses your sky, bringing warmth and light, only to disappear again over what you might believe is the edge of the world. You live in fear of large animals that are faster and stronger than you and who see *you* as food. But you have some advantages. A thumb opposite the fingers on each hand enables you to make and use simple tools and weapons. Your brain enables you to learn from every experience. And you have language — the ability to make sounds that have a shared

species a group or classification of living things
flint a very hard stone, useful for tools and for making sparks to start fires

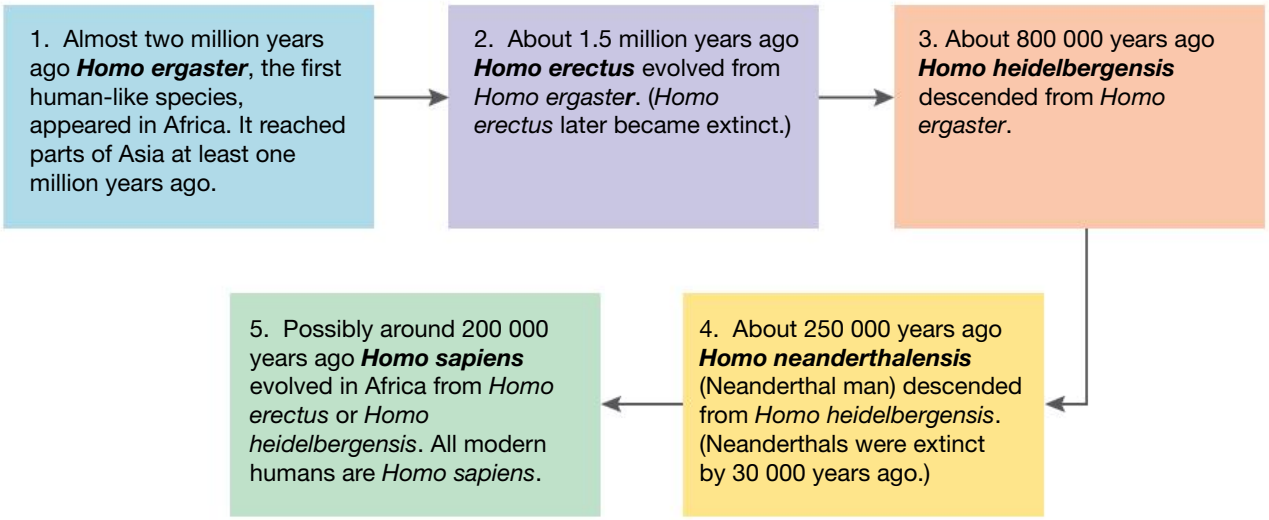
meaning for the group with which you will spend your life. This is how many historians imagine ancient life for the early *Homo sapiens* in the Old Stone Age.

The theory of evolution

Less than two centuries ago most people in Christian, Jewish and Muslim societies believed that the Earth and all living things were only about 6000 years old. This belief came from the Bible. Charles Darwin challenged this idea in 1859. Darwin presented a scientific argument using evidence to show that all species evolved from other life forms over millions of years. This is called the theory of evolution. It is supported by evidence from discoveries of **fossils** by **palaeontologists**, but some people still reject this theory.

Scientists now generally agree that life on Earth began about three billion years ago. About six million years ago the line of animals from which modern humans are descended split from that of the chimpanzees. **SOURCE 1** illustrates the way in which many scientists believe humans evolved.

SOURCE 1 How human beings evolved



14.3.2 Human migrations

As we now know, there were originally several human species. However, only our species, *Homo sapiens*, had survived. *Homo sapiens* had migrated throughout Africa and into Asia, Australia and Europe by around 40 000 years ago and more recently into the Americas. Palaeontologists and archaeologists have traced these migrations by studying and dating fossil sites and archaeological sites, and comparing the tools and bones of humans and the animals they hunted.

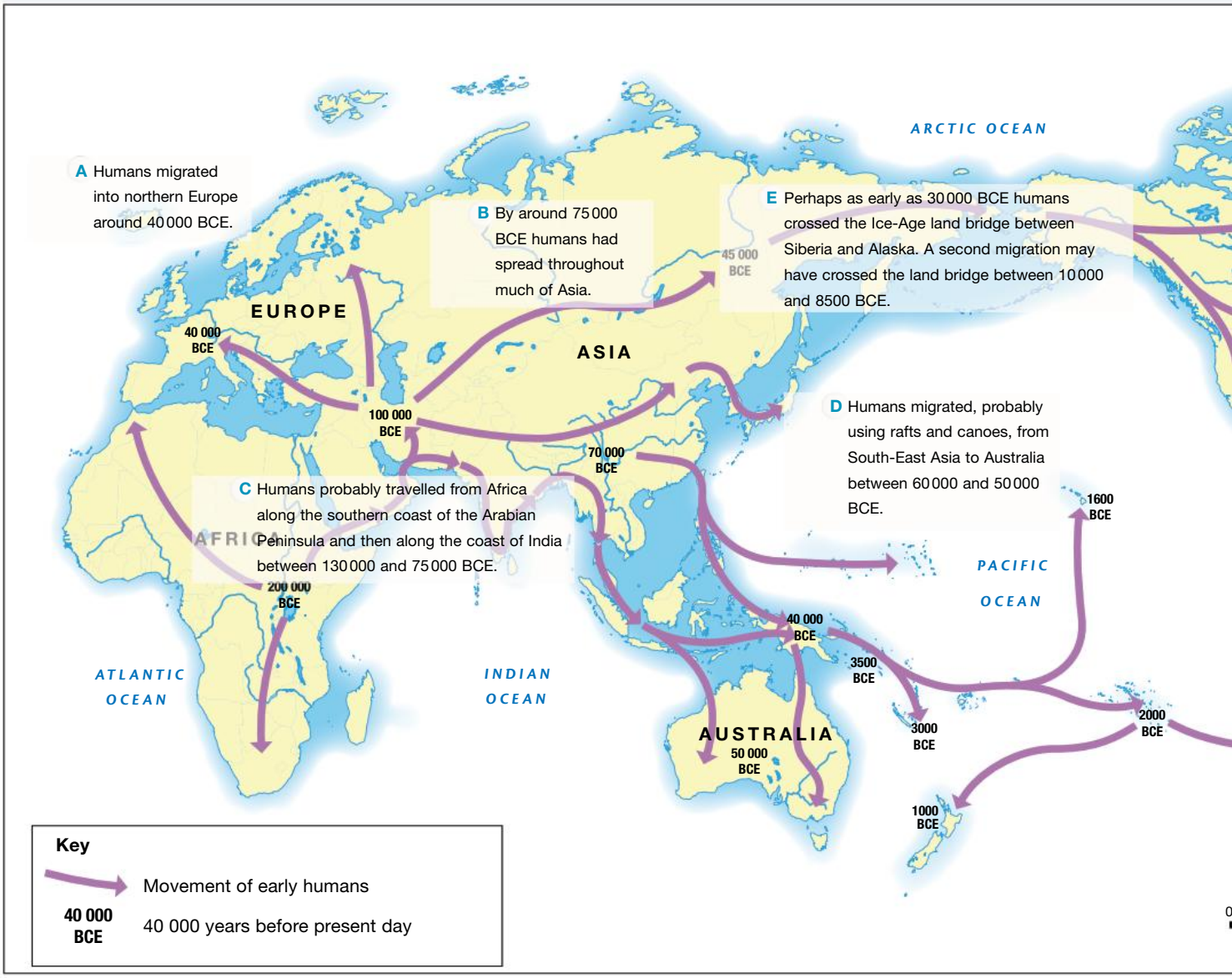
Why did people migrate to new lands?

Perhaps people migrated because of pressure on food supplies, but evidence from the science of **genetics** suggests that 40 000 years ago there were only about 200 000 humans in the world. The cold northern climate could have encouraged groups to migrate south, but this would not explain why other humans moved north into icy Siberia around 40 000 years ago.

fossils remains of plants or animals found in rocks
palaeontologist a scientist who studies fossils
genetics study of heredity

int-5971

SOURCE 2 A map showing migrations of early humans from Africa to the rest of the world



Source: MAPgraphics

14.3.3 Technologies and peoples

The earliest tools were stones that were smashed to create a jagged edge (see **SOURCE 3**). Over many thousands of years, humans improved stone tools by flaking and grinding them. From about 40 000 BCE people were using stone chisels, scrapers, and small spear and arrow tips as well as sewing needles and fish hooks made of bone. They were also wearing body ornaments and using symbols in cave paintings.

SOURCE 3 A flint hand axe made around 200 000 years ago in Africa





F Humans reached the far south of South America between 15 000 and 10 500 BCE.

DID YOU KNOW?

Prehistoric people made musical instruments like flutes from hollow bones. The earliest were found in Africa and are believed to be around 45 000 years old.

How were Old Stone Age societies organised?

If prehistoric societies were similar to later hunter-gatherer societies, people probably moved around in extended family groups of fewer than fifty individuals. Men and women would have had different roles. The older men would have had most authority, but there would have been few differences in wealth and power. However, this is largely guesswork.

What can we tell from their art?

Prehistoric art tells us something about how Old Stone Age people saw their world. There is evidence of grinding pigments to make paints in Africa at least 100 000 years ago. Prehistoric art sites are on every continent. Prehistoric people in Europe carved small sculptures (see **SOURCE 4**) and made cave paintings from around 40 000 years ago. Most importantly, archaeologists believe that people who communicated through art must also have communicated through spoken language.

SOURCE 4 The Venus of Willendorf, a stone figure likely made around 27 000 years ago



What happened to the Neanderthals?

One of the great puzzles of prehistory is why the Neanderthals died out. We know that Neanderthals and some types of *Homo erectus* lived at the same time as early *Homo sapiens*. But by about 30 000 years ago *Homo sapiens* were the only surviving humans.

Did *Homo sapiens* cause this or did these other species become **extinct** for other reasons? We do not know.

Neanderthals and *Homo sapiens* had similar-sized brains and used similar tools; both were hunter-gatherers and used fire. There is evidence that both cared for sick or injured members of their groups and buried their dead. Fossils suggest that Neanderthals were shorter but more strongly built than *Homo sapiens*. Neanderthals also had shorter lives, lived in smaller groups, never spread past Europe and western Asia and did not change their tool-making technology as much as *Homo sapiens*. Evidence also suggests that Neanderthals were less nomadic. They occupied their sites year-round so they would have had to hunt and gather over a wider area each day.

extinct died out

14.3 ACTIVITY

Create a comic strip to show how the tool in **SOURCE 3** would have been made and used.

HASS skills: Communicating and reflecting
History concepts: Source, Evidence

14.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 6, 8	Questions 3, 4, 9, 10, 11	Questions 7, 12, 13, 14

Check your understanding

1. On what continent did the human species emerge?
2. In the Old Stone Age, how did people obtain food, clothing and shelter?
3. Suggest examples of how language could have given humans advantages over other animal species.
4. Using the map in **SOURCE 2**, place the movement of early humans from Africa to each main region of the world in chronological order.
5. Make a list of possible reasons for human migration in prehistoric times.
6. Make a list of tools made by Old Stone Age peoples from about 40 000 BCE.
7. Draw up a table with two columns.
   a. In the first column, list the things that *Homo sapiens* and Neanderthals had in common.
   b. In the second column, list the ways in which they were different.
   c. Discuss in groups which differences might have helped one to survive while the other became extinct?

Apply your understanding

8. Using **SOURCE 1**, name three species of early humans.
9. Due to rising sea levels about 10 000 years ago, routes taken by humans migrating along the coasts of Asia are now under water. Explain how this would make it difficult for archaeologists to trace their movements.
10. **SOURCE 4** is believed to represent fertility (ability to produce offspring). Suggest a reason Old Stone Age people made such figures.
11. What are we able to know about prehistoric societies from fossils, tools and art and from the ways of life of hunter-gatherer societies in later times? Refer to **SOURCES 3** and **4** in your answer.
12. Evaluate the significance of Darwin's theory of evolution in changing the way people understand their origins.
13. What kind of evidence supports Darwin's theory of evolution?
14. Why do you think many people still reject Darwin's theory of evolution?

For sample responses to every question, go to www.jacplus.com.au.

14.4 A changing Paleolithic world

LEARNING INTENTION

By the end of this subtopic you will be able to describe the last Ice Age and explain how humans survived.

14.4.1 The last Ice Age

Today we know that human activities, such as burning coal and oil, are causing global warming. This could bring disastrous climate changes, causing the drying up of fertile farming regions and flooding of river valleys that are home to tens of millions of people. In **Paleolithic** times, humans had no effect on changes in the Earth's climate. Changes in climate did, however, have huge effects on humans.

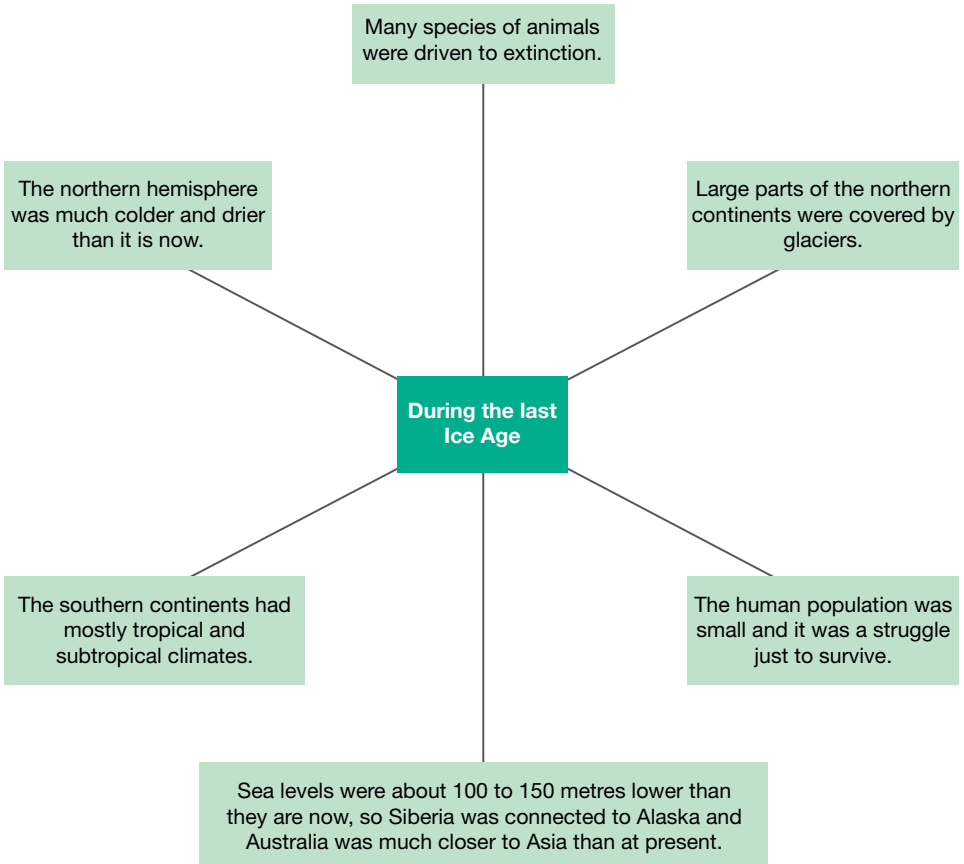
The time we call the **Pleistocene Epoch** (about 1.8 million to 10 000 BCE) was generally a time of extreme cooling and recurring **Ice Ages**. These periods lasted for tens of thousands of years. Such climate changes are caused by small changes in the Earth's orbit around the sun. The last Ice Age began around 110 000 BCE and reached its peak (its coldest point) about 20 000 BCE.

Paleolithic of the Old Stone Age

Pleistocene Epoch the glacial period before the Holocene Epoch

Ice Ages long periods during which glaciers covered much of the northern hemisphere

SOURCE 1 During the last Ice Age, the world was a very different place.



Living in the Ice Age

Humans survived by adapting to climate changes and becoming more intelligent. The northern hemisphere's long, cold winters meant fewer plant foods. But humans learned to make better weapons and to change their hunting methods to kill large mammals such as **mammoths** (see **SOURCE 2**). The meat of a mammoth could keep for months in the freezing conditions.

SOURCE 2 Mammoth and ibex (a type of wild goat). A Paleolithic wall painting from the Rouffignac cave, Dordogne, France.



14.4.2 Humans in a changing environment

Surprisingly, even humans living long ago had some effect on their environment. They burned vegetation to create new growth. This attracted the plant-eating mammals they hunted. Burning and over-hunting may have changed the balance of plants and animals in some areas. Humans tamed wolves to become domesticated dogs. As they spread to new places such as Australia, Siberia and the Americas, humans found species of animals that had not learned to fear them. Such animals became easy prey. Scientists believe that humans drove some large animals, such as the mammoth, to extinction.

An Ice Age village

At a place called Pushkari, in Ukraine, archaeologists discovered the traces of a settlement that had been inhabited at the peak of the Ice Age. These traces provided evidence of how humans survived in a world of freezing temperatures and continual drought (see **SOURCE 3**).

mammoth a large extinct mammal like a modern elephant but with larger tusks and woolly fur to keep it warm

SOURCE 3 An archaeologist's description of Pushkari as it was around 20 000 BCE from Steven Mithen, *After the Ice: A Global Human History 20 000–5 000 BC*, 2003

… five dwellings form a rough circle … They face south, away from the biting icy wind and close to … a semi-frozen river. The dwellings are igloo-like but built from mammoth bones and hide rather than blocks of ice. Each has an imposing entrance formed by two tusks, up-ended to form an arch. The walls use massive leg bones as vertical supports, between which jawbones have been stacked chin-down to form a thick barrier to the cold and wind. Further tusks are used on the roof to weigh down hides and sods of turf that are supported on a framework of bones and branches … Temperatures can fall to minus 30 degrees C and there are nine months of it to endure.

SOURCE 4 A modern elephant has smaller tusks than a mammoth and no fur.



The world warms up

The world began warming up from about 18 000 BCE. By 13 000 BCE, the ice sheets had started melting. Between 12 000 and 8000 BCE the climate fluctuated wildly. But then the Ice Age was over. It was followed by the **Holocene Epoch**. The new epoch brought a milder climate to the northern hemisphere, but in some parts of the southern hemisphere, such as Australia, vast areas became very hot and dry. This global warming created conditions in which humans in a few places could move towards the New Stone Age, the age of farming and towns.

Holocene Epoch the past 10 000 years

14.4 ACTIVITY

Use **SOURCE 4** and what you have learned about mammoths to draw a sketch of a mammoth with labels showing how mammoths were different from modern elephants.

HASS skills: Communicating and reflecting
History concept: Continuity and change

14.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 7	Questions 3, 6, 8	Question 5, 9

Check your understanding

1. What and when was the Pleistocene Epoch?
2. Referring to **SOURCE 1** and the information in this section, fill in the blanks to complete the following sentences.
   a. In the last Ice Age the Earth was much _____ and _____ than today.
   b. Much of the northern hemisphere was covered by _____.
   c. Ice Ages and other natural changes in the Earth's _____ were caused by small changes in the Earth's _____.
   d. People coped with the Ice Age by becoming more _____, making better _____ and changing _____ methods.
3. Explain the main differences between the cause of the global warming that took place from about 20 000 to 10 000 years ago and recent global warming.
4. Draw a cartoon to show how Ice Age people might have hunted and killed mammoths.
5. Look closely at **SOURCE 2**. What evidence suggests that the climate was quite cool at the time this artwork was made?

Apply your understanding

6. Study **SOURCES 2** and **3**.
   a. What is unusual about the image of the mammoth in **SOURCE 2**?
   b. Can you think of any reasons why prehistoric artists might have drawn it? (Several answers are possible.)
   c. How were mammoth parts used as described in **SOURCE 3**?
   d. Make a list of other resources that the people of Pushkari would have obtained from mammoths.

7. Explain what changed and what remained the same in Old Stone Age ways of life during the last Ice Age.
8. To establish the historical significance of an event, we ask questions such as: How were people's lives changed? How many people were affected? Using those questions, explain the historical significance of the end of the last Ice Age. For help with understanding significance, see topic 13 History concepts and skills.
9. As you already know, by around 20 000 BCE humans had migrated from Africa to most parts of the world. Suggest a hypothesis to explain why people continued to live in the harsh environment described in **SOURCE 3** instead of migrating south to a warmer region.

For sample responses to every question, go to www.jacplus.com.au.

14.5 An amazing journey

LEARNING INTENTION

By the end of this subtopic you will be able to explain how and when the first Aboriginal and Torres Strait Islander Australians arrived in Australia.

14.5.1 Coming to Australia

Aboriginal and Torres Strait Islander peoples explain their origins through the stories of their creation period. According to some of these stories, their people have been in Australia since the beginning of time. Each language group has its stories of spirit ancestors who created all life in the distant past. However, scientists argue that all human life originated in Africa, and people gradually migrated to the far-flung regions of the world, including Australasia.

The last Ice Age in the Pleistocene period ended around 10 000 years ago. During the Ice Age much of the world's water was locked up in great ice sheets in the northern hemisphere; this meant ocean levels were up to 160 metres lower than they are today. It also meant that islands and continents now separated by wide seas were once joined to one another or separated by much narrower sea channels. The distance by sea between Australia and Asia was much shorter than it is now, and Papua New Guinea and Tasmania were joined to the Australian mainland (see **SOURCE 1**).

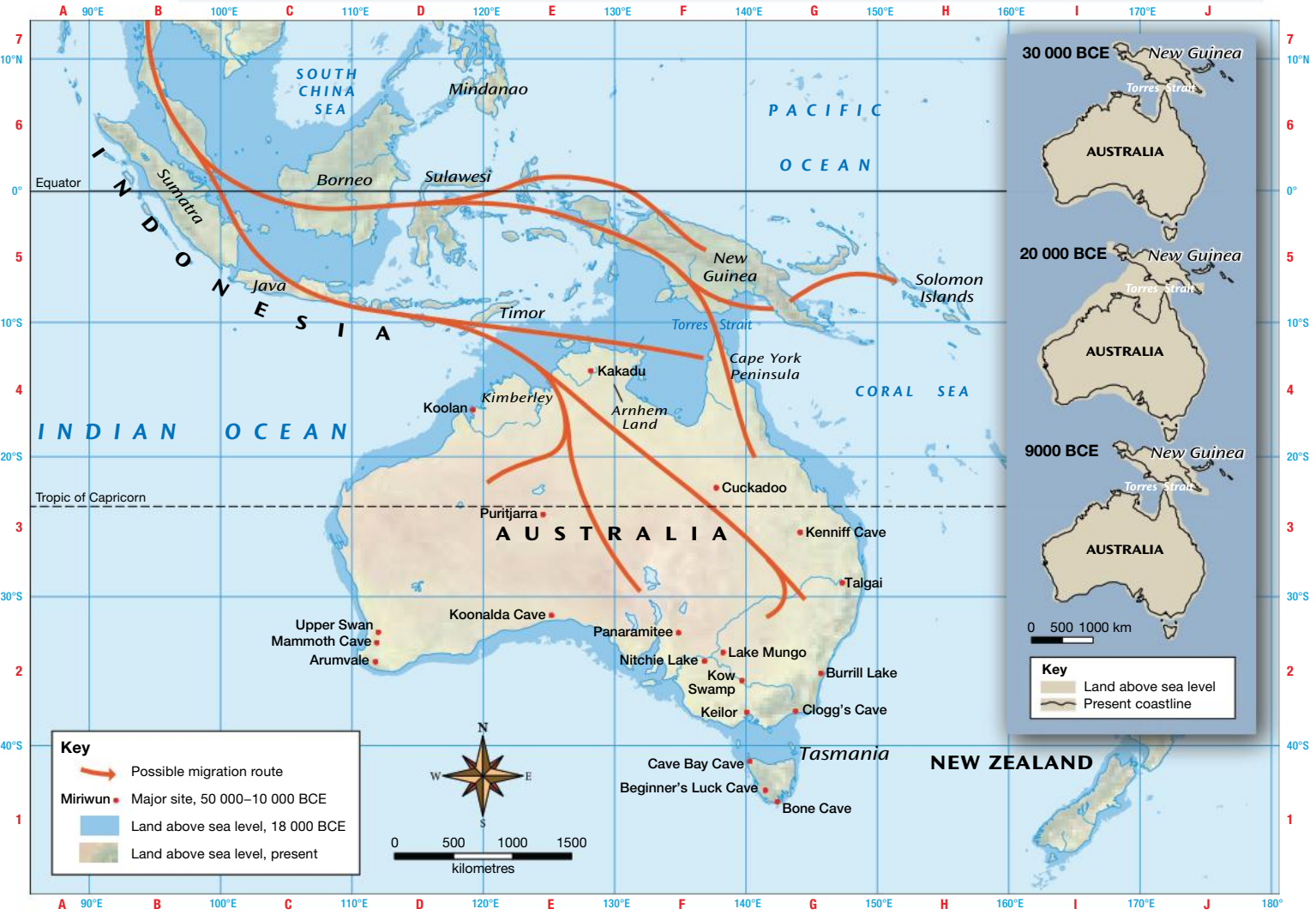
The most widely accepted theory is that groups of people migrated from South-East Asia to Australia during the Ice Age. They did so by walking across the land and 'island hopping' across the narrow seas in canoes or rafts.

DID YOU KNOW?

For many Aboriginal and Torres Strait Islander peoples who lived in coastal areas, the archaeological evidence of their lives was covered over when sea levels rose around 10 000 years ago. Stories of the Sea Country have been passed down through the generations that followed. In 2020, researchers from Flinders University, working with the Murujuga Aboriginal Corporation, found artifacts off the Pilbara coast near the Burrup Peninsula. These included stone tools that are believed to be around 8000 years old.

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SOURCE 1 The lowest sea levels in the past 120 000 years occurred about 20 000, 70 000 and 90 000 years ago. The shaded areas show places that are now under the sea but were above sea level until the last Ice Age ended about 10 000 years ago. The map also shows some Australian archaeological sites that are more than 10 000 years old.



Source: Spatial Vision.

SOURCE 2 From Josephine Flood, *The Riches of Ancient Australia*, 1990

The reason why scientists believe in an overseas origin for Australia's first people is there is nothing in the Australian **fauna**, past or present, from which humans could have evolved. There are no **anthropoid** or pongid (ape-like) ancestors in Australia from whom they could be independently descended.

fauna animals
anthropoid human-like

When did people first come to Australia?

Most archaeologists now believe that the Aboriginal and Torres Strait Islander peoples arrived in Australia at least 50 000 and possibly 60 000 years ago. Over many thousands of years they gradually spread throughout the land. Traces of human life found in many parts of Australia provide evidence for this theory. These traces include:

- rock shelters in Kakadu National Park in the Northern Territory with evidence of occupation for at least 50 000 years
- stone tools with radiocarbon-dated charcoal between 45 000 and 38 000 years old from campsites at Lake Mungo in the Willandra Lakes region of New South Wales.

A mystery

This theory does not claim to explain *why* they came to Australia. There is no evidence that would help to explain this. Perhaps it was by accident, although this seems unlikely. Perhaps their migration was caused by pressure from other peoples in South-East Asia. Migration could have taken place gradually over many generations. What we do know is that people gradually occupied the whole Australian continent, including Tasmania, which they reached at least 33 000 years ago.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Indigenous migrations to Australia**

DISCUSS

Because no evidence explains why Aboriginal and Torres Strait Islander peoples travelled to Australia in the distant past, discuss circumstances that may have led to their decision to make such a journey.

General capability: Critical and creative thinking

SOURCE 3 A modern artist's impression of the way the first people may have reached Australia, travelling on rafts from South-East Asia around 60 000 years ago



14.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 8	Questions 2, 6, 7	Questions 4, 9, 10

Check your understanding

1. What is the difference between sea levels during the last Ice Age and those today?
2. How would the difference in sea levels between the last Ice Age and today have helped to make it possible for people to travel from Asia to Australia?
3. Define the terms 'fauna' and 'anthropoid' and use them in a sentence.
4. Look closely at **SOURCE 1**. Name three archaeological sites that are more than 10 000 years old.
5. During the Ice Age, mainland Australia and Tasmania were joined together. True or false?

Apply your understanding

6. Use the scale in **SOURCE 1** to calculate roughly how far Aboriginal and Torres Strait Islander peoples would have had to travel by sea to reach the Australian continent by one or more of the possible routes shown on the map.
7. According to **SOURCE 2**, why do most scientists think that Aboriginal and Torres Strait Islander peoples must have originated outside Australia?
8. Imagine you are one of the people depicted in **SOURCE 3**. Describe what you might have experienced on such a journey.
9. Using information about climate change and sea levels in subtopic 14.4 along with information and sources in this subtopic, describe possible reasons at least 50 000 years ago the ancestors of Aboriginal and Torres Strait Islander peoples chose to make such an amazing journey.
10. Archaeologists have their theories for how people first came to Australia. How do Aboriginal and Torres Strait Islander peoples explain it?

For sample responses to every question, go to www.jacplus.com.au.

14.6 The Mesolithic Age

LEARNING INTENTION

By the end of this subtopic you will be able to describe the Mesolithic Age and how life changed for humans.

14.6.1 When was the Mesolithic Age?

Our next stop as we race through time is a brief one. It is the short period we call the Mesolithic Age or Middle Stone Age. It was a stage between the Old Stone Age, when people survived entirely by hunting and gathering, and the New Stone Age, when some people developed **agriculture**. It usually marked as a step in between these two ways of providing for human needs.

In the area around the eastern shores of the Mediterranean Sea, agriculture took place even before the end of the last Ice Age. The **Fertile Crescent** is the name given to the area now covered by Israel/Palestine, Lebanon, Jordan, Syria, south-east Turkey and Iraq. By around 14 000 BCE it had become warmer and wetter. Wild barley, wheat and rye grew in this area, and by around 12 000 BCE hunter-gatherers

agriculture the cultivation of land, growing of crops or raising of animals

Fertile Crescent the area now roughly covered by Israel/Palestine, Lebanon, Jordan, Syria, south-east Turkey and Iraq

had formed permanent villages in places with good supplies of water, plants and animals. Although these people were not yet farmers in a modern sense, they were nurturing and harvesting wild plants.

In northern and central Europe, the Mesolithic Age began at the end of the last Ice Age, as glaciers melted and the warmer climate produced **marshlands** with abundant food supplies. In Europe, the Mesolithic Age lasted until around 4500 BCE.

14.6.2 How did life change in Mesolithic times?

Mesolithic peoples still hunted and gathered their food but they also developed new skills. They made small flint blades called **microliths** and used them for arrowheads and as cutting tools. Mesolithic societies developed pottery and there is evidence that different groups traded with each other. Significant Mesolithic sites are in England, Ireland, France, Germany, Denmark, Greece, Serbia, Estonia and The Netherlands.

SOURCE 1 A headdress made from the skull and antlers of a large deer around 8000 BCE. It was excavated at Star Carr.



Star Carr and Howick—two Mesolithic sites

At Star Carr in northern England, archaeologists uncovered the site of a Mesolithic camp beside a lake. Here they found remains of a wooden trackway that crossed the boggy ground between the camp and the lake. Evidence suggests that the camp was a hunting base and that people were burning off the reeds, probably to attract animals that fed on the new shoots.

At Howick, also in northern England, archaeologists have excavated the traces of a house and found evidence that it was used for at least 100 years from about 7800 BCE. If this was a permanent home, it means that in some places abundant food resources had made it possible for people to stop living as nomads and to have permanent settlements.

marshland low-lying land that is usually boggy and often flooded

microliths small stone artefacts

SOURCE 2 An artist's impression of the Howick Mesolithic house as it might have appeared around 7800 BCE



14.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 7	Questions 4, 6, 8	Questions 5, 9, 10

Check your understanding

1. The Mesolithic Age marked a step between what two ways of providing for human needs?
2. What was the Fertile Crescent?
3. What changed in the Fertile Crescent by around 12 000 BCE?
4. Name two changes in skills that occurred during Mesolithic times.
5. What discoveries at Star Carr and Howick provide evidence of permanent settlement?

Apply your understanding

6. Look closely at **SOURCE 1**. What might such a headdress suggest about beliefs or rituals among the people who used it?
7. **SOURCE 2** is based on pieces of evidence found at Howick. Explain what made the Howick site different from Old Stone Age campsites.
8. What do changes in climate and evidence of types of settlements suggest about changing lifestyles in the Mesolithic Age?
9. Explain the historical significance of the discoveries of evidence of permanent settlements at Star Carr and Howick. See topic 13 History concepts and skills for help understanding significance.
10. We know from evidence at Howick and Star Carr that abundant food resources made it possible for people to stop living as nomads and to have permanent settlements. Suggest a hypothesis to explain why people in other places kept to a nomadic lifestyle.

For sample responses to every question, go to www.jacplus.com.au.

14.7 The New Stone Age

LEARNING INTENTION

By the end of this subtopic you will be able to describe the New Stone Age, in which people first learned to keep animals and grow crops.

14.7.1 The Neolithic Revolution

For our next stop, imagine that we have travelled back in time 11 000 years to some villages in the Fertile Crescent. The people of these villages had survived by hunting wild animals and gathering plants or seeds along the waterways but somewhere around 9000 BCE these people began growing wheat and barley and keeping herds of sheep and goats.

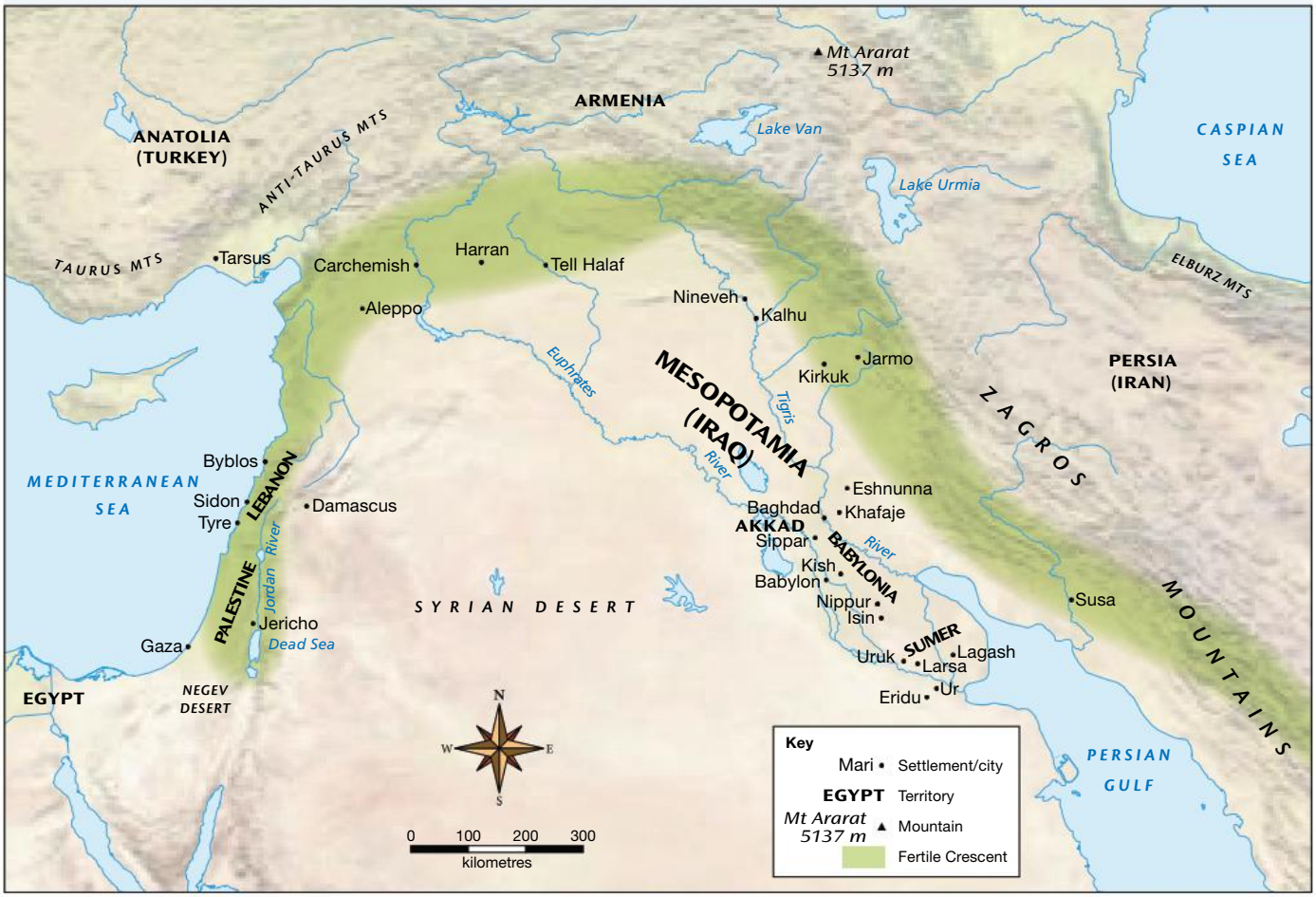
This new way of living allowed the people to stay in one place, so they replaced their simple shelters with houses made from mud bricks. We call this change the Neolithic Revolution — the adoption of farming that marked the beginning of the New Stone Age. Nothing that has happened since, from the invention of the wheel to the creation of the internet, could have taken place without that huge change.

The Neolithic Revolution would lead to the invention of writing, mathematics and money. It would trigger many inventions, the use of metals, the building of cities, organised religion and systems of government. But it

would also end the equality people had known during the Old Stone Age and see the rise of kings, empires and wars of conquest.

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SOURCE 1 The Ancient Near East. The Fertile Crescent is shaded. The cities marked on the map existed at times between 5000 and 1600 BCE.

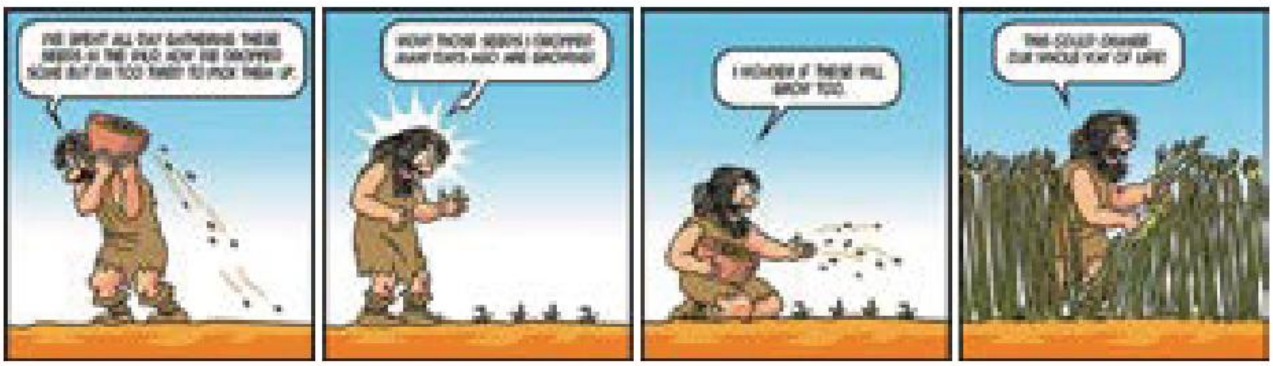


Source: Map drawn by Spatial Vision.

14.7.2 Farming and civilisation

How did people first learn to domesticate animals and grow food crops? Perhaps they caught wild animals and realised that they could breed them to have a permanent supply. People might have dropped some harvested seeds of wild plants and then seen these seeds grow where they fell and realised what that could mean (see **SOURCE 2**).

SOURCE 2 A modern artist's impression of how New Stone Age people may have first learned to grow crops



DID YOU KNOW?

Agriculture had many benefits but it also caused environmental damage. The soil on cleared land was more easily washed away in floods. Irrigation was essential for farming in Mesopotamia, but scientists now believe it contributed to the collapse of some Mesopotamian cities as the irrigated soils were poisoned by mineral salts. By 2300 BCE much of the best land had already been ruined.

Agriculture made it possible to produce food supplies in smaller areas than were needed by hunter-gatherers. Inventions of tools such as hoes and ploughs and changes such as clearing land and digging irrigation ditches improved yields from crops. Most importantly, improvements in agriculture meant that not everyone needed to work producing food. Some people could specialise in other things, including crafts.

SOURCE 3 A stone plaque from Sumer with an engraved scene showing an offering to a king, c. 2600–2350 BCE



The beginnings of 'civilisation'

Historians disagree on definitions of civilisation. It generally means having an organised community with farming, towns and a culture that encourages advances in technology. The way of life based on farming that first appeared in the Middle East is often called the *beginning* of civilisation. The first large centre of civilisation was Sumer in modern Iraq. Because two rivers, the Tigris and Euphrates, flow through Iraq from north to south, the ancient Greeks called the area Mesopotamia, meaning 'between two rivers'. The rivers regularly flooded the plains, leaving behind layers of fertile mud, and this was ideal for growing crops.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Early river civilisations**

14.7 ACTIVITY

Imagine you are a member of a third or fourth generation farming family during the Neolithic Revolution. You live in a village that is part of a newly founded city-state. In that new city-state, people are already divided into rulers, nobles, free citizens and slaves. Not far from where you live, semi-nomadic tribes are still following a hunter-gatherer lifestyle. You know, from stories handed down to you by your parents, about the greater equality that existed in times when your family were hunter-gatherers. In small groups, role-play the following situation.

The city-state ruler has described the hunter-gathers as primitive savages who need to be forced to become civilised or be destroyed. He has called on you and your fellow villagers to take part in armed attacks on the neighbouring hunter-gatherers to kill those who resist, to enslave the others and to take the land that supplies their food. Village elders have called a village meeting at which you and other villagers will have one last chance to state your opinions in support of or against the ruler's demands.

In your role-play, different speakers should represent different views about the importance of sticking to the moral principles you inherited from your hunter-gatherer ancestors and the way that your ruler represents the neighbouring hunter-gatherers as savages.

HASS skills: Communicating and reflecting
History concept: Continuity and change

14.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 7	Questions 5, 6, 8, 9	Questions 4, 10, 11

Check your understanding

1. What was the Neolithic Revolution?
2. When and where did agriculture first develop?
3. The first large civilisation was Sumer in modern Iraq. What did the ancient Greeks call this area?
4. What were the most important differences between life in the Old and New Stone Ages?
5. According to scientists, how did farming cause environmental damage in Mesopotamia?

Apply your understanding

6. Look closely at the map in **SOURCE 1**. Identify the geographical features of the Fertile Crescent that allowed farming to emerge around 9000 BCE.
7. Look closely at **SOURCE 2**.
   a. Describe the sequence of events that suggests how people might have learned to grow crops.
   b. Using **SOURCE 2** as a model, create your own sequence of sketches to show how people might have learned to domesticate sheep and cattle.
8. Study **SOURCE 3**.
   a. Describe what is happening in each register (horizontal set of pictures).
   b. What can you tell from this source about the benefits that some people gained from the Neolithic Revolution?
9. Do you think any of the people shown in **SOURCE 3** might have preferred the Old Stone Age way of life? If so, which ones and why? If not, why not?
10. The term 'revolution' suggests a big change that was of great significance. Explain why the beginning of the New Stone Age has been described as a revolution. For help with the concept of significance, see topic 13 History concepts and skills.
11. In a short piece of writing identify at least two massive changes to life in Mesolithic times. For help with the concept of continuity and change, see topic 13 History concepts and skills.

For sample responses to every question, go to www.jacplus.com.au.

14.8 Cities, laws, government

LEARNING INTENTION

By the end of this subtopic you will be able to explain how the Neolithic Age led to more complex societies including cities, laws and governments, using the example of Sumer.

14.8.1 Growth of towns and trade

The Neolithic Revolution marked the beginning of more complex societies as farming enabled people to settle in larger communities, usually built along rivers. With these developments came many other changes.

No longer having to travel long distances in search of food, people could build solid dwellings and accumulate belongings, such as furniture, containers and ornaments. With permanent shelter and more reliable food supplies, more children survived and populations grew. Food surpluses enabled some people to do different jobs. People created pottery and invented looms for weaving cloth to make clothing. Others learned to work metals — first bronze and later iron. Surpluses also increased trade. A town might produce more grain than it needed and exchange it for another city's salt, cloth, precious stones or cooking oil.

The earliest towns and cities

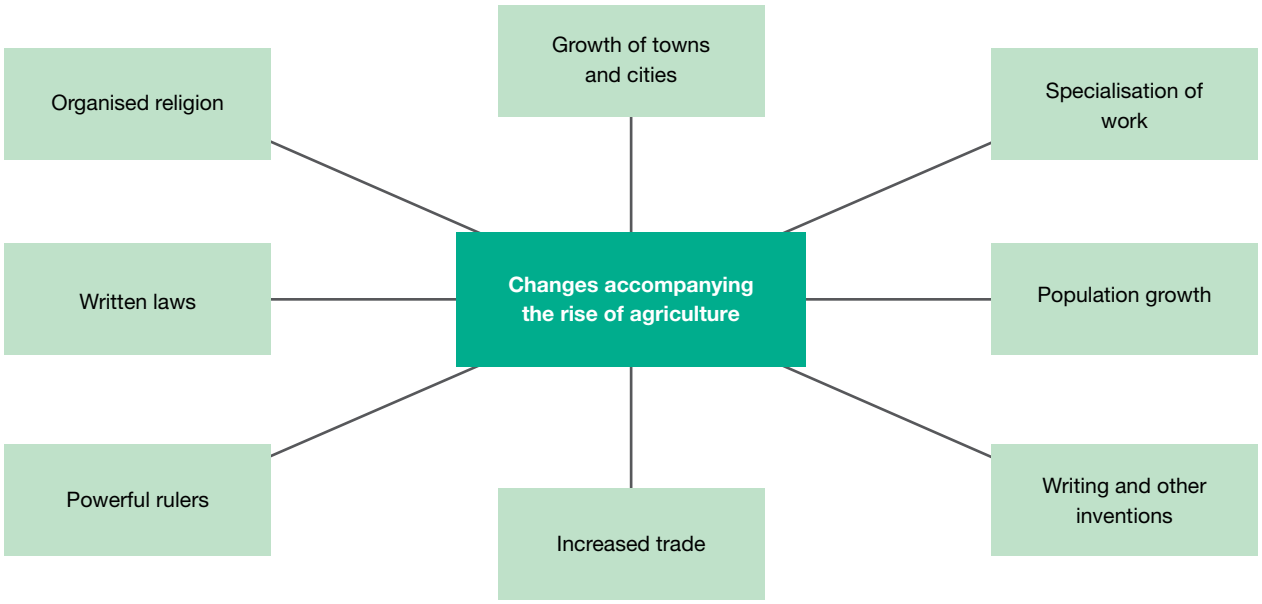
By about 8000 BCE there was a permanent town at Jericho (in modern Israel). In Anatolia (part of modern Turkey), Çatal Hüyük, probably the world's first city, appears to have had a population of at least 5000 from around 6500 to 5800 BCE.

DID YOU KNOW?

The greatest source of wealth in the Middle East today is oil. The ancient Sumerians collected oil in the form of **bitumen** that seeped out of the ground. They used it as a fuel and an adhesive and for waterproofing houses and boats. The Sumerians also invented the wheel, the sail and money.

bitumen tar, as used on modern road surfaces

SOURCE 1 Examples of changes accompanying the rise of agriculture



14.8.2 Civilisation begins at Sumer

Civilisation soon spread through Mesopotamia, Egypt and beyond. The people of Sumer in southern Mesopotamia were the first to use writing (see **SOURCE 2**), probably about 3200 BCE. Sumerian inventions and ideas spread through their **colonies** in Iran and Syria and through trade (see **SOURCE 3**). Their ideas were adopted by their neighbours and by their conquerors.

Rulers and laws

Civilisation created the need for leaders who had power over large numbers of people. Sumer is our earliest example. It was made up of several city-states (states consisting of a walled city that ruled over surrounding towns, villages, farms and grazing land). Each city-state had its own ruler, called an **Ensi**, who was said to have been chosen by the gods. It is likely that the Ensi were at first elected by assemblies of free citizens to lead them in battle. Over time these rulers came to inherit their power and some ruled over several cities. The title Lugal was given to such a ruler. The ruler had the power to make laws for his people (see **SOURCE 4**). Inscriptions of Urukagina, the Ensi of the Sumerian city of Lagash, suggest that by 2400 BCE it was common for rulers to record their laws.

SOURCE 2 A Sumerian cuneiform tablet from Lagash, third millennium BCE. Sumerians and Babylonians wrote using pictures we call pictograms. Gradually these became simpler so that a few lines represented a picture. The writing was done on clay tablets, which could be baked in the sun and kept.



DID YOU KNOW?

Until the late nineteenth century, the modern world knew almost nothing about ancient Sumer. It really was a lost civilisation. When archaeologists first began digging in Mesopotamia, they were not even looking for evidence of the Sumerians. Instead they were searching for traces of the Assyrians, whose civilisation came much later than Sumer. In the 1920s Sir Leonard Wooley found the tombs of some powerful Sumerians of the ancient city of Ur. What the archaeologists found told them they had unearthed a great ancient civilisation. Since then many other archaeological digs have unearthed further traces of Sumer.

colonies countries or regions taken over and controlled by another state

Ensi ruler of any Sumerian city-state

SOURCE 3 A stone stamp seal carved with a procession of animals, perhaps gazelles. It was probably made in Syria between 4000 and 3000 BCE. Early traders used seals to make impressions in wet clay to identify their property.





SOURCE 4 From an inscription of Sumerian ruler Urukagina listing his legal reforms to protect the poor. The gentry were the privileged big landowners.

An appointed priest may no longer go into the garden of a **villein** and fell a tree or take away the fruits.

If a villein makes a fish-pond, no one of the gentry class may take away his fish.

villein a poor farmer who worked the land of a big landowner and had fewer rights

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Early urban civilisations**
- Overview > **Mesopotamia — Sumer**

14.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 7	Questions 2, 6, 8	Questions 4, 9, 10

Check your understanding

1. What is a food surplus?
2. Explain how food surpluses enabled people to specialise in jobs that did not involve producing food.
3. Which was the first civilisation to use writing?
4. What is the most likely way that Sumerian rulers originally gained power?
5. Who made the laws of Sumer?

Apply your understanding

6. **SOURCE 1** is a mind map. Mind maps are a way of showing how one thing led to other things. In small groups, discuss which of the changes in the mind map you think were most important for human progress and why.
7. Study **SOURCE 2**.
   a. What was cuneiform?
   b. How was it done?
8. Read **SOURCE 4**. What was the intention of this Sumerian ruler's law?
9. Using the information and sources in this subtopic, describe the following.
   a. How the change from hunter-gatherer societies to settled agricultural societies led to much wider lifestyle changes
   b. How new ideas spread
10. Explain why the development of writing has great significance for historians.

For sample responses to every question, go to www.jacplus.com.au.

14.9 Society and culture

LEARNING INTENTION

By the end of this subtopic you will be able to describe life in Sumer, including social classes and everyday life.

14.9.1 Social classes

Civilisation changed societies. But some people gained much more than others from the changes. What differences were there in wealth and influence? What were the roles of religion, festivals, music and the family? As in the previous subtopic, we will use Sumer as our example.

Officials and nobles

Nobles (aristocracy or gentry) formed a ruling class below the Ensi (ruler). Nobles had many privileges and owned large estates that were worked by slaves and landless free citizens. In Sumerian religious beliefs, each city-state belonged to its main god. Some of the city's land was owned by the temple on behalf of the god. Officials administered temple lands on behalf of the Ensi. As rulers became more powerful, more tax collectors and **scribes** were needed. As with the rulers, these officials gained power and wealth. As **SOURCE 1** shows, some Sumerians resented the wealth and power that certain classes gained at the expense of others.

SOURCE 1 From a hymn to Nanshe, a goddess of the Sumerian city of Lagash. In this hymn, Nanshe is seen as supporting the poor against the rich.

[Nanshe] knows the orphan … knows the widow,

Knows the oppression of man over man …

…

To set up a place of destruction for the mighty,

To turn over the mighty to the weak …

Nanshe searches the heart of the people.

Free citizens and slaves

Many free citizens farmed land of their own. Others worked on the estates of the nobles. Some worked at skilled crafts or were employed in the temple or the palace. There were merchants, boatmen, carpenters, potters and jewellers.

Slaves were the property of temples or palaces and of the owners of rich estates. They could be branded and flogged if they tried to escape. People became slaves by being taken prisoner in war, as a punishment for committing a crime or by being sold by their families. Slaves had some rights under Sumerian laws, including the right to buy their freedom.

14.9.2 Everyday life

The Sumerian family

In Sumerian families, marriages were arranged by parents and women had less power than men. If her husband died, a woman could share his property with their children. But if a couple were unable to have children, the woman was blamed and her husband could divorce her. In ordinary Sumerian families, sons probably worked alongside their father from an early age while girls helped their mother.

scribe citizen who could read and write and was trained to keep records

DID YOU KNOW?

In ancient Sumer, children were the property of their parents. A father could sell his children into slavery if they displeased him. However, there are Sumerian stories expressing parents' love for their children.

Temples, houses, music and festivals

All Sumerian buildings were made of mud bricks because mud was the only building material that was plentiful. Most houses were small, single-storey buildings with rooms surrounding a courtyard. The grandest building in each city was the main temple, which developed over time into a huge, stepped tower called a ziggurat, as shown in **SOURCE 2**. Music was important in Sumer. Sumerians played harps, lyres, drums, tambourines and pipes. Poetry and singing were taught in schools. Hymns were sung and played for the gods in the temples and the rulers in their palaces.

SOURCE 2 An artist's impression of a Sumerian ziggurat. The temples were places of worship but were also charged with taking care of the families of men who had died.



Religious festivals were also important. One of the main festivals in each city was held at the beginning of the year to ensure good harvests for the year ahead. The king climbed to the top of the city's temple to take part in a ceremony of marriage to a priestess representing the fertility goddess Inanna.

SOURCE 3 Bronze statues of ancient Sumerians



Sumerian gods

Sumer had hundreds of gods and goddesses. Sumerian people believed that these gods had been created out of clay. There were Sumerian stories in which gods and goddesses behaved just like humans. They ate, drank, loved and fought just as people did.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Mesopotamia—Sumer**

14.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 8	Questions 3, 6, 7	Questions 5, 9, 10

Check your understanding

1. List the different social classes of ancient Sumer in order of their wealth and power.
2. According to ancient Sumerian religious beliefs, who owned the land of a city-state?
3. How could people become slaves and how could they gain their freedom?
4. Who had the most and the least power in families?
5. What roles did music and religion play in people's everyday lives?

Apply your understanding

6. **SOURCE 2** depicts a ziggurat (Sumerian temple). Why would the priests and officials who administered the temples have become powerful?
7. Read **SOURCE 1**.
   a. What does the hymn call on the goddess Nanshe to do?
   b. How does this hymn provide evidence of inequality?
   c. What does it appear to tell us about moral ideas in Sumer?
8. Using **SOURCE 3** as your evidence, describe the appearance and clothes of Sumerian men, women and children.
9. Using information and sources from this subtopic and the previous subtopic, explain why the legacy of Sumer was significant for the ancient world. For help with analysing sources and determining significance, see topic 13 History concepts and skills.
10. Explain why 'civilisation' had the effect of increasing inequality.

For sample responses to every question, go to www.jacplus.com.au.

14.10 Civilisations and empires in North Africa, western Asia and Europe

LEARNING INTENTION

By the end of this subtopic you will be able to describe the rise and fall of civilisations and empires over time.

14.10.1 The rise and fall of empires

The new way of life based on farming brought hazards, such as windstorms and locust plagues that could destroy entire crops. The rivers too held dangers. In Sumer, where almost no rain fell, the rivers needed to be fed by regular rainfall in the far-off mountains. Too much rain brought destructive floods; too little caused drought and famine. But the worst danger in ancient times was the frequent threat of war as empires rose and fell.

A Sumer
Sumerian civilisation emerged around **3500 BCE.** Although later overrun by other powers, it had a lasting influence throughout Mesopotamia and beyond.

SOURCE 1 A Sumerian clay tablet from about 3100–3000 BCE recording the allocation of beer



C Crete and Greece
From around **3000 BCE**, the Minoans built a civilisation on the island of Crete, south of Greece. This peaceful civilisation disappeared when Crete was overtaken by the warlike Mycenaeans from the Greek mainland by about 1375 BCE. From around 750 BCE, Greek city-states set up colonies around the Mediterranean and Black seas. In the late fifth century BCE, the Greeks defeated an invading army of the mighty Persian Empire. Greece was later conquered by Macedonia in 336 BCE and then by Rome in **146 BCE** (see **topic 17**).

SOURCE 2 Ancient Greek pottery from 2800–2300 BCE. It was found in Syros, Greece.



E The Hittite Empire
The Hittites, skilled warriors and charioteers, came from Anatolia (Turkey), where they had a capital called Hattusa. In **1595 BCE** they invaded Mesopotamia and destroyed Babylon. In the thirteenth century BCE the great Egyptian pharaoh Rameses II tried and failed to defeat them. However, around 1000 BCE the Hittites were swallowed up by the Assyrian Empire.

G The Assyrians
The Assyrians were from Assur (north of Mesopotamia). Their highly disciplined infantry had the advantage of iron weapons and they had squads of archers and chariots. They created a powerful empire from around **883 BCE**. The Assyrians killed, tortured or enslaved people who rebelled and moved whole populations to prevent rebellion. They collected taxes from conquered subjects and forced them to work as slaves or to fight in the Assyrian army. However, in 612 BCE, armies of Babylonians, Chaldeans and Medes destroyed the Assyrian Empire.

SOURCE 3 An Assyrian wall panel from the eighth century BCE, showing Assyrian forces attacking a city with a battering ram



BCE
3500
3100
3000
2400
2000
1595
1000
883
560
272
180
CE

B Egypt
The longest civilisation in North Africa began when Egypt was first united around **3100 BCE**. This great kingdom experienced many periods of war. During the New Kingdom (c. 1550–1069 BCE) Egypt fought to drive out invaders. During the period from around 1069 to 332 BCE Egypt fell under the rule of Libyans, Nubians, Assyrians and Persians (see **topic 16**).

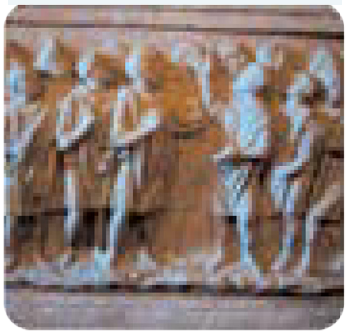
D Akkadians, Elamites and Babylonians
Around **2400 BCE** Akkad (north of Sumer) conquered the Sumerian cities. When the Akkadian Empire fell about 200 years later, the Sumerian city of Ur dominated Sumer. Around **2000 BCE** the Elamites (from Iran) conquered Sumer. Other peoples moved into Mesopotamia, occupying Akkad and other cities. Around 1800 BCE, King Hammurabi defeated these groups and founded a Mesopotamian empire based on the city of Babylon.

F The Phoenicians
The Phoenicians were great seafarers who lived in what is now Lebanon. They traded with Egypt and Greece, and around **1000 BCE** they founded colonies along the coasts of Africa, Sicily and Spain.

H The Persian Empire
Between **560** and 330 BCE, Persia (modern Iran) created a huge empire that spread from Egypt to India. Babylon had again become a great centre of power under King Nebuchadnezzar (c. 605–560 BCE), but soon after his death the Persians conquered the city.

I The Roman Empire
By **272 BCE**, the city of Rome dominated Italy. By **180 CE**, the Roman Empire had become the greatest empire of ancient times, controlling much of Europe, North Africa and the Middle East. The Roman Empire finally fell to invaders in the fifth century CE (see **topic 18**).

SOURCE 4 Sculpture from the tomb of a wealthy Roman citizen who died in the first century CE



Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Early urban civilisations**
- Overview > **Mesopotamia—Babylon**
- Overview > **Persian Empire**
- Overview > **Mesopotamia—Assyria**
- Overview > **Cities of the Near East**

14.10 ACTIVITY

Working in small groups, design and sketch devices that could be used to stop the Assyrian battering rams shown in **SOURCE 3**.

HASS skills: Communicating and reflecting
History concepts: Source, Evidence

14.10 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 5, 9	Questions 6, 7, 8	Questions 4, 10, 11

Check your understanding

1. Why would war have been a great hazard for people in ancient times?
2. Which civilisation lasted longest in North Africa?
3. Name two groups of people who invaded Mesopotamia in ancient times.
4. Why would the Assyrians' iron weapons have given them a big advantage over opponents such as Egyptians, who still used bronze weapons?
5. What ancient empire was based in Iran?
6. For around how many centuries did the Roman Empire exist?

Apply your understanding

7. Make a list of questions that historians could ask about any three of the sources in this subtopic.
8. Among all of the changes described in this subtopic, what development can you identify as having continuity?
9. Look closely at **SOURCE 1**. Why might the allocation of beer be recorded on a clay tablet?
10. Describe the activities of the defenders in the war scene depicted in **SOURCE 3**.
11. Examine **SOURCE 3**. What do you think the device on the left at the front of the wall panel is meant to do?

For sample responses to every question, go to www.jacplus.com.au.

14.11 Civilisations in South and East Asia

LEARNING INTENTION

By the end of this subtopic you will be able to describe the civilisations of Ancient China and Ancient India.

14.11.1 Ancient China

Humans spread from Africa through Asia, reaching China around 75 000 years ago. When and where did civilisations emerge there? We will focus on ancient India and China because it is in these regions that eastern civilisation first arose. Elsewhere in South Asia, South-East Asia and Japan, civilisations emerged much later.

A site called Spirit Cave, in Thailand (South-East Asia), provides some evidence of farming in Asia around 9000 BCE. The earliest evidence of farming in China comes from Taiwan and dates to about 6000 BCE. Elsewhere in China, farming settlements have been found dating back to around 4000 BCE.

A Chinese legend tells of a folk hero called the Yellow Emperor who founded Chinese civilisation. His **dynasty**, called the Xia, is said to have ruled from around 2100 to 1600 BCE. However, we have no real evidence that it actually existed. What we can be certain about is that Chinese civilisation developed around the Huang River (Yellow River) and the Yangtze River. The fertile soils of these river valleys were what made a farming civilisation possible.

dynasty a line of rulers from the same family, and the period during which they ruled

int-7750

SOURCE 1 A map of South and East Asia showing capital cities



Source: Map drawn by Spatial Vision.

Early Chinese dynasties

The second Chinese dynasty, the Shang, also seemed to be a myth until archaeologists found supporting evidence in 1928. The finds included written inscriptions on bones. The Shang ruled from 1600 to 1046 BCE, so we know that writing existed in China from at least that time. Shang rulers also built cities. At one city, Anyang, skeletal remains of victims of human sacrifice were found. The Shang rulers took sacrificial victims with them to the grave.

In 1046 BCE the Shang dynasty fell to a people called the Zhou. Around 500 BCE, under this dynasty, iron replaced bronze as the main metal for making weapons and the tools that would help increase farm productivity. This change was significant because iron was harder and therefore more efficient.

China became a unified nation with the arrival of the Qin (pronounced *chin*) dynasty in the third century BCE. The Qin united China after a destructive period called the Warring States period, when rival rulers fought one another for power. The short-lived Qin dynasty was followed by the Han dynasty. The Han ruled China for most of the period from 206 BCE to 220 CE.

Ancient China and the outside world

Throughout this period, the Chinese believed the lands beyond their own to be savage places that lacked China's order and learning and were populated by 'barbarians'. China was surrounded by natural barriers that made contact difficult: the sea to the east, deserts to the north and the west, rainforests in the south and the great Himalayan mountain range in the south-west. The only contact between China and western Asia was opened in the first century BCE. It was made possible by a series of trading routes called the 'Silk Road' (see topic 20 Ancient China).

SOURCE 2 From the ancient Chinese annals *Hou Hanshu*

In the ninth year of the Yen-Hi period [166 CE] in the reign of Emperor Huan, king An-tun [the Roman emperor Marcus Aurelius Antoninus] of Ta-ch'in [the Roman Empire] sent an embassy. From the frontier of Jih-nan [in part of Vietnam controlled by China at that time] this [embassy] offered ivory, rhinoceros horn and tortoiseshell; from that time began direct trade relations with this country — but their **tribute** contained no jewels whatever.

tribute riches given by a state to acknowledge submission to another state or ruler

subcontinent large section of a continent (e.g. the Indian subcontinent)

14.11.2 Ancient India

Civilisation arose even earlier on the Indian **subcontinent**. The first Indian civilisation was founded in the Indus River Valley, in what is now Pakistan, around 3000 BCE. Its growth was made possible by the plentiful water and fertile soils of the Indus Valley. Its earliest cities were built around 2500 BCE and there is evidence of trade with Sumer. By 1600 BCE these cities had been abandoned. Remarkably, traces of the Indus Valley civilisation were first dug up only in the 1920s. The oldest examples of Indian writing come from this civilisation.

Around the time that this first civilisation collapsed, nomadic warriors called Aryans invaded India. The country did not become a unified state until the Mauryan Empire was established in 304 BCE. But long before that event two great world religions, Hinduism and Buddhism, arose in India (see topic 19 Ancient India).

SOURCE 3 A scene from The Mahabharata, an Indian Hindu epic poem composed in 220 BCE



Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.
- Overview > **Early urban civilisations**

14.11 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 6	Questions 5, 7, 9	Question 3, 8

Check your understanding

1. For how long have humans lived in China?
2. How do we know that under China's Shang dynasty people were sacrificed to be buried with their rulers?
3. Why was the introduction of iron a significant change in ancient China?
4. On which river was the oldest Indian civilisation founded?
5. In what decade did archaeologists begin excavating the cities of this Indian civilisation?

Apply your understanding

6. What evidence does **SOURCE 2** provide of China's foreign trade relations?
7. **SOURCE 2** describes the gifts from the Roman emperor as tribute. This means money or goods paid by a ruler to a higher ruler. What does this tell us about the way the Chinese rulers regarded their relationship with Rome?
8. Using **SOURCE 1**, explain the significance of rivers for the development of civilisations in China and the Indian subcontinent. See topic 13 History concepts and skills for help with the skills of determining significance and continuity and change.
9. Briefly describe the broad patterns of change in China and India between about 4000 BCE and 220 CE.

For sample responses to every question, go to www.jacplus.com.au.

14.12 Ancient American civilisations

LEARNING INTENTION

By the end of this subtopic you will be able to describe the ancient American civilisations.

14.12.1 Human migration within the Americas

North and South America were the last inhabitable continents to be reached by humans. The accepted theory is that during the last Ice Age people crossed over a land bridge from Asia into North America where the Bering Strait now exists (see **SOURCE 1**). At that time, sea levels were much lower than they are today. Humans could therefore have walked across from one continent to the other. Ancient civilisations arose in parts of the Americas from around 1800 BCE, but there are many gaps in our evidence for them.

We know that humans had reached the far south of South America by at least 10 500 BCE, because in 1997, near Monte Verde in southern Chile, archaeologists found an ancient campsite. Here was evidence of people having gathered fruit, edible seaweed, potatoes, grasses, mushrooms and shellfish. These people had lived in animal-hide shelters and hunted now extinct animals. The archaeologists even found the human waste of these prehistoric Americans. Radiocarbon testing was used to estimate the age of these materials.

Until 1997, the oldest evidence of humans in the Americas was a stone spear found near Clovis in Mexico. This was dug up in the 1930s, and is believed to date from 9200 BCE. What makes the find at Monte Verde in Chile remarkable is that it is in the far south of the continent. Migration from the far north to South America would have taken thousands of years.

The Monte Verde people were hunter-gatherers and, like all American cultures, used stone weapons and tools. Even the cultures that built cities, used gold and silver to make ornaments, and used writing for communication (from around 300 CE) still used stone weapons and tools. The earliest evidence of farming in the Americas is from a cave in the Tihuacan Valley in Mexico. Samples of domesticated corn found in the cave are similar to ancient wild corn. Scientists have dated the corn samples at 2700 BCE, and this probably marks the beginning of agriculture in America.

int-7751

SOURCE 1 Probable routes taken by the first humans to America during the last Ice Age. The land bridge between Asia and America is now under the sea.



Source: Map drawn by Spatial Vision.

14.12.2 From the Olmec to the Maya

Most American peoples continued to live by hunting and gathering and by small-scale farming, but some developed more complex societies. The earliest civilisation in the Americas, the Olmec, flourished in Mexico between around 1800 and 400 BCE. From around 800 to 200 BCE another civilisation that we call the Chavin flourished in Peru.

SOURCE 2 One of several giant stone heads carved by people of the Olmec civilisation in Mexico about 3000 years ago



In Central America, in what are now the nations of Honduras and Guatemala, the civilisation of the Maya flourished from about 300 to 900 CE. This civilisation was based on farming, which produced a surplus to provide for its rulers and priests. The Maya built cities with huge stone temples and palaces. These buildings were decorated with carvings and pictures. Their priests created a mathematical system that used the number zero and counted in twenties. They studied the stars and created a calendar. It is possible that the collapse of their civilisation came about after Mayan peasants revolted against their rulers. New Mayan cities were built, but around 975 CE they were conquered by a younger American civilisation — the Toltecs of Mexico.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Mayas and Toltecs**

14.12 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 5, 7, 8	Questions 4, 9, 10

Check your understanding

1. Approximately how long have people lived in the Americas?
2. How long ago did farming develop in the Americas?
3. When and where did the Olmec civilisation develop?
4. Describe the significant achievements of the Maya.
5. What most likely caused the collapse of the Mayan culture?

Apply your understanding

6. Using the scale in **SOURCE 1**, calculate the distance people would have travelled when migrating from Siberia to Central America.
7. Look closely at **SOURCE 2**. It is over three metres high.
   a. Why would it be almost impossible for a hunter-gatherer society to produce such an object?
   b. Suggest reasons the Olmec made such objects.
8. What similarities and differences can you recognise between the emergence of civilisations in Europe, Asia and Africa and such developments in the Americas?
9. Explain why the discoveries at Monte Verde are considered to have great historical significance.
10. What do you think is the main reason we know little about the causes of the collapse of the Olmec and Mayan civilisations?

For sample responses to every question, go to www.jacplus.com.au.

14.13 The ancient birth of modern religions and philosophies

LEARNING INTENTION

By the end of this subtopic you will be able to explain the origins of the five major religions practised today.

14.13.1 Religions and philosophies that developed in South and East Asia

In ancient times, people held many religious beliefs. Most of those beliefs, such as worshipping the sun, have disappeared over time. Today, five religious faiths have had such widespread influence or so many followers that they are considered to be major world religions. They are Hinduism, Buddhism, Judaism, Christianity and Islam. Each was established during or very soon after ancient times. In East Asia, their influence has been matched by Confucianism. It too originated in ancient times, but it is a **philosophy** rather than a religion.

SOURCE 1 Statues of guardian giants at a Buddhist temple in Bangkok, Thailand. These mythical creatures come from the Ramayana, an ancient Hindu epic.



Hinduism

Hinduism is the oldest of the major world religions. It appears to have originated in western Asia, reaching India around 1600 BCE. The first Hindu books, called the Vedas, come from this time. Today Hinduism is followed by about 80 per cent of the people of modern India; it is the third most popular religion in the world.

philosophy study of the causes and meanings of things

Followers of Hinduism are called Hindus. They believe in many gods, including a universal spirit called Brahma. They also believe in **reincarnation**. Hindus believe that a person's current life will determine what form their next life will take. As set out in a series of books called the *Upanishads*, composed from the ninth to the fifth centuries BCE, the Hindu faith holds that a soul exists in each living thing. Cows are particularly sacred, so Hindus do not eat beef.

Buddhism

Buddhism was founded by a Hindu prince called Siddhartha Gautama in the sixth century BCE in what is now the country of Nepal. After observing the human suffering around him, he decided to abandon his privileged life and seek truth. According to legend, he first spent years as a hermit and then set out to teach people what he called the Four Noble Truths. At this time, people began calling him the Buddha, which means 'the Enlightened One'. Followers of Buddhism came to be called Buddhists.

SOURCE 2 Detail of a gigantic reclining Buddha figure in Thailand. It is covered in gold.



The Four Noble Truths are:

- All people suffer pain.
- People suffer because they keep being born and reborn, and pain continues.
- Pain is caused by the desire, or craving, for things.
- To overcome desire, a person must follow the Eightfold Path.

The Eightfold Path includes knowing truth, resisting evil, serving others and **meditation**. The Buddha taught that through this path a person could achieve *nirvana*, a state in which the soul would cease to exist as it comes into harmony with the universe.

Buddhism later lost much of its influence in India but it spread throughout most of Asia, including Sri Lanka, China, Japan, Tibet, Bhutan, Korea and mainland South-East Asia. Today it is the state religion in Thailand and Cambodia.

Confucianism

Confucianism has had an enormous influence, particularly in China and Vietnam. Confucius (K'ung Fu-tse) lived in China from 551 to 479 BCE in a period of ongoing destructive wars. He was not concerned with religion, but rather with making a better society. He taught ideas about life and government to solve the problems of his age. During his lifetime, Confucius had little success in influencing rulers, but he gained disciples who went on to have great influence.

Confucius's sayings were recorded in the book *Lun-yu* (*The Analects*). He taught the ideals of family obligations, that government should exist for the people's welfare and that people would follow the example of a good ruler. Confucius's ideas were to influence Chinese thought right up to modern times.

reincarnation the process of being reborn over and over again in another human or animal body

meditation exercising the mind through contemplation

14.13.2 Religions that developed in Western Asia

Common features of Judaism, Christianity and Islam

All these three religions believe in one God. They share many beliefs and some of the same sacred texts. Judaism has the Torah. Christianity has the Bible. Islam has the Qur'an. All three religions believe that God must be obeyed. Each religion sets out guidelines for their followers to live good lives. Each holds that God will judge people according to how they live their lives and that there is a 'heaven' where good people live with God in an afterlife.

Judaism

Judaism is the religion of the Jewish people throughout the world. According to stories in the Old Testament of the Bible, the Hebrew (Jewish) people were enslaved in Egypt for about 300 years until a leader, called Moses, led them to Palestine. On the way, he is said to have given them a set of laws called the Ten Commandments, which were dictated to him by their god, Yahweh. These events have long been debated by scholars, butsome agreement exists that the Hebrews could have arrived in Palestine around 1100 BCE. Judaism was not a religion that set out to convert other peoples. However, it was to have an enormous influence on two later religions — Christianity and Islam.

Christianity

The Christian religion arose in Palestine (then part of the Roman Empire) in the first century CE. Christianity was based on the teachings of Jesus Christ, a Jew whose followers preached that he was the son of God. Jesus taught his followers that through faith people could receive forgiveness for sins and gain **eternal life**. Because they saw him as a threat to their power, Jewish religious leaders had Jesus arrested, condemned and **crucified** by the Romans.

The followers of Jesus came to be called Christians. They spread his teachings, but the Romans saw the new religion as a threat because Christians refused to worship the Roman emperor. Roman persecution of Christians ended in 313 CE when Emperor Constantine made Christianity legal. It became the state religion of the Roman Empire in 391 CE and became the religion of nearly all people in Europe over the following centuries. Today Christianity is the main religion in Europe, North and South America, parts of Africa, Australia and some parts of Asia.

eternal life living forever

crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony

SOURCE 3 Saint Mark's Cathedral in Venice, Italy



SOURCE 4 Jewish worshipers at the Western Wall of the ancient Hebrew temple in Jerusalem



Islam

Islam was founded by the **prophet** Mohammed, who was born about 570 CE in Mecca, in Saudi Arabia, where people worshipped many gods and made sacrifices to idols. Mohammed believed that he had received revelations from an angel. He called on the people of Mecca to worship the 'one true God', known in Arabic as Allah. *Islam* means 'submission' to the will of Allah.

Many people in Mecca accepted Mohammed's teaching and became Muslims (Arabic for those who had 'surrendered' to Allah). They suffered persecution until Mohammed left Mecca and fled to Medina in 622. The year of this migration, called the Hijrah in Arabic, is the date from which the Muslim calendar begins. The Muslims won several battles against their opponents. By 630 Mohammed had returned to Mecca, which became the centre of Islam.

After Mohammed's death, his revelations were written down as the Qur'an. This sacred text includes teachings on religious, social and political issues. Between 632 and 732, Islam spread across the Middle East and North Africa into Persia, parts of India and southern Spain. In the following centuries it spread through Central Asia and parts of South-East Asia. Islam is now the world's second most popular religion, with more than one and a half billion followers. The world's largest Islamic country is Indonesia.

prophet a revealer or interpreter of God's will

SOURCE 5 Minarets reach to the sky in modern Istanbul in Turkey. These slender towers are connected to mosques (Islamic places of worship) and are used to call Muslims to prayer.



Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Monotheistic belief systems**
- Overview > **Eastern belief systems**

14.13 ACTIVITY

Create a timeline to show the order in which each of the major world religions and Confucianism were established.

HASS skills: Analysing
History concepts: Chronology

14.13 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 8, 10	Questions 3, 6, 7, 12	Questions 4, 9, 11, 13

Check your understanding

1. Which religion that originated in southern Asia has many gods?
2. Which religion is the main faith in many countries but not in the country where it began?
3. Why has Confucianism been very influential even though it is not a religion?
4. Why do you think followers of Judaism did not try to convert other peoples?
5. What do Judaism, Christianity and Islam share in common?

Apply your understanding

6. How does **SOURCE 1** provide evidence that Hindu ideas have influenced the cultures of Buddhist countries?
7. What does **SOURCE 2** suggest about the way Buddhists regard the Buddha?
8. What symbol identifies St. Mark's Cathedral (**SOURCE 3**) as a Christian church and what does it represent?
9. Study **SOURCE 4**. Why do you think the ancient temple wall in Jerusalem is so significant for followers of Judaism?
10. How many minarets can you count in **SOURCE 5** and what does this suggest about Islam's importance in modern Turkey?
11. Discuss possible reasons some religions spread around the world while others remained mainly in one area or with one group of people.
12. Make a timeline to show the order in which each of the major world religions and Confucianism were established.
13. Explain where developments within one religion led to the formation of a new religion.

For sample responses to every question, go to www.jacplus.com.au.

14.14 SkillBuilder: Describing broad patterns of change

14.14.1 Tell me

What are broad patterns of change?

During any period of history, some changes happen quickly and others occur slowly. Some changes affect only limited numbers of people while others are widespread. Think about the developments in human societies from early communities (around 60 000 BCE) to later ancient times (up to around 650 CE). Over such a long period we would expect significant changes. Broad patterns of change are not the kinds of changes that might have affected one community, such as a change of rulers. Rather, they are patterns of change that are extensive or widespread.

Broad patterns of change have taken place in the modern world in just a generation. For example, when your parents were your age there was no internet, and Facebook or Twitter could hardly have been imagined. Such technological changes have revolutionised the ways we communicate. In the ancient world, patterns of change occurred much more slowly but, just as much as the recent technological revolution, these changes transformed human societies.

Why is it important to describe broad patterns of change?

A period as long as that of the ancient world has many examples of broad changes in technologies, religious beliefs and the ways in which societies were organised and governed. Identifying such broad patterns of change will help you to:

- recognise the nature of a change that occurred
- recognise the speed of any change
- recognise the extent or significance of any change
- assess the role of changes in contributing to other changes.

14.14.2 Show me

How to describe broad patterns of change

From your work in this topic, you will already understand that there were enormous changes from the Old Stone Age through the New Stone Age and into later ancient times. You will be able to recognise such changes when comparing primary sources from different ages within the times of the ancient world. You can recognise evidence of broad patterns of change by asking questions such as:

For what broad patterns of change do these sources provide evidence?

To answer such a question, you need to break the question down into more specific questions, such as:

1. What kind of development was this? For example, was it a change in the ways in which people provided for basic needs, such as food and shelter, or a change in beliefs, transport, technology, trade or entertainment?
2. What was the situation before the change?
3. How did the change occur?
4. What was different after the change?

In the following example, these types of questions have been applied to **SOURCES 1**, **2** and **3**.

Returning to the question we posed earlier:

For what broad patterns of change do **SOURCES 1**, **2** and **3** provide evidence?

SOURCE 1 This Old Stone Age painting on rock shows a man hunting deer. It is from Mexico. Old Stone Age rock paintings, cave paintings and engravings showing similar scenes have been found in many places, including Australia and France. Some are believed to be as many as 30 000 years old.



SOURCE 2 This ancient Egyptian wall painting of people harvesting crops is from the tomb of a successful Egyptian artisan named Sennedjem, c. 1306–1290 BCE.



SOURCE 3 This relief sculpture depicts ancient Assyrians hunting lions. It is from around 883 BCE to 612 BCE when Assyria was a powerful empire in the Middle East.



We can break the question down to more specific questions and answer these:

1. *What kind of development was this?* **SOURCES 1** and **2** provide evidence for a change from hunter-gatherer societies to societies based on farming.
2. *What was the situation before the change?* Before the New Stone Age, which saw the development of farming, all peoples provided for their needs by hunting and gathering, like the hunter depicted in **SOURCE 1**.
3. *How did the change occur?* The change first came about around 9000 BCE, when people in the Fertile Crescent began growing crops and herding sheep and goats. As others saw advantages in adopting these new ways, the development spread to other societies, such as the ancient Egyptians, shown in **SOURCE 2**.
4. *What was different after the change?* People were able to produce food in smaller areas than were needed by hunter-gatherers so they could settle in permanent dwellings. They could also produce a surplus so that some people could specialise in work other than food production. Large settled societies saw the need for laws and powerful rulers. The surpluses the people produced could support a ruling class, who saw hunting as a form of sport or recreation, as depicted in **SOURCE 3**, rather than as a necessity, as in **SOURCE 1**.

14.14.3 Let me do it

Complete the following activities to practise this skill.

14.14 ACTIVITY

Apply the following questions to **SOURCES 4** and **5** to identify broad patterns of change in another aspect of life in ancient times.

General question: For what broad patterns of change do **SOURCES 4** and **5** provide evidence?

More specific questions:

a. What kind of development was this?
b. What was the situation, as shown in **SOURCE 4**, before the change?
c. How did the change occur?
d. What was different, as shown in **SOURCE 5**, after the change?

SOURCE 4 Creevykeel Megalithic Tomb was constructed in Ireland around 3000 BCE by New Stone Age people. This was around the same time that structures, such as Stonehenge and other stone circles, temples and tombs were built in England. Because everything else built by these peoples was made of wood and other vegetable matter, such giant stone monuments, called megaliths, are the only built traces they left behind.



SOURCE 5 Part of the remains of the ancient Roman town of Pompeii, which was buried in volcanic ash when Mount Vesuvius erupted in 79 CE



14.15 Thinking Big research project: Museum exhibition guide

Scenario

An Australian museum is planning a major exhibition on significant changes over the period from *circa* 60 000 BCE to *circa* 650 CE. The exhibition will include objects and written primary sources from the period. The museum's directors want a small group of school students to contribute to a visiting schools' guide booklet for the exhibition. In order to select suitable student guidebook contributors, they have asked applicants to complete the following task.

Task

Identify five particular developments that represent significant changes during the period, and then choose a suitable image for each and write a paragraph on each development. The aim is to help other students who visit the exhibition to understand why these developments were significant.

Each development that you choose must represent one of the following themes:

- Human migrations
- Change from Old Stone Age (Paleolithic) to New Stone Age (Neolithic) lifestyles
- The rise of cities
- The rise of civilisations and empires
- The birth in ancient times of modern religions and philosophies.

For example, you could write about the rise of a Sumerian city to represent the rise of cities.

Process

Follow these steps to complete this task:

- Open the projectsPLUS application for this topic. Click the Start new project button to enter the project due date and set up your project group. Working in small groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the Research forum, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have

SOURCE 1 Primary objects and sources from the period



SOURCE 2 Old Stone Age (Paleolithic) lifestyles



SOURCE 3 The rise of cities



completed your research, you can print out the Research report in the Research forum to easily view all the information you have gathered.

- Revisit the timeline in the Overview for this topic. Next, browse through all subtopics in this topic to help you to select the five developments that you will use to represent each of the five themes.
- Select your five developments.
- Find information and a suitable image for each development by reading relevant sections of the topic. In the Media centre you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Write up your research findings under the heading for each development in your Research Forum. Be sure to explain the historical significance of each development.
- Remember to record details of your sources so you can create a bibliography to submit with your completed guidebook.
- Now it is time to create the guidebook using the information and images you have found. Feel free to be creative!
- Email your completed task to your teacher for assessment and feedback.

on Resources

ProjectsPLUS Museum exhibition guide (pro-0226)

14.16 Review

14.16.1 Key knowledge summary

14.2 Examining the evidence

- For Old Stone Age societies, our main primary source evidence comes from tools, weapons and cave paintings.
- For New Stone Age, Bronze Age and Iron Age societies, we have much more evidence, especially from societies that used writing.

14.3 Out of Africa

- Scientific evidence suggests that modern humans descended from people in Africa, some of whom migrated into other parts of the world from around 100 000 years ago.
- Other human species also migrated from Africa but became extinct by about 30 000 years ago.
- Old Stone Age peoples were hunter-gatherers.

14.4 A changing Paleolithic world

- Humans adapted to survive the conditions of the last Ice Age.
- Global warming from around 12 000 BC created conditions in which humans in some places could move towards the New Stone Age.

14.5 An amazing journey

- Lower sea levels during the last Ice Age shortened the distance between Asia and Australia.
- The ancestors of Aboriginal and Torres Strait Islander peoples arrived by sea at least 50 000 years ago.

14.6 The Mesolithic Age

- The Mesolithic Age was a step between the Old Stone Age and New Stone Age.
- Mesolithic sites in Europe provide evidence for this brief period.

14.7 The New Stone Age

- People in some places became farmers and herders and lived in permanent villages.
- These changes led to significant inventions, including writing, mathematics, money and specialisation of occupations.

14.8 Cities, laws, government

- Sumer is regarded as the first civilisation.
- The change to more complex societies led to the rise of powerful rulers, laws and increased trade.

14.9 Society and culture

- Civilisation increased differences between social classes and in wealth and power.
- Organised religions became a feature of civilisations.

14.10 Civilisations and empires in North Africa, western Asia and Europe

- Significant ancient empires were founded by Egyptians, Akkadians, Elamites, Babylonians, Hittites, Assyrias, Persians and Romans.
- Empires rose and fell through destructive wars.

14.11 Civilisations in South and East Asia

- The first Chinese dynasty for which we have evidence is the Shang dynasty.
- China became an empire under the Qin dynasty.
- The first Indian civilisation was in the Indus Valley.

14.12 Ancient American civilisations

- Humans reached the Americas by crossing a land bridge from Asia.
- The earliest evidence of farming in the Americas has been dated to 2700 BCE.
- The earliest American civilisation was the Olmec.

14.13 The ancient birth of modern religions and philosophies

- Hinduism, Buddhism and Confucianism originated in Asia.
- Judaism, Christianity and Islam originated in the Middle East.

14.16.2. Key terms

agriculture the cultivation of land, growing of crops or raising of animals
anthropoid human-like
bitumen tar, as used on modern road surfaces
colonies countries or regions taken over and controlled by another state
crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony
dynasty a line of rulers from the same family, and the period during which they ruled
Ensi ruler of any Sumerian city-state
eternal life living forever
extinct died out
fauna animals
Fertile Crescent the area now roughly covered by Israel/Palestine, Lebanon, Jordan, Syria, south-east Turkey and Iraq
flint a very hard stone, useful for tools and for making sparks to start fires
fossils remains of plants or animals found in rocks
genetics study of heredity
Holocene Epoch the past 10 000 years
hunter-gatherers people who live by hunting animals and gathering plants
Ice Ages long periods during which glaciers covered much of the northern hemisphere
mammoth a large extinct mammal like a modern elephant but with larger tusks and woolly fur to keep it warm
marshland low-lying land that is usually boggy and often flooded
meditation exercising the mind through contemplation
microliths small stone artefacts
Neolithic Revolution the beginning of the New Stone Age
nomadic moving about from place to place
palaeontologist a scientist who studies fossils
Paleolithic of the Old Stone Age
philosophy study of the causes and meanings of things
Pleistocene Epoch the glacial period before the Holocene Epoch
prophet a revealer or interpreter of God's will
reincarnation the process of being reborn over and over again in another human or animal body
scribe citizen who could read and write and was trained to keep records
species a group or classification of living things
subcontinent large section of a continent (e.g. the Indian subcontinent)
tribute riches given by a state to acknowledge submission to another state or ruler
villein a poor farmer who worked the land of a big landowner and had fewer rights

14.16.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry questions posed in the Overview:

Without planes and ships, how (and why) did early humans spread across the world from Africa?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views.

Resources

eWorkbook
- Customisable worksheets for this topic (ewbk-4290)
- Reflection (ewbk-4388)
- True/false quiz (ewbk-4386)
- Crossword (ewbk-4385)
- Student learning matrix (ewbk-4378)

Interactivity
- Ancient world crossword (int-7691)

14.16 Review exercises

Multiple choice

1. Based on scientific evidence, in which of these continents did humans originate?
   - **A.** Asia
   - **B.** Europe
   - **C.** Australia
   - **D.** Africa

2. By which of these means did Old Stone Age peoples supply their needs?
   - **A.** Shooting and fishing
   - **B.** Herding and gathering
   - **C.** Hunting and gathering
   - **D.** Farming and manufacturing

3. How did humans in the northern hemisphere adapt to survive the last Ice Age?
   - **A.** Making better weapons and changing hunting methods
   - **B.** Building cities
   - **C.** Burning large fires
   - **D.** Staying indoors

4. When did Neanderthal people live?
   - **A.** About 1000 years ago
   - **B.** About 5000 years ago
   - **C.** About 100 000 years ago
   - **D.** About 250 000 years ago

5. How did the Earth's climate change between about 20 000 and 10 000 years ago (during the Holocene Epoch)?
   - **A.** The world began to warm up
   - **B.** The world got cooler
   - **C.** The world was flooded
   - **D.** The world was covered in ice and snow

6. The term 'Neolithic Revolution' describes which of the following changes?
   - **A.** From hunting and gathering to mass production
   - **B.** From unscientific ideas to scientific thinking
   - **C.** From hunter-gatherer societies to societies based on farming
   - **D.** From primitive to sophisticated technologies

7. Who were the first people to use writing?
   - **A.** Romans
   - **B.** Sumerians
   - **C.** Greeks
   - **D.** Egyptians

8. Consequences of the Neolithic Revolution included which of the following?
   - **A.** Powerful rulers, written laws and growth of towns
   - **B.** More entertainment and leisure
   - **C.** More equality
   - **D.** Fewer diseases

9. Which of the following civilisations arose in ancient western Asia and Europe?
   - **A.** The Hittite Empire, Persian Empire and Roman Empire
   - **B.** The Shang dynasty and Indus Valley civilisation
   - **C.** The Olmec and Maya
   - **D.** The Aztec and Inca

10. The two oldest world religions are which of the following?
   - **A.** Islam and Buddhism
   - **B.** Christianity and Hinduism
   - **C.** Hinduism and Judaism
   - **D.** Judaism and Christianity

Short answer questions

11. In groups, research the findings of archaeologists at any one of the following Mesopotamian cities: Ur, Babylon, Nineveh or Nimrud. Write a short, illustrated tourist guide to the site of your chosen city, explaining to visitors the meaning of the remains.

12. Use the internet to select and download at least three pictures of artefacts and information on an aspect of life in the ancient Middle East. Show the class what you found and explain the importance of the items you selected.

13. Using the knowledge and skills you have developed from this topic, explain the significance of the scene in **SOURCE 1**.

14. Look at **SOURCE 2**.
   - **a.** Describe the weapons and armour of both the Assyrians and the Elamites.
   - **b.** Explain what the warriors are doing.
   - **c.** Why would Assyrian kings want to decorate their palaces with such scenes?

SOURCE 1 A scene from a wall painting in an ancient Egyptian tomb showing farmers at work



SOURCE 2 Detail from a wall panel in the palace of the Assyrian king Ashburbanipal. This scene depicts Assyrian soldiers defeating Elamites and killing Elam's King Teumman with a mace around 660 BCE.



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 14 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

14.1 Overview

Video eLesson
- The ancient past (eles-2456)

Interactivity
- A timeline of the ancient world (int-4291)

14.3 Out of Africa

eWorkbook
- Journal of a prehistoric human (ewbk-4567)

Interactivity
- A map showing migrations of early humans from Africa to the world (int-5971)

14.4 A changing Paleolithic world

eWorkbook
- Climate change (ewbk-4379)
- Living in the freezer (ewbk-4380)

14.5 An amazing journey

eWorkbook
- Why migrate? (ewbk-4381)

Interactivity
- The lowest sea levels (int-7748)

myWorldHistoryAtlas
- Overview > Indigenous migrations to Australia

14.7 The New Stone Age

eWorkbook
- What is a civilisation? (ewbk-4382)

myWorldHistoryAtlas
- Overview > Early river civilisations

Interactivity
- The Ancient Near East (int-7749)

14.8 Cities, laws, government

My World History Atlas
- Overview > Early urban civilisations
- Overview > Mesopotamia — Sumer

14.9 Society and culture

myWorldHistoryAtlas
- Overview > Mesopotamia—Sumer

14.10 Civilisations and empires in North Africa, western Asia and Europe

eWorkbook
- Hammurabi's code (ewbk-4383)

myWorldHistoryAtlas
- Overview > Early urban civilisations
- Overview > Mesopotamia—Babylon
- Overview > Persian Empire
- Overview > Mesopotamia—Assyria
- Overview > Cities of the Near East

14.11 Civilisations in South and East Asia

Interactivity
- A map of South and East Asia showing capital cities (int-7750)

myWorldHistoryAtlas
- Overview > Early urban civilisations

14.12 Ancient American civilisations

Interactivity
- Probable routes taken by the first humans to America (int-7751)

myWorldHistoryAtlas
- Overview > Mayas and Toltecs

14.13 The ancient birth of modern religions and philosophies

eWorkbook
- Which religion?(ewbk-4384)

myWorldHistoryAtlas
- Overview > Monotheistic belief systems
- Overview > Eastern belief systems

14.15 Thinking big research project: museum exhibition guide

ProjectsPLUS
- Museum exhibition guide (pro-0226)

14.16 Review

eWorkbook
- Reflection (ewbk-4388)
- True/false quiz (ewbk-4386)
- Crossword (ewbk-4385)
- Student learning matrix (ewbk-4378)

Interactivity
- Ancient world crossword (int-7691)

To access these online resources, log on to **www.jacplus.com.au**.

15 Investigating the ancient past

15.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

What clues can we follow to learn about the past?

15.1.1 Links with our times

Around eighteen hundred years ago, men fought in bloody battles in an ancient Roman arena. Crowds bigger than those at most football matches cheered them on as each fighter slashed at the other with a short sword, hoping to maim or kill him, while ducking and weaving to avoid his opponent's deadly blows. At the end of this brutal contest, the victor would turn to the emperor or the crowd and await their signal — to spare his opponent or kill him.

We do not know much about these individual fights, but we do know these things happened, and we know why these warriors, who were called gladiators, killed and died. We know that most people at the time found it entertaining to watch such horrors and that many thought it proper to provide such entertainment. We know these things because archaeologists and historians use clues, such as stone fragments and many other sources, to bring the past to life. History uses evidence that includes all kinds of traces, from skeletons to old books, paintings and photographs. History involves using such evidence to try to find the truth about what happened in former times.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4291)

Video eLesson Investigating the past (eles-1057)

SOURCE 1 A group dressed as Roman soldiers, reenacting a parade



15.2 Detective work and archaeology

LEARNING INTENTION

By the end of this subtopic you will be able to explain where we find evidence of the past.

15.2.1 Written sources and archaeological sources

As you know, our evidence for the past comes from primary sources — sources that were created in the time we are investigating. Depending on the event and place, primary sources might include bones, tools, weapons, letters, newspapers, works of art or photographs. For prehistory, we have no written primary sources, but for most periods of history we can divide primary sources into written sources (including poems, songs, letters, myths and legends) and archaeological sources (including tools, pottery, coins, toys, paintings, jewellery, tombs and entire cities).

As a historian tests a hypothesis, he or she will compare sources with other sources to assess reliability and ensure the theory is supported by evidence. Historians often draw on the work of other experts for their sources.

15.2.2 Archival research

When historians research historical periods during which written records were kept, they often find many of their primary sources in archives. These are organised collections of records. For example, historians researching the history of Christianity in medieval times might carry out their research in the Vatican archives in Rome because this is where the records of the Roman Catholic Church are held.

15.2.3 Digging up the past

Historians also draw on the work of archaeologists. These experts examine the physical remains of the past; they collect, record and interpret them. Sometimes we already know where to find such archaeological sources. Examples include sites such as the pyramids in Egypt and the Great Wall of China. Very often, however, archaeologists have to dig to find evidence of the past. Generally, the older the site, the deeper the dig has to be.

Deciding where to dig

The first decision archaeologists have to make is where to dig for remains of past times. Many remains become buried over time by wind-blown sands, **sediments** from floods or volcanic ash. Some remains are hidden but clues to their whereabouts may be in sources such as old documents. Caves are likely places in which to look and so are mounds of earth or other features that suggest that humans have changed the landscape (see **SOURCE 2**). Sometimes ancient remains are found purely by accident.

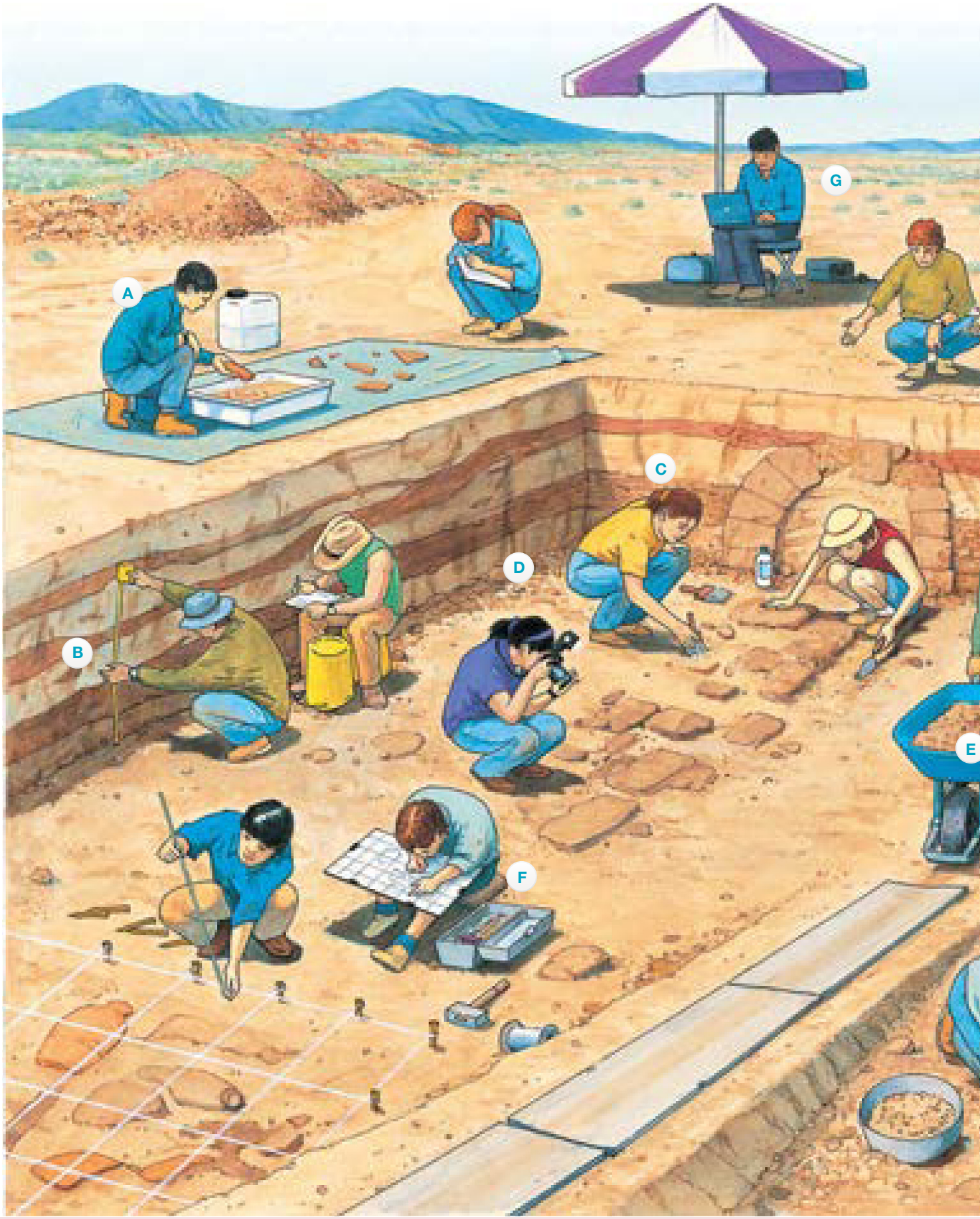
sediment the material that settles at the bottom of a liquid

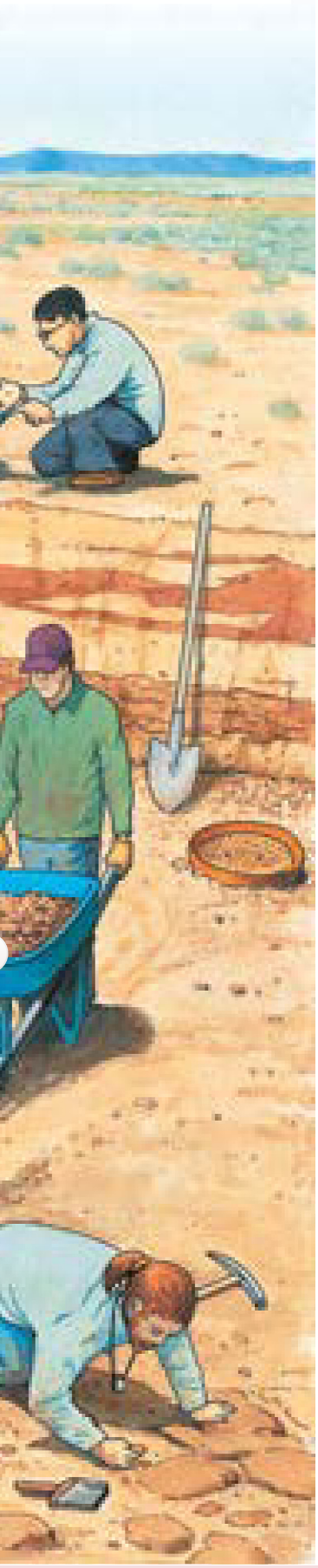
DID YOU KNOW?

For investigations of prehistoric and ancient times, historians and archaeologists also use important information from other scientists. Anthropologists study human behaviour, especially in tribal societies. Their findings help historians to understand past societies. Palaeontologists study fossils (traces of humans and animals from prehistoric times). Cryptographers specialise in breaking codes. Their skills have helped us to decipher and read some ancient languages.

int-5968

SOURCE 1 Activities at an archaeological dig





A Finds are carefully washed and labelled to record the trench and layers in which they were found.

B Strata revealed by the trench help archaeologists to date the various layers of the dig.

C Brushes and trowels are used to carefully uncover objects.

D Objects and sections of the site are photographed.

E After the site has been searched for objects, earth is removed from the trench.

F Positions of objects are recorded using drawing frames divided into squares.

G An ongoing record of progress at the dig is kept.

Modern archaeologists also use a number of scientific techniques. Aerial and satellite photography can locate patches of earth that have different temperatures or different vegetation caused by buried settlements or tombs. Sonar equipment can be used to locate relics, including sunken boats, that lie beneath seas.

Excavating remains

Once the site for an excavation, or dig, has been decided on there are several steps to follow. Archaeologists have to obtain permission to dig from the government of the country in which the site is located. They then survey the site, marking it out in squares with pegs and strings. When digging commences, the archaeologists must be careful not to damage remains. The remains might be close to the surface. But sites that have been occupied for a long time can have several layers of remains. These layers are called strata and the oldest remains will normally be in the deepest strata. As they remove earth, the archaeological team searches carefully for remains. They label each find to record the square and level in which it was found.

SOURCE 2 Mounds called barrows were made in England in prehistoric times. They were usually the burial place of a chief or king.



Help from other scientists

Other scientific experts and new technologies are frequently used to help archaeologists to interpret their finds. Such experts include forensic pathologists who examine human remains to find evidence of what people ate and what might have caused their deaths. Technologies include computer programs that can analyse remains of buildings to create 3D images suggesting how they once looked.

SOURCE 3 Remains of a ditch called a moat that was dug around a castle at Old Sarum in England in the eleventh century CE



DID YOU KNOW?

When archaeology began in the eighteenth century, some archaeologists were wealthy amateurs. They had no real training, and some of their expeditions destroyed more than they saved when they dug up ancient treasures. Among the greatest of all twentieth-century scientific archaeologists was an Australian, Vere Gordon Childe (1892–1957). He became a leader in the archaeology of prehistoric times.

15.2.4 Survival by chance

Only some archaeological traces of the distant past have survived. Many more have been destroyed by a range of causes. These include:

- demolition and rebuilding
- natural decay and erosion by wind, rain and floods
- theft. Almost all of the tombs of the Egyptian pharaohs were robbed of their treasures in ancient times.
- war. Many ancient towns and cities were smashed and burned in wars.

SOURCE 4 Painted pottery from ancient Greece, sixteenth or fifteenth century BCE



15.2.5 Clues from pottery

One of the most common and important sources of archaeological evidence is pottery. Pottery is made by shaping wet clay and then baking the clay so that it hardens and keeps the shape the potter has given it. Pottery has been made for about 10 000 years in East Asia, the Middle East and the Mediterranean region.

Pottery was used in much the same way that we use glass and plastic bottles and jars today — mainly for holding and storing food and drinks. A lot of evidence comes from pottery because people threw away their broken pots. The broken pieces are called sherds, and even small pieces can help in building up a picture of the past. Archaeologists have named some prehistoric people after the style of pottery they made.

SOURCE 5 Small pottery vases found together in Rome. They are from the first century BCE. Each contains a small piece of bone from a dead person, and each has an inscription stating the person's name and date of death.



Particular pottery styles can be identified with different ages. For example, in one period a typical container made of pottery might have a long neck but no handles. In another age, a typical style might have a short neck and a handle. Such differences help archaeologists to compare pottery from different sites to decide whether they are likely to belong to the same age or to a different time. Further clues are provided by decoration. Some vases, jugs, urns and bowls were engraved or painted with scenes showing the customs, work, stories and beliefs of the societies that produced them.

15.2 ACTIVITY

Working in small groups, list reasons there would usually be more archaeological evidence from ancient times than from prehistoric times. **History concepts: Continuity and change**

15.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 7, 8	Questions 4, 5, 9, 10	Questions 6, 11, 12

Check your understanding

1. Complete the following sentences:
   a. Primary sources include _____ sources (including poems, letters and legends) and _____ sources (including tools, pottery, paintings, jewellery and entire cities).
   b. Archives are organised _____ of ____ sources.
2. What three tasks describe the main work of archaeologists?
3. List the kinds of clues that help archaeologists to decide where to dig.
4. Name two technologies that help archaeologists locate sites for digs.
5. List two causes of destruction of archaeological traces.
6. What kinds of archaeological traces would be most likely to be lost through theft?
7. What did people do with broken pottery in ancient times?

Apply your understanding

8. Write descriptions of four activities that people are performing in **SOURCE 1**.
9. Imagine you are one of the people in **SOURCE 1**. The site you are excavating is thought to be the remains of a city that was destroyed in a war. Describe in a diary entry your feelings about your day's work, what you might hope to find and what you might actually have found.
10. Examine **SOURCES 2** and **3**.
    a. Describe what you see in each photograph.
    b. Explain why it is obvious that humans did something to change the landscape shown in each photograph.
    c. What might an archaeologist expect to find on a dig at either of these sites?
    For help with analysing sources, see topic 13 History concepts and skills.
11. Look closely at the details in **SOURCES 4** and **5**. Use these details and information in the captions to form a hypothesis about each of the civilisations that made these items.
12. Why is pottery such an important source of evidence for archaeologists?

For sample responses to every question, go to www.jacplus.com.au.

15.3 How old is it?

LEARNING INTENTION

By the end of this subtopic you will be able to explain how the date of evidence is worked out.

15.3.1 Dating techniques

Archaeologists are finding evidence of our past all the time. Before we can assess what the source of evidence tells us about past human activity, we need to know how old the source is. Being able to date evidence allows historians to place events and human behaviours in time order. It also helps to identify any links between past groups of people. Sometimes it allows experts to detect fakes.

Some dating methods will not reveal how old something is — just whether it is older or younger than something else. These methods are called **relative dating techniques**. Two of these are stratigraphy and fluorine dating.

Stratigraphy is the study of the different **strata** or layers revealed when a slice is cut down through the earth.

relative dating techniques methods used to assess whether something is older than something else (e.g. stratigraphy, fluorine dating)

strata (singular: stratum) distinct layers of material beneath the ground, built up over time, that provide information for archaeologists and geologists

radiocarbon dating a way of dating objects of plant or animal origin according to the amount of carbon left within them

SOURCE 1 Limitations of **radiocarbon dating**. This diagram indicates different types of objects that might be found during the excavation of a site that has been occupied over thousands of years. Radiocarbon dating gives approximate dates before the present. A 95 per cent chance exists of the true date falling within 200 years either side of any estimated radiocarbon-dated age. However, radiocarbon dating cannot date anything that died more than about forty thousand years ago. In such remains there will not be enough C14 left for radiocarbon dating to work. Artefacts such as stone tools cannot be dated this way because they were never alive. But if they were found alongside a layer of plant remains or charcoal, that material could be dated, and the age of the tools would probably be similar.



SOURCE 2 One famous object that has been radiocarbon dated is the Shroud of Turin — said by some to be the cloth in which Christ was wrapped after his crucifixion. These tests, carried out in the late 1980s, indicated the cloth was only around seven hundred years old. Then further tests were performed. These proved that only the bacteria and mould on the cloth were around seven hundred years old. The mystery continues. Written records confirm the cloth did exist in 1357.



The longer that bones lie in the earth, the more fluorine they absorb from the soil. So the more fluorine it has, the older the bone. Fluorine testing was used to expose one of the most famous scientific frauds in history — the Piltdown Man. For 41 years the skull of this so-called creature had been accepted as firm evidence of the 'missing link' between ape and man. Fluorine testing conducted in 1953 found that the top section of the skull was much older than the jawbone and teeth. It was then revealed that the remains of a human skull had been carefully joined with those of a chimpanzee. It is still a mystery who set up this amazing fraud.

What's its age?

Absolute dating techniques are used to work out the actual age of something or someone. Archaeologists combine these with relative dating techniques. For example, if absolute dating techniques prove that an object is 1000 years old, and the object was found in a particular stratum (or layer), then archaeologists can generally assume that any objects found in strata below this will be more than 1000 years old. There are many different absolute dating techniques.

Radiocarbon dating

All living things absorb C14, which is a radioactive form of carbon. This chemical process stops when the human, plant or animal dies. Then any C14 in the once-living tissue starts to decay. Scientists know the rate at which C14 breaks down. By working out how much of it still remains, they can work backwards to establish the likely date of death, and hence the approximate age.

15.3.2 Tree rings tell stories about the past

What might seem like one of the strangest of all dating methods involves using tree rings and so we call it tree-ring dating. The scientific name for this method is dendrochronology. All trees have tree rings and they can help with dating old objects. But the technique only works if the objects were made of wood. The age of a tree is worked out by counting the number of rings in the wood. A new ring is formed every year in a tree's life. The width and shape of each ring depend on environmental conditions such as rainfall and soil type. All trees of the same type growing in the same area will have the same environmental conditions, so the pattern of their growth rings will be very similar.

absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating)

Sometimes the age of wooden items such as spear handles and roof beams can be worked out by matching the growth rings in the wood with those in a dated sample from trees in the same area — as long as they are of the same species.

SOURCE 3 Tree growth rings



DID YOU KNOW?

In recent years, DNA evidence has become another important scientific method for discovering information that can be used by archaeologists and historians. DNA samples can tell us who people's ancestors were. Using DNA analysis, scientists have found that the ancestors of all modern humans came from Africa (see topic 14 The ancient world: c. 60 000 BCE to c. 650 CE).

15.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 7	Questions 3, 6, 8	Questions 5, 9, 10

Check your understanding

1. What are strata?
2. Will objects found in a lower stratum be older or newer than those found in a higher stratum?
3. What is radiocarbon dating, and how can knowing the rate at which C14 breaks down help in finding out the likely age of any once-living remains?
4. What is another name for dendrochronology (see **SOURCE 3**)?
5. How might dendrochronology help in finding out the age of wooden objects?

Apply your understanding

6. Look at the artefacts illustrated in **SOURCE 1**. Describe the kinds of changes that must have happened in ways people lived at this site over many ages.
7. Examine **SOURCE 2** and outline why you think the Shroud of Turin might be regarded by many people as something of great historical significance.
8. Look at the evidence in **SOURCE 3**. Suggest how old (approximately) the tree was using the tree growth rings.
9. Design a mind map to represent the technologies that help archaeologists to date the sources of evidence that they discover.
10. Imagine you are an archaeologist investigating a recently discovered medieval site. You have found pottery, books, wooden furniture and bones. Identify and describe the dating techniques you could use to work out the age of each item in order to identify what changed over the centuries during which the site was occupied.

For sample responses to every question, go to www.jacplus.com.au.

15.4 Investigating ancient Australia

Aboriginal and Torres Strait Islander readers are advised that this topic may contain photos of or references to people who have died.

LEARNING INTENTION

By the end of this subtopic you will be able to describe the sources of evidence about ancient Australia.

15.4.1 How do we know about ancient Australia?

The history and beliefs of ancient Australia were not written onto clay tablets or scrolls of papyrus. Modern archaeologists often begin their study of the life and culture of ancient Aboriginal and Torres Strait Islander communities by talking and consulting with the traditional custodians of the land.

quarry an excavation or pit from which stone or building material is cut

shell midden a mound of shells and other waste material marking the site of an ancient community

geologist someone who studies the sediments and landforms associated with ancient campsites

palaeontologist a scientist who studies fossils

anthropologist someone who researches the appearance and features of the life of prehistoric people and the connections they had with other human populations

From oral tradition and archaeology

Our ancient past was remembered through the spoken word. This oral history was passed down through the generations. As such, the archaeological record of our ancient past is incomplete. Archaeologists gather their evidence from ancient occupation sites such as camps, **quarries**, **shell middens** and fish traps, burial areas, and ceremonial and sacred sites. Archaeologists interpret layers of sediment, charcoal, clay and sand. Sites, such as Lake Mungo in the Willandra Lakes region of western New South Wales, are studied and interpreted by not only archaeologists, but also **geologists**, **palaeontologists** and **anthropologists**.

SOURCE 1 Newspaper account of archaeological excavations at Barrow Island, Western Australia

Boodie Cave on Barrow Island is yielding an ancient secret of global significance: resourceful, well-fed humans were living in its limestone chambers more than 50 000 years ago, several thousand years earlier than archaeologists had estimated.

The startling evidence has been unearthed in surgically excavated pits on Barrow, Western Australia's second largest island, 50 kilometres off the Pilbara coast.

Thousands of tiny artefacts lie in sediment dated to 50 000 years old…

There are even older dates of 53 000 years from grains mixed in with fragments of a shellfish meal.

…

'People talked about it, and dates of 47 000 for Aboriginal occupation have been well accepted, but there was no hard data before,' [lead archeologist Peter Veth says].

…

Barrow Island was once part of the original coastal plain of northwest Australia, now drowned.

For three years, teams from UWA, the University of Queensland, James Cook University and Sacramento University have dug pits in the cave floor, unearthing evidence that early Australians lived off marine and terrestrial life along the limestone ridges until sea levels rose and Barrow became an island 7500 years ago.

And they dined well in a stunningly productive landscape, Veth says.

'You take off the sterile soil surface and… in layers below are (the remains of) turtle, oyster, crocodile, porpoise, sea urchin and freshwater mussel. It's like a seafood basket, only 50 times richer. There are also the bones of marsupial carnivores and kangaroos — these people were eating better than we do.'

Several traditional owners also helped, such as Eden Bobby from the Kuruma Marthudunera Aboriginal Corporation. 'It was a privilege to see first-hand how archaeologists use scientific techniques to understand how the old people of this land lived tens of thousands of years ago,' he said.

Most intriguing are material clues to a resourceful people who harvested food and traded items over possibly hundreds of kilometres. 'Heating stones' were nestled among ancient turtle remains, large quartzite pebbles carried back from inland gorges to act as cooking agents.

Baler shells show signs of being shaped into spoons or incised with mysterious markings.

…

'One of the big questions of Australian archeology is "When did Aboriginal people get here?"'

'To jump over that 50 000-year mark, with the reliable results of Peter and his team, will attract a lot of international interest in this find.'

So when exactly did the First Australians make landfall?

'That's the big question,' McNiven says. 'We're now able to say it's at least 50–53 000 years ago. It's getting earlier and earlier all the time.'

Lore and museums

'Caring for Country' is a very important responsibility taken on by many Aboriginal and Torres Strait Islander communities. To Aboriginal and Torres Strait Islander peoples 'Country' is the land to which a person belongs, or the land of their **Dreaming**. In caring for their Country, the traditional owners of the land share knowledge and pass on the **lore**.

Non–Aboriginal and Torres Strait Islander people and government institutions, such as museums, also have an important role to play in protecting and conserving the **heritage**, culture and artefacts of ancient Australia. Museums are the places where the stories of many people, places and times can be told. The National Museum of Australia preserves and displays collections of **artefacts** that represent our history from ancient to modern times (see subtopic 15.6).

Artefacts become wonderful sources of information when they are given a background. Aboriginal and Torres Strait Islander art and objects come to life when they are interpreted by custodians of traditional knowledge who understand how to share knowledge of specific objects and ideas appropriately. Connecting the oral traditions with the museum objects helps us to see the images and hear the voices of ancient Australia. What survived from the ancient past can give us a glimpse of the world as it was for the first Australians.

the Dreaming the English word used to label the systems of beliefs about life, culture and spirituality of Australian First Nations peoples.

lore the customs and stories that came from the Dreaming

heritage everything that has come down to us from the past

artefact an object made or changed by humans

DID YOU KNOW?

Stone tools are the longest lasting objects that archaeologists find because organic substances such as plants and animals perish after only a few hundred years. Nature sometimes preserves objects, such as the wooden boomerangs that survived in the water-logged peat bog of South Australia's Wyrie Swamp for over 10 000 years and the 20 000-year-old bone tools at Devil's Lair in Western Australia.

SOURCE 2 Denise Lovett of the Gunditjmara people (western Victoria) explaining the importance of connecting artefacts, such as the emu-feather skirt made by her ancestors, with the object's cultural background

I look at the feathers that the women would have collected, made and danced with. I wonder what song they were singing while they danced. Rightfully, this should have been handed down to someone's daughter and the story handed down too. It's sad that we don't have the whole meaning of them, that they are just objects.

SOURCE 3 An emu-feather dance skirt, made and worn by Wendy Berick of the Dja Dja Wurrung people (Melbourne, Victoria)



15.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 8	Questions 3, 6, 7, 9	Questions 5, 10, 11, 12

Check your understanding

1. What is an artefact? Give an example.
2. Why do modern archaeologists talk to today's traditional owners of the land?
3. How were the histories and beliefs of ancient Australia passed down through generations?
4. Barrow Island off the Western Australian coastline was once part of the original coastal plain of north Western Australia. True or false?
5. Explain why stone tools are a rare archaeological find.
6. Archaeologists gather their evidence from many places. Identify the layers that archaeologists investigate.

Apply your understanding

7. Suggest why archaeological sources may not give a complete picture of life in ancient Australia.
8. Why is the evidence found at Boodie Cave in **SOURCE 1** described as 'startling'?
9. What were some of the 'material remains' that were found at Barrow Island (**SOURCE 1**)?
10. From an examination of **SOURCE 3**, what assumptions could you make about the resources people used in ancient Australia.
11. 'Artefacts from ancient Australia can only reveal their true meaning if their cultural background is also considered.' Explain what you understand by this statement. **SOURCES 2** and **3** may help you to do this.
12. Consider the ways we can learn about ancient Australia as presented in this subtopic. Rank them from most useful to least useful as a way of learning about ancient Australia's past. Justify your ranking.

For sample responses to every question, go to www.jacplus.com.au.

15.5 Conserving the past

Aboriginal and Torres Strait Islander readers are advised that this topic may contain photos of or references to people who have died.

LEARNING INTENTION

By the end of this subtopic you will be able to describe Lake Mungo and what was discovered there.

15.5.1 Investigating Australia's ancient past

With all the fascinating information that archaeological and scientific study of ancient burial sites can give us, it is easy to forget that these sites are also places of great spiritual significance and that ancient Australia is not just a story of the past.

The traditional Aboriginal and Torres Strait Islander owners and custodians of the land continue to care for Country and all the generations who belong to it. Australian governments now recognise the rights that Aboriginal and Torres Strait Islander communities have over human remains, artefacts and heritage sites. Debate over the control and correct treatment of human remains and heritage continues to be an important issue in Australia.

The role of the archaeologist

Careful investigation of archaeological sites is where the collection of evidence begins. The sites are the source of information and the basis for our archaeological understanding of how people lived in ancient Australia. Most sites have been found through careful survey of the landscape. Pits and trenches are then dug so that excavation can reveal the layers of history found in places such as middens and campsites.

Archaeological evidence of ancient Australia includes **sites**, artefacts (including tools and weapons), art (such as cave paintings and rock engravings), scarring of trees, burial grounds, and placement of rocks.

site a place where there are traces of past human activity

SOURCE 1 A collection of artefacts, tools and weapons including boomerangs and hand axes



DID YOU KNOW?

Bones and teeth leave a record of health and disease. At Roonka Flat in South Australia, people suffered from arthritis of the jaw and tooth loss. Archaeologists have connected this condition to chewing very stringy food and the use of the mouth as a tool. Chewing tough bulrush roots was part of the process of making the string necessary for the large hunting and fishing nets of the region.

SOURCE 2 A map of Australia showing Aboriginal and Torres Strait Islander art sites and some of the locations of ceremonial and cultural significance in south-east Australia



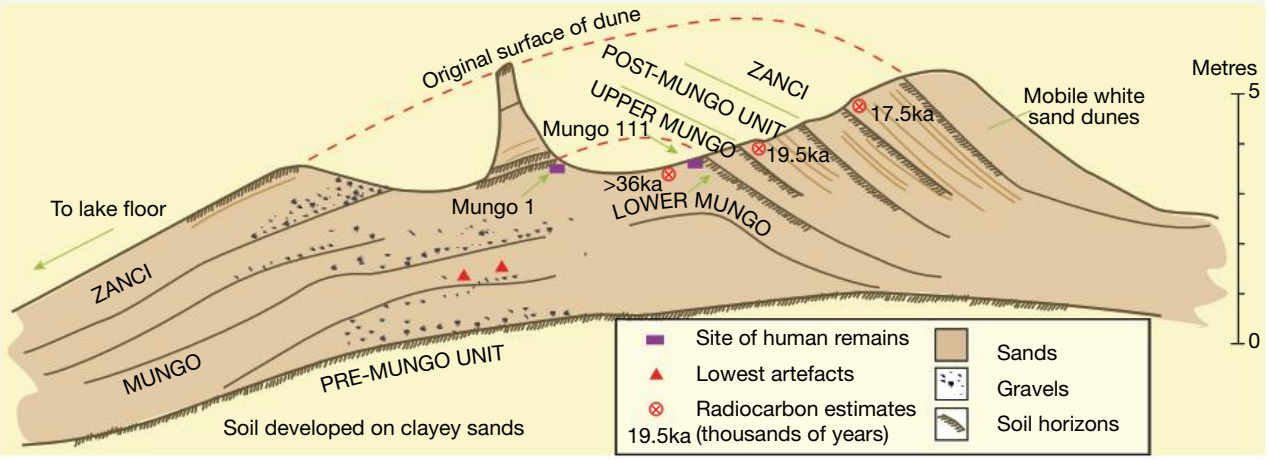
Source: Spatial Vision

15.5.2 Lake Mungo site study

The evidence of the lives of the ancient people who lived on the shores of the now dry beds of Lake Mungo, in the Willandra Lakes region of western New South Wales, has been exposed by erosion. In 1968, wind erosion uncovered the charred remains of a young woman in the sand dunes near Lake Mungo. This skeleton, known as 'Mungo I', had been cremated and then the bones had been crushed before burial. The first archaeologists to study her remains estimate the burial had taken place 25 000 years ago, making it the oldest known cremation in the world. More recent studies have concluded that Mungo I is closer to 40 000 years old.

Other fragments of human remains and hundreds of artefacts have since been found in the eroded dunes of the vast Lakes region. Possibly the oldest human remains are the skeleton of a person, probably a tall man, who died between 38 000 and 42 000 years ago. Archaeologists have named him 'Mungo III'. The body had been carefully laid out, with hands clasped together and knees slightly bent. Archaeologists believe that so much ochre had been spread over the body during burial that tiny traces of the pink soil still remained in the grave. A sense of the dignity, ritual and respect for the dead were preserved for thousands of years in the remains of Mungo I and III.

SOURCE 3 Diagram showing a cross-section of the excavations at the Lake Mungo archaeological site

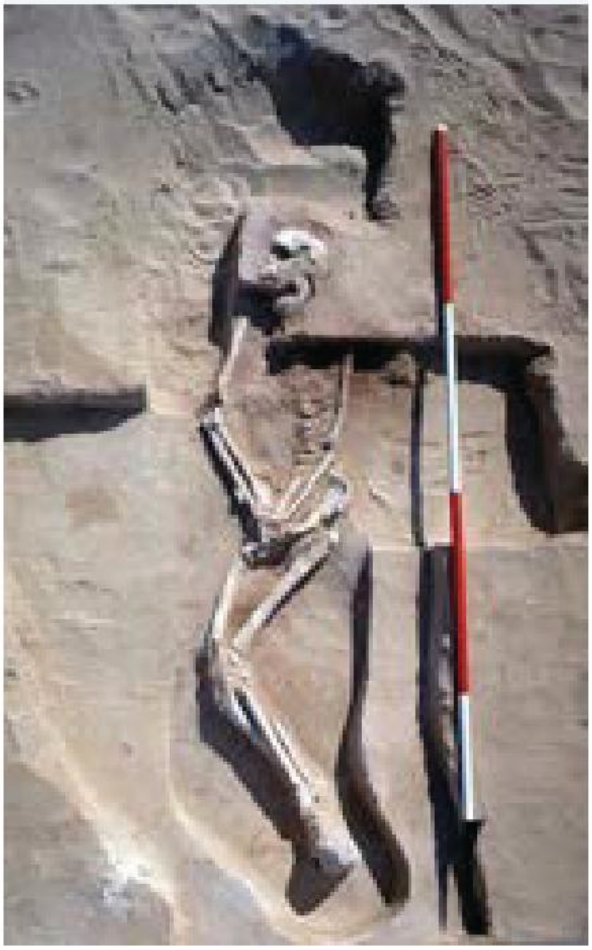


Lake Mungo is one of the 17 lakes in the Willandra region in New South Wales, a series of fossil lakes that is a World Heritage Site because of its natural and cultural importance. The remains of fireplaces, shell middens and human burials provide evidence of a time when Lake Mungo was full of water and supported an abundance of life. In 2003, another remarkable archaeological discovery was made when the 20 000-year-old footprints of the Willandra people were found. Archaeologists working with Elders of the Paakantji, Ngiampaa and Mutthi Mutthi people were visiting Country when Mary Pappin Junior, a Mutthi Mutthi woman, showed the footprints to archaeologists. Hundreds of the Pleistocene footprints had formed in soft muddy clay, dried and then became fossilised. The Elders have interpreted the footprints as the record of a small group of adults and children walking on top of a thick layer of clay. Within a couple of days, a band of hunters ran through the same area. The prints show that one Willandra man ran extremely fast while another was one-legged. Elders from the Paakantji, Ngiampaa and Mutthi Mutthi people continue to work with the government in the ongoing care of the Lake Mungo archaeological site.

Appreciating our heritage

Many sites in Australia today are of historical, cultural and archaeological significance. In addition to this, the Australian government has established over 70 Indigenous Protected Areas. These areas are managed by the traditional owners, who look after the plants, animals and any special sites. Aboriginal and Torres Strait Islander rangers manage the impact of visitors, particularly tourists, who come to the area. In this way, Aboriginal and Torres Strait Islander peoples can keep their cultures strong.

SOURCE 4 The remains of Mungo III, a man placed on his side with hands clasped and then buried in a shallow grave



Source: J. M. Bowler & Traditional Owners, c/o National Parks of NSW, Buronga, 2739

SOURCE 5 The Pleistocene footprints from the clay at Lake Mungo left an ancient human record of life in Australia.



SOURCE 6 Extract from Harvey Johnstone and Michael Westaway, archaeologists

Some of the footprints and stride lengths [belong to a child and] show how the child walked, paused, turned and ran away from the groups they were with, before walking briskly back towards them. Perhaps the child was called back by an adult or older sibling. So seldom in open-site archaeology do we see such a personal and familiar signature.

The Australian Museums and Galleries Association, Western Australian branch, and Heritage Perth, for example, have agreed to principles of the Burra Charter, an agreement that is a guide for the conservation of Australia's heritage sites. The principles are of particular importance to Australia's fragile Aboriginal and Torres Strait Islander art and settlement sites. The Burra Charter principles express the belief that:

- Heritage sites enrich all our lives because they help us to understand the past and the cultural richness of the world that we live in today.
- The cultural significance of a heritage site is in its location, the objects within it, its use and the meaning that it has to people today.
- Consideration of cultural significance, combined with careful analysis and study, must take place before any decisions are made that affect a heritage site.
- Careful records must be kept to ensure the care, management and understanding of heritage sites into the future.

SOURCE 7 Guidelines for a site study in your area

The following steps should be followed when undertaking a site study of a site relating to Aboriginal and Torres Strait Islander history and cultures.

1. Establish the location of site of cultural significance that you can visit.
2. In small groups, plan your excursion and design a range of archaeological fieldwork activities. Remember that traditional owners should be consulted when planning site visits. Extend an invitation to a member of your local traditional owners to accompany your class on the excursion to help explain the significance of the site and the artefacts you are studying.
3. It is important that the site be treated with the same respect you would give a church, mosque or war memorial. Think about how your group will need to move around to ensure you do not damage the site.
   In the planning process, you will also need to:
   - Check with the National Parks and Wildlife Service for the rules of the site in their care.
   - Ensure that all visitors to your chosen site are aware of the rules of site management and that the only records taken of your visit are what you write, what you photograph and what you draw.
   - Familiarise yourself with the key features of the site location: if is it near water, if it is exposed or protected from the weather, how accessible it is, what the vegetation surrounding the site is, and so on.
   - Research the Dreaming stories and beliefs of the people who created and maintained the site.
4. Prepare an information sheet to help record your excursion findings and details of site features. Include:
   - site name and location
   - details of site or artefact
     - shape
     - size
     - material
     - use or function.

Underneath each entry leave a space for your sketch of the artefact or site feature.

When you have completed your site visit, prepare group presentations, reporting on your findings. Your presentation will need to provide background information explaining the features of the site. Remember that the environmental setting, including the landscape, climate and natural resources, is very important in understanding how people lived. Your presentation should highlight the value of the site to Australian archaeology and any heritage issues you have become aware of. You may want to consider the problems of managing and preserving the site for future generations. You may have noticed that site management and conservation plans have already been put in place. The area of the site may have barriers erected as protection against people and animals, or drip lines to direct running water away from wall engravings or paintings. Conclude your presentation with a statement expressing why you believe the continued study and management of archaeological sites is important, and what you have learned from your study of ancient Australia.

15.5 ACTIVITIES

1. The map in **SOURCE 2** shows artefacts and sites around Australia of archaeological significance. Choose one site of particular interest to you, research it in more detail and then write a letter to your local paper explaining the significance of this site, the conservation threats it faces and what you think we need to do to protect the ancient heritage of our country. **HASS skills: Communicating and reflecting**
   History concept: Significance
2. In 2003, Willandra Elders lifted a 20-year ban on further excavation of the archaeological sites of the Willandra Lakes region. Many Aboriginal and Torres Strait Islander communities believed they needed to protect their sites and history from archaeologists who had not previously respected human remains or the objects of sacred or traditional importance.
   a. In groups or as a class, consider the issues related to ownership and control of artefacts.
   b. Hold a debate on the following topic: All Australian Aboriginal and Torres Strait Islander peoples' remains and artefacts should be returned to the traditional custodians. **General capability: Ethical understanding**

15.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 7	Questions 5, 6, 8	Questions 4, 9, 10

Check your understanding

1. Identify two archaeological sources of evidence about ancient Australia.
2. Identify the artefacts and evidence of life found at Lake Mungo.
3. Why were hundreds of Pleistocene footprints preserved at Lake Mungo?
4. What are the principles of the Burra Charter designed to achieve?
5. How old is the young woman's body found in the sand dunes near Lake Mungo, known as Mungo I?

Apply your understanding

6. The map in **SOURCE 2** shows artefacts and sites around Australia of archaeological significance. List all the challenges for the protection and conservation of these sites.
7. Examine **SOURCE 3** and read the relevant text.
   a. What role did erosion play in discovering the evidence of early occupation of Lake Mungo?
   b. How deep was the Upper Mungo level?
   c. Would you expect Mungo I or Mungo III to be closer to the boundary between Upper and Lower Mungo?
   d. What does 'ka' stand for? What difference in time is there between the first date in the Zanci layer and the third date in the Lower Mungo layer?
8. Look at the photograph in **SOURCE 4**. What evidence of religious beliefs and funerary practices could an archaeologist gain from studying this source?
9. Discuss the concept of a 'shared heritage' and decide what that should mean in modern Australia.
10. The ability to identify with a person and their times is known as empathy. When we empathise we seek to understand, through imagination and knowledge, how others acted and thought. We show empathy when we read a novel, watch a movie, study a painting or listen to others. A child living 20 000 years ago left some of the footprints shown in **SOURCE 5**; they are evidence of someone's life from long ago. These footprints provide only a glimpse of that child's life but are nevertheless historically very significant. Write the inscription for a plaque erected near these footprints, explaining to visitors what they are looking at when they see these simple footprints. Convey a sense of the significance of the footprints and support this with some general information on the key features of life in this region during this distant time. See topic 13 for more information on empathy and significance.

For sample responses to every question, go to www.jacplus.com.au.

15.6 The role of museums

LEARNING INTENTION

By the end of this subtopic, you will be able to explain the important role of museums in conserving our heritage.

15.6.1 Museums

The proper **conservation** of historical evidence allows future generations to enjoy the experience of viewing items that show what life might have been like for people who came before us.

Much historical evidence is kept in public museums. Many of the items in a museum collection are donated; others are borrowed and some are bought. They may include artefacts, works of art, fossils, documents such as letters, and scientific specimens.

conservation the preservation and protection of artefacts or relics from damage or decay

curators people who look after a museum collection

conservators specially trained people who clean, care for or repair artefacts for display in a museum or gallery

How a museum works

A museum has three main functions: to obtain items to display, to exhibit and preserve these items, and to provide public support such as guided tours and educational services.

Curators — known as content developers in the National Museum of Australia — look after specific sections of a collection. They work with other museum staff, such as **conservators** and designers, to decide what to display at any one time and how items will be presented. They also conduct research to find out more about the items they have acquired or would like to acquire. One of the main tasks of conservators is to clean, restore and repair items so they are ready for display. They also monitor the condition of items on display as well as their surrounding environmental conditions. The ultimate aim is to preserve a museum's exhibits in top condition.

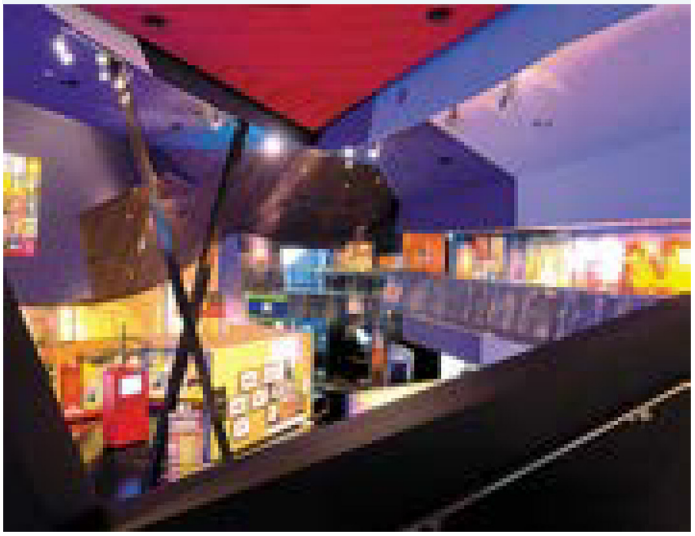
National Museum of Australia

The National Museum of Australia opened in Canberra in March 2001. It is entirely devoted to conserving evidence of Australia's social history — both past and present. Its collection of some 180 000 items includes rare, high-interest exhibits such as a carcass of the now extinct Tasmanian tiger through to clothing worn by convicts and the largest collection of bark paintings in the country.

The Gallery of First Australians

'First Australians: Gallery of Aboriginal and Torres Strait Islander Peoples' is one of five permanent exhibitions. It presents aspects of more than 40 000 years of Aboriginal and Torres Strait Islander social history. Exhibits range from old artefacts through to interactive multimedia displays of present-day culture.

SOURCE 1 The exhibits at the Gallery of First Australians are presented over two levels. Displays on the lower level are mainly to do with the history of Aboriginal and Torres Strait Islander peoples since their contact with white settlers. The upper level focuses on the relationships and beliefs of five selected communities. The displays have been structured to allow these communities to tell their own stories in their own way.



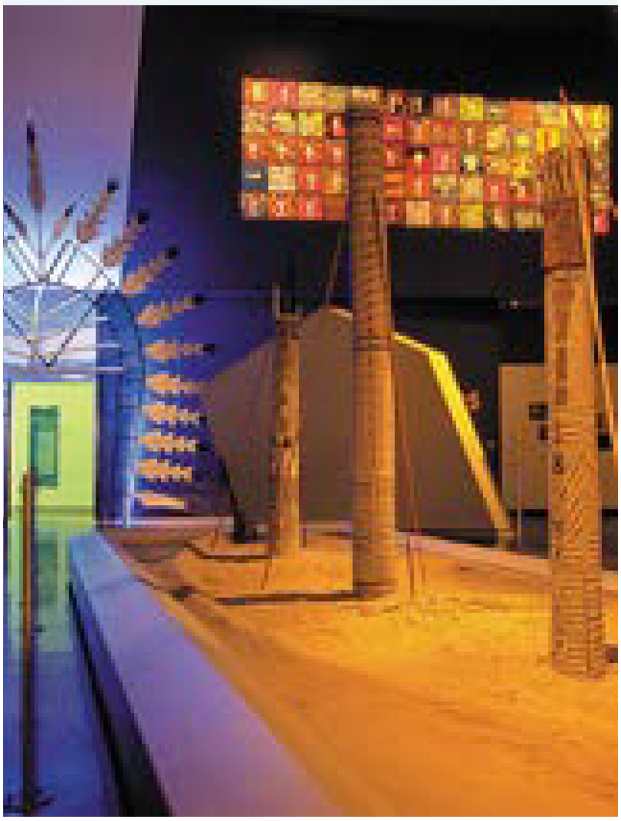
SOURCE 2 What is displayed is only a fraction of the museum's total collection. The rest is stored in secure warehouses elsewhere in Canberra. The temperature and humidity within these warehouses are carefully controlled. Each item stored is given a barcode and is catalogued so that it can be found easily when needed.



SOURCE 3 Proper conditions must be met for each item on display to make sure it is not damaged while being exhibited. Different items require different conditions. Some items are regularly swapped with others in storage to meet conservation requirements.



SOURCE 4 The strong sense of community of the Torres Strait Islanders and their close links with the sea are portrayed in a separate area of the Gallery of First Australians.



SOURCE 5 As each item is acquired, conservators check its condition carefully. It may need cleaning, some restoration or extensive repairs. Before any item is dismantled, its details are carefully photographed.



15.6 ACTIVITY

Visit a museum close to you, or browse its website to look at highlights of their collection or perhaps even take a virtual tour. If visiting as a class, your teacher will arrange which sections of the display you will view, perhaps working in small groups. Consider each of the following points as you view the display, so you can contribute to a class discussion afterwards.

a. Take careful note of what you see displayed. What does it tell you about the distant or more recent past?
b. How have items been displayed? Think about why they might have been displayed in that way.
c. If visiting in person, note the temperature of the museum and the level of lighting. Are there any external windows or doors? If so, what has been done to control light levels?
d. Do any items look like they might have been restored? How can you tell? Given the nature of the item and its age, think about what it might have looked like when the museum acquired it.
e. Consider what you learned from a visit to the museum or its website that you did not know before. How did it help you to appreciate why conservation is so important? **HASS skills: Questioning and researching**

Resources

Weblink National Museum of Australia

15.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 6	Questions 3, 7, 8	Questions 4, 9

Check your understanding

1. What is the role of the curator?
2. Why is it important to conserve our past?
3. What is unique about the National Museum of Australia?
4. Why do you think conservators photograph an item before dismantling it?
5. Explain what the three functions of a museum are.

Apply your understanding

6. Describe what you can see in each of the images featured in this subtopic, and how it contributes to the conservation of our heritage.
7. Individually or as a group, identify what parts of your community's history you think future generations might be interested in seeing or knowing.
8. Imagine that an Australian museum display some 100 years from now features your school. Decide what artefacts and other exhibits you think would best represent life at your school in the early twenty-first century. Then sketch and label a design to show how you would display these items to best advantage for a teenage audience.
9. Visit the website of one other museum in Australia or overseas. Use the information provided by the website to describe the main types of exhibits collected and held by that museum, what conservation work it carries out and some of the educational services it provides.

For sample responses to every question, go to www.jacplus.com.au.

15.7 Conserving the heritage of ancient Australia

LEARNING INTENTION

By the end of this subtopic you will be able to identify and describe ancient Australian heritage sites.

15.7.1 Heritage sites

Few among the first Europeans to come to Australia saw much value in the heritage of the Aboriginal and Torres Strait Islander peoples whose land they took. They cared little for creation stories, sacred sites or art. Today, Aboriginal and Torres Strait Islander communities work hard to keep their heritage alive, but many other groups also value protecting and preserving culture. These include historians, archaeologists, anthropologists, educators, students, public servants, farmers, people in the tourism industry, many members of the public and, sometimes, miners and developers.

As mentioned, Australia has tens of thousands of Aboriginal and Torres Strait Islander heritage sites. More than 6000 of them have been listed as heritage places in the Register of the National Estate. Some sites, including burial grounds and other sacred sites, are closed to the public; others can be visited only by arrangement with the traditional owners. Many other sites have been opened to the public, with the traditional owners acting as guides. Uluru is the best-known example.

Conserving these sites is a huge responsibility but it is very important, because it enables all Australians to appreciate that the land has been home to complex continuing cultures for more than 50 000 years. All prehistoric sites are protected by national, state and territory laws, and it is against the law to damage them in any way.

Two cultural heritage sites, Gariwerd and Burrup Peninsula, and one natural heritage and sacred site, Uluru, are described further in the next sections.

Gariwerd and Burrup Peninsula

Victoria's Grampians National Park is known in the local language as Gariwerd. Its spectacular rock formations contain very rich rock art sites at Billimina, Jaananjini, Manja and other places. These sites depict humans, animals and birds and are believed to be very old.

On the Burrup Peninsula in Western Australia's Dampier Archipelago are possibly millions of rock engravings depicting spirit beings, ceremonies, humans, animals and activities. Engravings of animals that are now extinct prove that these engravings are very old. According to the Ngarda Ngarlie people, ancestral beings created this land, and their spirits still live in its sacred sites. Along with its rock art, the Peninsula also has quarries, fish traps, middens, ceremonial sites and stone arrangements.

SOURCE 1 A rock carving in the Burrup Peninsula area



Uluru

Aboriginal and Torres Strait Islander heritage includes art and all archaeological traces, but it also includes natural sites that are important in the creation stories. Uluru is one of Australia's most famous landmarks. It is also a sacred site to the Aṉangu people, the traditional owners, who believe that it was formed by their spirit ancestors, the Tjukuritja. It features in their creation stories.

Although many tourists who visited the area have climbed Uluru, the Aṉangu do not climb Uluru and they have long preferred that others respect the site by looking at it only from below. In 2019, climbing Uluru was banned, in respect for Aṉangu culture.

SOURCE 2 Uluru, a sacred site



SOURCE 3 Newspaper account of Uluru climb closed permanently as hundreds scale sacred site on final day

The last person permitted to ascend Uluru has reached the base of the climb

Rangers permanently closed the climb at 4:00pm (ACST) and stopped any more people making the trek.

After the closure, Aṉangu traditional owners celebrated at the base of the rock as a new sign was set up notifying visitors the climb was permanently closed.

Almost 34 years to the day since the Aṉangu were handed back the title to Uluru, their wishes that people not climb the rock will now be enforced by law.

…

Traditional owners wanted the climb closed because of Uluru's cultural significance and concerns about safety and the environment.

…

Local Aṉangu ranger Tjiangu Thomas said it had been an important day for the community and the region.

"It's rather emotional, having elders who picked up this long journey before I was born, to close the climb, and now they are no longer here but we are carrying on their legacy," he said.

"Hopefully we can use that momentum and keep moving forward to build a brighter future for this generation and the next generation."

Mr Thomas said he believed a lack of education was predominantly the reason people would still want to climb.

"I'd say to those people, come out with an open mind and heart and immerse yourself in the culture," he said.

But Mr Thomas said he was still disheartened by how many had come to scale the rock in recent weeks, knowing how the traditional owners felt.

"At the end of the day, respect is a choice. Obviously it is disappointing but, compared to the school holidays, today hasn't had very large numbers," he said.

'Today I'm really happy'

A media throng crowded around traditional owners who'd gathered to see the new sign marking the permanent closure.

Elder Nelly Patterson said she was relieved the climb had been closed.

"Really good, I'm really happy," she said to cheers from the crowd.

She said seeing people climb Uluru had been hurtful for Aṉangu.

"I was worrying all the time because a lot of people climb here … go in and make a mess for the toilet and everything, rubbish mess," she said.

"That's why a lot of people pass away, everyone pass away, all the elders people, that's why I worry and today I'm really happy," she said.

"No more climb today … close it. Thank you very much."

…

Uluru is a sacred site and of great spiritual significance to First Australians, and Aṉangu traditional owners say climbing it is not only disrespectful but also dangerous.

Uluru and Kata Tjuta was handed back to the Aṉangu traditional owners on October 26, 1985.

In Uluru's history, at least 37 people have died while climbing and the Uluru-Kata Tjuta National Park board of management said they shared in the grieving process each time a visitor died.

"Tjukurpa [Cultural law and dreaming] requires that Nguraritja [traditional owners] take responsibility for looking after visitors to their country and each time a visitor is seriously or fatally injured at Uluru, Nguraritja share in the grieving process," they said.

The dismantling of the chain and trail is expected to commence over the weekend.

Source: Chelsea Heaney/Samantha Jonscher, ABC News

Resources

Weblink UNESCO World Heritage Sites

15.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 3, 6	Questions 4, 7	Questions 5, 8

Check your understanding

1. What do you think are the reasons for growing interest among all Australians in Aboriginal and Torres Strait Islander heritage?
2. About how many Aboriginal and Torres Strait Islander heritage sites have been listed in the Register of the National Estate?
3. Where would you find Uluru, the Grampians rock art and the Burrup Peninsula (see **SOURCE 1**)?
4. How do you think important cultural sites can be protected?
5. Write a letter to a newspaper or news website explaining the reasons for closing some Aboriginal and Torres Strait Islander heritage sites to the public.

Apply your understanding

6. Read **SOURCE 3** and form small groups to discuss the issues it raises. It is your group task to decide:
   a. the reasons for putting an end to climbing Uluru
   b. the reactions of the traditional owners to the closure.
7. Sometimes heritage sites have been damaged by mining and other kinds of economic activities. Individually or in groups, discuss what should happen in such cases.
8. Uluru is one of hundreds of sites in the world that have been listed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as World Heritage Sites. Use the **UNESCO World Heritage Sites** weblink in the Resources tab to:
   a. examine UNESCO world heritage criteria for ancient sites
   b. select an ancient site in another country and explain why it is important for that site to be preserved and conserved.

For sample responses to every question, go to www.jacplus.com.au.

15.8 Review

15.8.1 Key knowledge summary

15.2 Detective work and archaeology

- Archaeologists use several techniques to find remains of the past.
- The skills of other scientists contribute to discoveries in archaeology.
- Pottery is an important source of archaeological evidence.
- Some archaeological remains survive while others are destroyed.

15.3 How old is it?

- Relative dating techniques help us to know if a source is older or newer than another source.
- We can find the age of many sources using absolute dating techniques.

15.4 Investigating ancient Australia

- Scientists and archaeologists study the record of Australia's ancient past in sites such as Lake Mungo.
- The oral history of Aboriginal and Torres Strait Islander peoples has also left a record of the ancient world in the form of stories passed down through the generations.
- Museums work with traditional communities to give meaning to the artefacts they have in their collections.

15.5 Conserving the past

- The ancient river bed of Lake Mungo in New South Wales has provided evidence of the oldest known funeral practices anywhere in the world.
- Aboriginal and Torres Strait Islander communities play an important role in the conservation and cultural appreciation of archaeological sites like Lake Mungo.

15.6 The role of museums

- A museum has three main functions: to obtain items to display, to exhibit and preserve these items, and to provide public support such as guided tours and educational services.
- The National Museum of Australia is focused on conserving evidence of Australia's social history.

15.7 Conserving the heritage of ancient Australia

- Australia has tens of thousands of Aboriginal and Torres Strait Islander heritage sites, including Gariwerd, Burrup Peninsula and Uluru.
- Conserving these sites is a huge responsibility but it is very important.

15.8.2 Key terms

absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating)
anthropologist someone who researches the appearance and features of the life of prehistoric people and the connections they had with other human populations
artefact an object made or changed by humans
conservation the preservation and protection of artefacts or relics from damage or decay
conservators specially trained people who clean, care for or repair artefacts for display in a museum or gallery
curators people who look after a museum collection
the Dreaming the English word used to label the systems of beliefs about life, culture and spirituality of Australian First Nations peoples.
geologist someone who studies the sediments and landforms associated with ancient campsites
lore the customs and stories that came from the Dreaming
heritage everything that has come down to us from the past
palaeontologist a scientist who studies fossils
quarry an excavation or pit from which stone or building material is cut

radiocarbon dating a way of dating objects of plant or animal origin according to the amount of carbon left within them

relative dating techniques methods used to assess whether something is older than something else (e.g. stratigraphy, fluorine dating)

sediment the material that settles at the bottom of a liquid

shell midden a mound of shells and other waste material marking the site of an ancient community

site a place where there are traces of past human activity

strata (singular: stratum) distinct layers of material beneath the ground, built up over time, that provide information for archaeologists and geologists

15.8.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview.

What clues can we follow to learn about the past?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views

15.8 Review exercise

Multiple choice

1. How is the work of historians like that of detectives?
   - **A.** Historians solve crimes.
   - **B.** Historians are always right.
   - **C.** Historians never make mistakes.
   - **D.** Historians gather evidence from sources and interpret that evidence.
2. Which of the following best describes archaeological sources?
   - **A.** Artefacts, works of art and constructions from the past
   - **B.** Old documents
   - **C.** Anything found underground
   - **D.** Old buildings
3. Why is pottery very useful as archaeological evidence?
   - **A.** A lot of pottery can still be found.
   - **B.** It was sold in pottery shops.
   - **C.** Particular pottery styles can be identified with different ages.
   - **D.** It was the same in all ancient societies.
4. Scientific methods of dating remains from the past include which of the following?
   - **A.** Palm reading and horoscopes
   - **B.** Seeing how old they look
   - **C.** Chemistry and geology
   - **D.** Radiocarbon dating and stratigraphy
5. In an archaeological dig, older objects will generally be found where in relation to newer objects?
   - **A.** At the same level
   - **B.** Lower
   - **C.** Higher
   - **D.** In any position

6. During the Ice Ages people could walk much of the journey from South-East Asia to Australia because the ocean level dropped up to how much below the present level?
   - **A.** 10 metres
   - **B.** 1 kilometre
   - **C.** 160 metres
   - **D.** 10 kilometres
7. What do the sources we have for ancient Australia include?
   - **A.** Papyrus, rock art and pottery
   - **B.** Rock art and historical ruins of buildings
   - **C.** Statues and other rock art
   - **D.** Oral traditions and archaeology
8. What is Lake Mungo the site of?
   - **A.** The largest ceremonial grounds found
   - **B.** The most remote communities
   - **C.** The oldest known cremation site in the world
   - **D.** The most complex rock art in Australia
9. What are the three main functions of a museum?
   - **A.** Preserve, display and protect our culture
   - **B.** Obtain items to display, exhibit and preserve these items, and provide public support
   - **C.** Obtain items to display, preserve them and protect them from the public
   - **D.** Exhibit items, sell items and conduct public tours
10. How many existing heritage sites does Australia have?
    - **A.** Tens of thousands
    - **B.** Five thousand
    - **C.** Several hundred
    - **D.** 7500

Short answer questions

Imagine a team of archaeologists has just unearthed the sculptures you can see in **SOURCE 1**. After months of careful digging they have come upon this remarkable find — eight pieces of sculpted stone. They are dirty and worn and obviously very old.

11. What clues and techniques might the archaeologists have used to locate the site at which they found these sculptures?
12. What would they have had to do before beginning to dig?
13. These sculptures are made of stone, but if they were found alongside pottery how would that help archaeologists to work out how long ago they were created?

SOURCE 1 Ancient relief sculptures (created by chiselling the face of a piece of stone) found in Syria, in the Middle Wast



14. If they were found in a layer that contained charcoal, what dating technique could be used to discover how old they are?
15. As a historian, you want to use this find as evidence for an investigation of the ancient society that made them. Using the skills you have learned in this topic, try to answer the following questions.
    a. Describe what is depicted on each of the stones (except for the worn stone at the top right).
    b. Which of these scenes provides evidence about conflict?
    c. Which of these scenes provides evidence about other aspects of life in this ancient society, and what aspects are they?
    d. Form a hypothesis about this society based on the evidence in these sculptures. For example, you could begin with: 'This appears to have been a warlike society because the sculptures show …'
    e. Why is it impossible for these sculptures to give us a complete picture of this ancient society?
    f. What other kinds of evidence might help fill some of the gaps in our knowledge of these people?

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4291)
Reflection ewbk-4393
Crossword (ewbk-4392)
Student learning matrix (ewbk-4389)

Interactivity Ancient Australia crossword (int-7692)

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 15 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

15.1 Overview

Video eLesson
- Investigating the past (eles-1057)

15.2 Detective work and archaeology

eWorkbook
- What happened here? (ewbk-4569)

15.3 How old is it?

eWorkbook
- What happened when? (ewbk-4390)

15.6 The role of museums

Weblink
- National Museum of Australia

15.7 Conserving the heritage of ancient Australia

Weblink
- UNESCO World Heritage Sites

eWorkbook
- To climb or not to climb (ewbk-4391)

15.8 Review

Interactivity
- Ancient Australia crossword (int-7692)

eWorkbook
- Reflection (ewbk-4393)
- Crossword (ewbk-4392)
- Student learning matrix (ewbk-4389)

To access these online resources, log on to **www.jacplus.com.au**.

16 Ancient Egypt

16.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Perplexing pyramids and mysterious mummies. What were the ancient Egyptians thinking?

16.1.1 Links with our times

Modern Egypt is one of the world's poorer countries. Unlike several other neighbouring nations, it lacks oil and other natural resources. Despite such disadvantages, until recently, vast numbers of visitors flocked to Egypt to marvel at traces of its glorious ancient past. They looked in awe at the pyramids at Giza and the royal tombs in the Valley of the Kings; they puzzled over questions such as why the ancient Egyptians were so fascinated by death and how the mighty pyramids were built without any modern construction devices.

When Egypt erupted in political conflict in early 2011, visitor numbers fell dramatically. Egypt is now considered a very volatile place. There have been many oppressive acts by its authorities, violent clashes between protestors and police and soldiers, and several terrorist attacks. However, thanks to improvements in security, there are signs that Egypt's tourism economy is recovering, with visitor numbers increasing since 2017. And, despite great dangers, archaeologists have continued the exciting work of discovering Egypt's tombs, mummies and other clues about the fascinating ancient history of this land.

Resources

eWorkbook	Customisable worksheets for this topic (ewbk-4292)
	Ancient Egypt Timeline exercise (ewbk-4571)
Video eLesson	Ancient Egypt (eles-1835)

SOURCE 1 The Sphinx is part of Egypt's amazing ancient past.



int-4293

SOURCE 2 A timeline of ancient Egypt











BCE

5000

4500

4000

3500

3000

2500

2000

1500

1000

500

BCE CE

CE

c. 5000–3100
People settle along the Nile and learn to use bronze. At least two separate states develop.

c. 3100
King Narmer unites Egypt. The Archaic period, also called Early Dynastic Period (to c. 2686 BCE), begins.

c. 2551–2528
Khufu rules.
The Great Pyramid is built.

c. 2686–2181
The Old Kingdom: a long period of peace and order

c. 2181–2025
The First Intermediate Period: a time of disorder and division as rival leaders fight for control

c. 2025–1650
The Middle Kingdom: Egypt is united under strong rulers. Nubia is conquered.

c. 1650–1550
Second Intermediate Period: the Hyksos invade and occupy Egypt.

c. 1550–1069
The New Kingdom: the Hyksos are driven out. Egypt dominates neighbouring lands.

c. 1479–1458
Hatshepsut rules.

c. 1279–1212
Rameses II rules.

c. 1069–332
The Late Dynastic Period: Egypt is invaded and ruled in turn by Nubians, Assyrians and Persians.

c. 332–30
Alexander the Great conquers Egypt. One of his generals founds the Ptolemaic Dynasty. The Ptolemaic Period lasts until Rome takes over.

30
Romans take control of Egypt.

16.2 Examining the evidence

LEARNING INTENTION

By the end of this subtopic, you will be able to describe useful archaeological and written sources for ancient Egypt and explain the gaps in our knowledge.

16.2.1 How do we know about ancient Egypt?

As you study the pictures in this subtopic, you will notice many clues about life in ancient Egypt. This is because the ancient Egyptians left a huge amount of primary source evidence behind them. As in Mesopotamia, most Egyptian houses were made of mud bricks so they left few traces, but their pyramids, temples and tombs were made of stone. The pyramids and tombs of Egyptian kings and nobles contained mummies and brilliant artworks, including statues of gods, models and wall paintings. Many of these are very well preserved. There are also colossal stone statues of pharaohs and magnificent painted wall panels.

Ancient Egyptian written primary sources

Egyptians used writing, in the form of symbols called hieroglyphs, from about 3100 BCE. However, from the fourth century to the nineteenth century CE no-one knew how to read ancient Egyptian! Thanks to the discovery of the Rosetta Stone in 1799 and the dedicated work of two nineteenth-century scientists, the code was broken and scholars can now read the many primary source records of ancient Egypt (see subtopic 16.8).

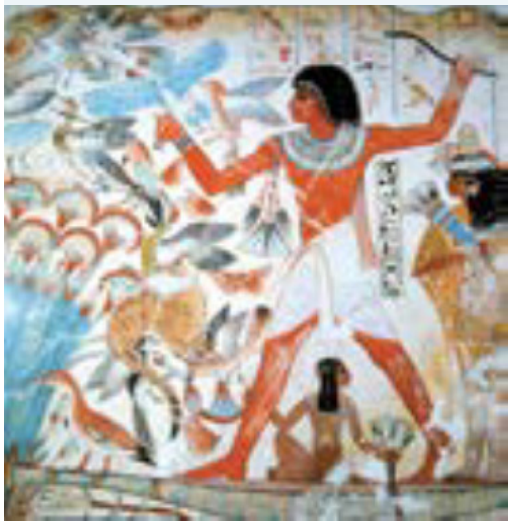
SOURCE 1 The gold mask found covering the face of the mummy of the New Kingdom pharaoh Tutankhamen



SOURCE 2 A painted limestone panel showing the great New Kingdom pharaoh Rameses II striking bound prisoners of war



SOURCE 3 A wall painting from the tomb of Nebamun at Thebes (c. 1400 BCE), showing him hunting birds in the marshes with a throwing stick. With him are his wife, daughter and cat.



Ancient secondary sources

Some ancient written sources on Egypt are actually secondary sources. This is because they were written a long time after the events they describe. Among them are the writings of the Greek historian Herodotus (c. 484–420 BCE), who travelled to Egypt to gather information. They also include the surviving pages of a history of Egypt written by an Egyptian priest called Manetho around 300 BCE.

16.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 5	Questions 6, 7, 8	Questions 9, 10

Check your understanding

1. What are some examples of primary sources that have survived from ancient Egypt?
2. Why have some primary sources, such as the Egyptian pyramids and wall paintings, survived while others have left few traces?
3. Why don't historians consider ancient written sources by, for example, Herodotus and Manetho to be primary sources for ancient Egypt?
4. When was the Rosetta Stone discovered?
5. What was most significant about the discovery of the Rosetta Stone?

Apply your understanding

6. Look closely at **SOURCE 1** and explain what it can tell us about the wealth and power of the rulers of ancient Egypt.
7. Study **SOURCE 2**.
   a. Describe the main features of this painted panel.
   b. How can you tell that the men on the left are prisoners?
   c. Why do you think the pharaoh is depicted as being much bigger than his captured enemies?
   d. Why do you think an Egyptian ruler would want to be shown killing his prisoners?
8. Look very closely at **SOURCE 3**.
   a. Describe the details of the painting.
   b. What are the people standing on?
   c. What is Nebamun using to hunt birds?
   d. Compare and contrast this weapon with an Aboriginal and Torres Strait Islander boomerang.
   e. What might we learn from this painting about a favourite Egyptian pastime?
9. For which social classes do **SOURCES 1**, **2** and **3** provide evidence? Why do you think we have much more evidence for them than for the common people of Egypt?
10. Write a summary of all you have discovered about ancient Egypt from these three sources.

For sample responses to every question, go to www.jacplus.com.au.

16.3 The gift of the Nile

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the geographical features of Egypt and explain how the natural environment influenced the development of Egypt's civilisation.

16.3.1 Floods and irrigation

Like many other ancient civilisations, Egypt developed along a river — the Nile. The waters of the Nile are what made civilisation possible in Egypt's hot, dry, sun-baked land. The Nile is formed by the joining of two rivers, the White Nile and the Blue Nile, which flow north from the wet highlands of central Africa. The Nile flows through the deserts and finally empties through a long **delta** into the Mediterranean Sea. The people of ancient Egypt lived in 'the Black Lands', the river's floodplain. These parts of the land were covered by water whenever the Nile flooded.

SOURCE 1 From *The Histories*, written by the ancient Greek historian Herodotus, who visited Egypt in 475 BCE

… it is clear to any intelligent observer … that the Egypt to which we sail nowadays is … the gift of the Nile … When the Nile overflows, the whole country is converted into a sea, and the towns, which alone remain above water, look like islands. At these times water transport is used all over the country instead of merely along the course of the river.

Each year, between June and September, heavy rains in central Africa caused the Nile to flood. The annual flooding provided a layer of fertile soil. Without this flooding, civilisation would not have developed in Egypt. People began to live along the Nile from about 5000 BCE. Its waters, the plants that grew in the soil on its banks, and the birds, fish and mammals that lived around it provided all that they needed (see **SOURCE 3** in subtopic 16.2). They domesticated cattle, sheep, goats and geese and grew crops in the floodplains.

The river provided reeds to make boats, roofs, baskets and **papyrus**, and a transport route for people and goods. The annual flooding also helped set Egypt's calendar. The **Inundation**, the period of flooding, was regarded as the start of each year.

To use the Nile's waters more efficiently, the Egyptians invented a way of irrigating their crops by lifting the water from the river and moving it through ditches in their fields. To do this they used a bucket device called a **shadoof**, a method that is still used today. Most importantly, irrigation enabled a smaller part of the population to produce enough food for the whole population. This freed others to do more specialised work.

delta low, triangular area where a river fans out as it nears the sea

papyrus paper made from crushing reeds

Inundation the seasonal flooding of the Nile

shadoof irrigation device used to lift water from the river

DID YOU KNOW?

Away from the floodplain of the Nile, 90 per cent of Egypt is desert. The arid deserts provided little to sustain the Egyptians, but deserts were difficult to cross and for centuries they helped Egypt to develop its civilisation without the constant threat of foreign invasion.



SOURCE 2 Ancient Egypt — its main geographical features and key sites



Source: Map drawn by MAPgraphics

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- Overview > **Early river civilisations**
- Overview > **Early urban civilisations**

16.3 ACTIVITY

Working in small groups, suggest reasons why it would have been impossible for a civilisation like ancient Egypt to have developed in a country like Australia. (*Hint*: Does Australia have rivers that flood each year? Does Australia have native plants and animals that could be domesticated?) **HASS skills: Questioning and researching**
History concept: Cause and effect

16.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4	Questions 2, 5, 6	Questions 7, 8, 9, 10

Check your understanding

1. Complete the following sentences by choosing the correct words from the alternatives in brackets:
   a. The Nile is formed by the joining of two rivers, the (Green/White) Nile and the (Blue/Black) Nile.
   b. Ancient Egyptians lived in the (deserts/floodplains).
   c. The Inundation was the period of (drought/flooding).
   d. Egypt's natural defences were provided by (mountains/deserts).
2. Suggest why the lands along the Nile's floodplain were called 'the Black Lands'.
3. Read **SOURCE 1**. What do you think Herodotus meant when he called the civilisation of ancient Egypt 'the gift of the Nile'?
4. Explain how ancient Egyptians irrigated their crops.
5. In approximately what year did people begin to live along the Nile?

Apply your understanding

6. Read **SOURCE 1**. Make a list of other ways in which the flooding of the Nile affected the lives of the ancient Egyptians.
7. Using **SOURCE 2**, locate the delta of the Nile and describe its shape and the geographical features that would have made it a good place for farming.
8. In what sense can the Nile be considered to have contributed to Egypt's success in developing a civilisation?
9. Explain how cultivating plants and domesticating animals would have transformed the lives of people living along the Nile.
10. According to **SOURCE 2**, where is the earliest evidence of human settlement along the Nile and when does it date from?

For sample responses to every question, go to www.jacplus.com.au.

16.4 The people of Egypt

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- describe the way in which ancient Egyptian society was structured into different social classes
- explain what everyday life was like for Egyptians
- identify how the lives of Egyptian women differed from the lives of men.

16.4.1 The structure of ancient Egyptian society

Ancient Egyptian society was layered like a pyramid (see **SOURCE 1**). At the top was the pharaoh, who was considered both a king and a god. Beneath him was the vizier (prime minister) who was in charge of almost everything. Next in importance were the nobles, priests, officials and scribes. Then there were the common people, peasants and slaves.

SOURCE 1 A social pyramid showing where each class ranked in ancient Egypt



Nobles, priests, officials and scribes

Nobles formed a wealthy class in ancient Egyptian society. These landowning families lived privileged lives while their large estates were farmed by peasants and labourers. Priests controlled the temples and this role gave them enormous power. The work of administering Egypt and ensuring that the pharaoh's wishes were carried out was done by officials. Most high officials were nobles but some were common people who worked their way up as scribes. Egypt's many scribes, like the man in **SOURCE 2**, ranked below the ruling classes of nobles, priests and officials but above the common people. Because they had been trained to read and write, scribes were employed to keep state records including taxes.

The ordinary people

Among the common people, **artisans** formed a large group. Young men learned their craft from their fathers. Craftsmen included:

artisans skilled craftspeople

- stonemasons, who made temples, tombs, statues and monuments
- painters, who decorated temples, tombs, coffins and canopic jars
- woodworkers, who carved furniture and other objects
- wigmakers, who made wigs and false beards
- metalworkers
- weavers
- musical instrument makers
- paper makers, who made sheets of papyrus
- jewellers.

Because money was not used in Egypt until the fourth century BCE, craftsmen were paid in food and beer.

Among the more prosperous commoners were merchants, who conducted trade. Peasants were by far the largest group. They were mostly tenant farmers who worked the land owned by the pharaoh, priests and nobles. Most of what they produced went to their landlords or was paid to the state in taxes. Usually their lives were an unchanging cycle of ploughing, planting, harvesting and other farm work.

During the flood they were sometimes expected to labour on the construction of pyramids, temples or the pharaoh's other building projects. There were also many labourers, servants and some slaves.

SOURCE 2 A scribe sitting with a papyrus on his lap. It took 12 years of study to become a scribe. This statue depicts Nespekasut, a senior scribe of Karnak, in Upper Egypt.



SOURCE 3 An Egyptian papyrus depicting farming work



DISCUSS

It has been estimated that at least 95 per cent of ancient Egyptians were illiterate. This percentage probably included all Egyptians below the rank of scribe. Discuss what problems this would pose for historians trying to discover the thoughts and feelings of ordinary Egyptians. **General capability: Critical and creative thinking**

16.4.2 Everyday life

All houses were made of mud bricks, but while nobles lived in great houses, artisans, peasants and labourers lived in simple huts. Their furniture was made of wood and rushes, and they stored food in pottery jars. From the evidence in sculptures and wall paintings, we know quite a lot about people's appearance. Men are depicted wearing tunics or kilts. Women are shown wearing straight dresses (see **SOURCE 4**).

SOURCE 4 A painted limestone statue of a woman, called Merseankh, and her husband, Raherka, from about 2500–2350 BCE



The same sources tell us that Egyptians took part in hunting, enjoyed music and dancing, and played several kinds of board games (see **SOURCE 5**). Children appear to have been valued and loved; they were seen as the main reason for marriage.

Food and drink

Ordinary Egyptians ate simple foods. They ate bread, onions and other vegetables, with occasional fish or meat, and drank beer. The ruling classes, however, enjoyed much more. In the tomb of one noblewoman, archaeologists discovered a meal that was meant for the **afterlife**. It consisted of porridge, fish, pigeon, quails, beef, bread, fruits, berries and cheese, with wines and beer to accompany the meal.

afterlife life after death

SOURCE 5 This ancient Egyptian game box from c. 1400–1200 BCE includes a playing board and a drawer to hold playing pieces.



Stories, rituals and festivals

Stories played a big part in people's lives. The Egyptians shared myths about their gods, tales of travel and adventure, and stories designed to teach wisdom. Their religion featured many rituals and festivals. In the villages, people worshipped their favourite gods at local shrines. At home, families worshipped at household shrines. In the temples, priests performed rituals. Temples, believed to be the dwellings of gods, were not public places. However, during festivals the ordinary people were permitted to take part in temple rituals. These festivals ranged from local celebrations to national events. Among them was the Festival of Opet, in which sacred barges were towed up the Nile while crowds applauded and danced along the river banks.

DID YOU KNOW?

Ancient Egyptians seasoned their food with salt and sweetened it with honey. Discoveries of children's toys from ancient Egypt include models of animals, dolls with movable legs and arms, leather balls and spinning tops.

16.4.3 Everyday lives of women in ancient Egypt

Women in ancient Egypt did not have the same rights as men. In all lower-class families, women were responsible for preparing food, including making bread and beer, and caring for children. In peasant families, they also worked in the fields. They were usually not taught to read and write. Apart from work as singers, dancers, musicians, servants, nurses and funeral mourners (people paid to weep and wail at funerals), few careers were open to women. Despite this, they had more freedom than in most other ancient societies, where women were treated as the property of men.

SOURCE 6 Mourners painted on the tomb of the vizier Ramoseh



Upper-class women

In ancient Egypt, a woman's rank in society depended on her husband's rank, but high status could also be achieved by the mother of a high-ranking son. Wives and daughters of pharaohs and nobles led privileged lives with fine clothes and many servants. By the beginning of the New Kingdom, about 1550 BCE, such women could inherit, own and sell property. They could work as part-time priestesses and decide whether to marry or divorce. However, marriages between wealthy families were often treated as business arrangements and some wealthy men had several wives. Frequently pharaohs married their own sisters but they had other wives as well.

Some upper-class women became high officials. A woman named Nebet became vizier under Pharaoh Pepy I. Another upper-class Egyptian woman who had great influence was Nefertiti. She was the main wife of Pharaoh Akhenaten (ruled c. 1351–1336 BCE). Queens were less important than pharaohs, but images depict Nefertiti as a very beautiful queen who accompanied her husband at ceremonies and on official occasions. Some images even show her in a war chariot.

SOURCE 7 From a New Kingdom love poem in which the poet expresses his feelings for a woman he has been parted from for a week

She is more to me than the collected writings …

When I see her, then I am well.

If she opens her eye, my body is young again;

If she speaks, then I am strong again;

When I embrace her, she drives all evil away from me …

But she has gone forth from me for seven days!

DID YOU KNOW?

Upper-class women in ancient Egypt possessed a great range of cosmetics and jewellery. Items found include pots for holding kohl (eye shadow), hair curlers, hair tweezers, combs, cosmetics boxes, rings, bead necklaces and collars, amulets, and palettes and stones for grinding cosmetics.

SOURCE 8 Bottles like these were used to hold eyeliner.



Hatshepsut — a very significant woman

Only a few queens ever ruled in their own right. The most famous of those queens was Hatshepsut. If a pharaoh died while the heir to his throne was still very young, the highest-ranking royal wife could act as regent (someone who rules on behalf of the heir until he is old enough to take the throne). Hatshepsut became regent because, when her husband (and brother) Pharaoh Thutmose II died, Thutmose III, the heir to the throne, was only three years old. A few years later she had herself crowned as pharaoh. She ruled Egypt from about 1479 to 1458 BCE and appears to have led Egypt's armies in at least one war.

16.4 ACTIVITY

Look closely at the mourners in **SOURCE 6**. Working with a partner, design an advertisement for the job of an ancient Egyptian mourner.

HASS skills: Communicating and reflecting
History concepts: Sources, Evidence

16.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 7, 8, 12	Questions 2, 4, 6, 10, 13	Questions 5, 9, 11, 14, 15, 16

Check your understanding

1. What was the role of a vizier in ancient Egypt?
2. What were the sources of the power of nobles and priests?
3. Name three types of artisans. Suggest which artisans might have been regarded as most important and why.
4. Explain how the housing of ordinary Egyptians was different from that of the nobles.
5. Describe the differences between the food and drink of ordinary Egyptians and that of the ruling classes.
6. What did Egyptians do for recreation?
7. What careers were open to women in ancient Egypt?
8. How much equality did women have with men within:
   a. lower-class families
   b. the upper classes?

Apply your understanding

9. Look at **SOURCE 2**. Describe how this scribe is portrayed.
10. Explain how a person may have become a scribe.
11. Study **SOURCE 3**. Describe what is happening in this scene and explain what evidence it provides for the everyday lives of the peasants
12. Using **SOURCE 1** and other information from this subtopic, identify barriers that existed to moving upwards in ancient Egyptian society and how people lower down the social scale might have felt about such barriers.
13. Look very closely at **SOURCE 4**. What can this source tell us about everyday life in ancient Egypt?
14. Why is **SOURCE 4** useful as evidence for everyday life in ancient Egypt?
15. Look closely at the mourners in **SOURCE 6**. Analyse this source to explain what it can tell us about ancient Egyptian society and women's roles in it.
16. Using **SOURCES 6** and **7** as your evidence, form a hypothesis about relationships between men and women in ancient Egypt. What other kinds of evidence would you need to support your conclusions?

For sample responses to every question, go to www.jacplus.com.au.

16.5 Pharaoh rules!

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the way that pharaohs came to power and explain their powers and responsibilities.

16.5.1 King Narmer and the rise of the pharaohs

The wealthiest, most powerful person in ancient Egypt was the pharaoh. He had the support of an army and a host of priests, scribes and officials, but the pharaoh alone decided how Egypt would be ruled. The people saw him as a god.

SOURCE 1 The king of Upper Egypt wore a white crown and the king of Lower Egypt, a red crown. Narmer's crown was said to be a mix of both, signifying a united Egypt.



Ancient Egypt was once divided into two kingdoms — Upper Egypt and Lower Egypt. Each was ruled by a king. The king of Lower Egypt had his capital in Buto, and the king of Upper Egypt ruled from Hierakonpolis. Around 3100 BCE it is thought that these kingdoms were united under King Narmer. He set up his capital in Memphis.

During the next 2700 years, Egypt's history was divided into a number of distinct periods. Three of the more important of these — times when Egypt was united and powerful, with a rich culture — are called the Old Kingdom, the Middle Kingdom and the New Kingdom.

During these three kingdoms, Egypt's rulers (eventually called pharaohs) came from some 30 dynasties. When a pharaoh died, his eldest son became the next pharaoh, unless a man from another family seized control and started a new dynasty. Sometimes the pharaoh's wife or eldest daughter ruled for a time if the eldest son was very young.

16.5.2 Power and responsibility

Heavenly powers

The ancient Egyptians saw their pharaoh as a man with supernatural powers. He was believed to descend from the sun god, Amun-Ra, and to have the sky god, Horus, living within him.

Egyptians believed that the laws the pharaoh made applied to the whole universe. They believed he made the Nile River flood and helped the land to produce good harvests. As a mark of respect, they did not call him by his name. Rather, they used the word 'pharaoh', which in ancient Egyptian meant 'great house'.

Earthly responsibilities

The people of ancient Egypt expected their pharaoh to protect and feed them, and to maintain a fair justice system and a peaceful society. He drew up the laws of the land and controlled the government and the army. In artworks, he was often portrayed as a military hero (see **SOURCE 3**). Exactly what laws the pharaohs made for their people is something for which we have very little evidence. No written code of laws has survived from ancient Egypt. Nor is there any evidence of a system of law courts. Rather, law cases appear to have been judged by officials who had many other responsibilities.

SOURCE 2 A gold emblem showing Pharaoh Tutankhamen returning from war. This was just one of many priceless objects found in his tomb.



SOURCE 3 The pharaoh's power was evident in his appearance. He wore a false beard and a bull's tail (symbols of pharaonic power), and carried a flail (symbol of Osiris) and shepherd's crook (hieroglyphic sign for a crook meant 'king').



He was also in charge of temple building, tax collection, mines, irrigation, trade, important religious ceremonies and the appointment of officials and priests. His huge wealth came from the labour and produce that the people provided as their taxes. Thousands of ordinary people worked the huge farms he owned or helped in the running of his palace. There they worked as cooks, cleaners, dancers, stable workers, craftsmen, weavers and wigmakers.

DID YOU KNOW?

Relief carvings show that after battles Egyptian soldiers cut a hand off the body of each dead enemy. These were then heaped into piles, counted by scribes and included in the records to glorify the pharaoh's victories.

An obedient, contented society?

Inscriptions and paintings in tombs of pharaohs and officials depict a harmonious society in which ordinary Egyptians worked contentedly in the fields or at their skilled crafts under the rule of the pharaoh. It was an image of a stable society in which everyone accepted their place and never questioned those above them. But how realistic was this?

Some text inscribed on pieces of pottery tell a different story. It is the story of the world's first recorded industrial dispute and it took place during the reign of Pharaoh Rameses III. It tells of tomb builders walking off the job of constructing the royal tomb after the officials in charge failed to pay them the food and supplies to which they were entitled.

SOURCE 4 An ancient scribe's record of the strike of workers employed to construct and decorate the tomb of Rameses III

[The] gang walked out [of the tomb] because they were hungry; there is no wood, no vegetables, no fish. So they went to consult the magistrate … who declared, '[the people of the Tomb]' are in the right.

DISCUSS

SOURCE 4 describes a tomb builders' strike. Explain how our understanding of ancient Egypt might be very different if we did not have the evidence of this strike. **General capability: Critical and creative thinking**

16.5 ACTIVITIES

1. A popular view of ancient Egyptian society until relatively recent times was one of harsh rulers and downtrodden slaves who worked in the fields and on building projects such as the pyramids. That view came from the Old Testament of the Bible and early twentieth-century Hollywood movies. It is contradicted by almost all reliable evidence from primary sources.

   The contrary view is that Egypt was a harmonious and generally stable society in which peasants toiled contentedly in the fields or on the Pharaoh's building projects, and craftsmen obediently carried out their work. This interpretation is supported by primary source evidence. However, **SOURCE 4** gives at least one counter- example that supports a slightly different interpretation. That example comes from an inscription on pottery, which records the first known industrial dispute in history. It occurred during the reign of Rameses III, when tomb builders went on strike after officials failed to pay them the food and supplies they were owed.

   In small groups, role-play the discussions among the workers that led to the strike. Discuss the role of the historical context and experience of the workers in reaching their decision to take industrial action.

   General capability: Ethical understanding

2. Use the internet to locate images of some of the pharaohs' treasures. Several museums hold such objects and you can view them online. Present two images to the class with an explanation of their importance in representing the power of the pharaohs. **History concept: Significance**

16.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5	Questions 2, 6, 7	Questions 4, 8, 9, 10

Check your understanding

1. Fill in the gaps in this passage.
   It is thought that King Narmer united Egypt in _____ BCE and set up a new capital in _____. In Egypt's long history, the three periods called kingdoms were times when the country was _____ and _____.
2. How did someone become a pharaoh?
3. In what ways did ancient Egyptians associate their pharaoh with gods?
4. What was the source of the pharaoh's wealth?
5. Create a mind map to outline the powers and responsibilities of a pharaoh.

Apply your understanding

6. Examine the timeline in subtopic 16.1.
   a. Find the years during which each of the following periods existed: the Old Kingdom, the Middle Kingdom and the New Kingdom.
   b. Explain how the other periods were different to these three kingdoms.
7. Explain how and why Narmer's crown (**SOURCE 1**) combined features of the crowns of Lower Egypt and Upper Egypt.
8. Explain what conclusions you can draw from **SOURCES 1**, **2** and **3** about the way that pharaohs wanted to be seen and thought of by their people.
9. Analyse **SOURCE 4** using the following questions.
   a. For what event does this source provide evidence?
   b. What were the grievances of the striking tomb workers?
   c. How do you think the workers regarded the pharaoh's officials who were responsible for paying them?
10. How does **SOURCE 4** contradict the image in other ancient Egyptian sources of an unchanging, contented society?

For sample responses to every question, go to www.jacplus.com.au.

16.6 Gods and the afterlife

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the many ancient Egyptian gods and explain the people's belief in an afterlife that could be reached only by following complicated preparations.

16.6.1 The journey to the afterlife

Death was a very important event for ancient Egyptians. It connected life on Earth with life ever after, so a lot of effort was spent preparing for it. This focus on death has been valuable to historians, because most of what we know about ancient Egypt comes from what has been found in tombs. Many of the **deities** of ancient Egypt, whether good or bad, played a role in a person's journey to the afterlife.

The ancient Egyptians believed the next world was a fantastic place. However, it was a long way away, and reaching it was not easy. First, the dead person had to cross a wide river. Then he or she had to chant secret spells to get through seven gates guarded by fierce monsters, all the while looking out for traps set by evil gods and attacks by savage crocodiles and venomous snakes. Then the dead person's heart was weighed on scales against a feather to see if it was 'heavy with sin'. Forty-two judges decided the outcome.

Preparing for the journey of the soul

The ancient Egyptians believed that a dead person had a number of souls. Two of these were the *ka* and the *ba*. The ka, the person's life force, stayed within the tomb, getting strength from the food and drink left there. The ba, the person's character, set off on its journey towards the afterlife, returning to the tomb to rest each night. To do these things, the soul needed a body. So dead people's bodies were carefully preserved, or embalmed, so they did not rot. An embalmed body is called a **mummy**.

deities gods or goddesses
mummy body that has been embalmed

SOURCE 1 Scenes from the *Book of the Dead of Hunefer*, which dates from around 1310 BCE. It is painted on papyrus. The Egyptians made books of the dead to protect their owners from the perils of the journey to the afterlife. If a heart was found to be 'as light as a feather', its owner joined the god Osiris in the afterlife. If heavy, it was chewed up by a monster god that was a cross between a lion or cheetah, a hippopotamus and a crocodile.



Mummies were buried with lots of the possessions the person's soul might need in the afterlife. They included food and drink, clothing, perfume, furniture, jewellery and special charms called **amulets**. Sometimes small wooden or stone figures representing servants doing activities such as making bread, ploughing a field or sailing a ship were placed in tombs. As well, prayers, hymns and magic spells from the 200 such texts in the *Book of the Dead* were often written on a scroll of papyrus and buried with the mummy or carved in hieroglyphs on the walls of the tomb. These texts were thought to protect the soul from evil and guide it through the afterlife.

SOURCE 2 The figurines were thought to come to life in the tomb and carry out the wishes of the dead person.



After a dead person's body was mummified, a funeral ceremony was held. The body was carried in a boat across the Nile and buried on the western bank, where the sun set. This was the direction in which the next world was believed to lie. Important people, such as pharaohs, were buried in elaborate underground tombs consisting of many rooms and tunnels. Poorer people were buried in the hot, dry sands to help preserve their bodies.

amulet charm believed to protect against evil

16.6.2 The gods of the ancient Egyptians

There were many deities in ancient Egypt, each looking after some particular area of people's lives. For example, the god Hopi was responsible for the Nile River. Some gods were portrayed as humans and some as animals. Others were a mixture of both — usually animal heads on human bodies.



Anubis



Osiris



Horus



Hathor



Thoth

Name of god	Responsibility	Associated animal or symbol
Amun-Ra	God of creation; god of the sun and king of the gods	The sun
Osiris	God of the dead; god of the afterlife; a judge in the underworld	Pharaoh mummy
Seth	God of confusion and chaos	Hippopotamus
Isis	Mother goddess; goddess of fertility; wife of Osiris	Woman wearing a throne as a crown
Horus	God of the sky; guardian of the pharaoh	Falcon
Hathor	Goddess of beauty and love; goddess of the sky	Woman with cow horns on her head
Thoth	God of the scribes; god of wisdom and knowledge; god of time	Man with the head of an ibis
Anubis	God of embalming; god of tombs and burials	Man with the head of a jackal

SOURCE 3 Herodotus observed how important cats were to the ancient Egyptians. They were thought to protect people's homes. It is no wonder they were chosen as one of the animals to be associated with a god.

What happens when a house catches fire is most extraordinary: nobody takes the least trouble to put it out, for it is only the cats that matter; everyone stands in a row, a little distance from his neighbour, trying to protect the cats, who nevertheless slip through the line, or jump over it, and hurl themselves into the flames. This causes the Egyptians deep distress. All the inmates of a house where a cat has died a natural death shave their eyebrows…



16.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6, 9	Questions 4, 5, 7	Questions 2, 8, 10, 11

Check your understanding

1. Beginning with 'Step 1: The dead person's body was embalmed', list in chronological order each step it was believed an ancient Egyptian had to take to reach the afterlife.
2. Explain why ancient Egyptians made books of the dead.
3. What was the difference between the ka and the ba?
4. Why were mummies buried with possessions?
5. Which Egyptian deity (god) was linked to each of these animals: jackal, hippopotamus, falcon, ibis?
6. In what ways were the gods Anubis and Osiris particularly important in the journey to the afterlife?

Apply your understanding

7. Analyse **SOURCE 1** using the following questions.
   a. The figure on the far left is the dead person. Which of the steps you listed in answering question 1 is shown in this source?
   b. What is the god with the jackal's head weighing on his scales?
   c. Why is he doing this?
   d. According to ancient Egyptian beliefs, will this dead person's soul be allowed to enter the next world?
8. Explain why the figurines in **SOURCE 2** would have been placed in a tomb.
9. According to Herodotus, **SOURCE 3**, how did ancient Egyptians regard cats? Why might they have been associated with the gods?
10. Using the sources and other information in this subtopic, identify the main differences between ideas about gods and life after death in ancient Egyptian religion and in any one of the religions that have large followings in the modern world.
11. Explain how beliefs about the gods and the afterlife could have contributed to making ordinary Egyptians content with their position in society.

For sample responses to every question, go to www.jacplus.com.au.

16.7 Mummies unwrapped

LEARNING INTENTION

By the end of this subtopic, you will be able to describe why and how ancient Egyptians mummified the bodies of the dead and explain how this practice has provided historians with vast amounts of primary source evidence for ancient Egypt.

16.7.1 Dead mummies do tell tales!

The art and hieroglyphs found on the tomb walls of ancient Egyptians, and the mummies made of their dead bodies, have told historians a lot about the way of life of the ancient Egyptians.

int-5977

SOURCE 1 Instructions to a priest for preparing a mummy



SOURCE 2 The mummy of a six-year-old Egyptian boy



10 Tell the relatives the mummy and the canopic jars are ready for burial. Your chief priest will need to accompany the funeral procession to the tomb so he can conduct the ceremony to open the mummy's mouth. The person's soul needs to talk in the afterlife. Remember, the professional mourners will be noisy!

9 Place the wrapped mummy in a body-shaped coffin that has been decorated with jewels, paintings and inscriptions of spells. Paint the coffin so it looks a bit like the person when he or she was alive. Be flattering!

2 Wash the dead body with water or palm wine.

natron a mineral salt used to dry out dead bodies

canopic jars jars used to store the liver, lungs, intestines and stomach of the person being mummified

At first, all ancient Egyptians buried their dead in the hot desert sands. However, in time wealthier Egyptians, especially pharaohs, began to build elaborate tombs. They would also mummify bodies so their souls would always have a 'home' to rest in, and be able to 'eat and drink'.

Mummies allow us to have some idea of what famous pharaohs looked like. Scientists and historians can also find out details such as their age, their body shape, whether they had had children, what diseases and health problems they suffered — even, sometimes, what caused their deaths. Researchers have found, for example, that cancer was probably rare or non-existent in ancient Egypt. On the other hand, broken and worn teeth were very common because of their crunching on sand grit and hard pieces of corn that were mixed up in bread.

16.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 4, 7, 9	Questions 2, 5, 7, 10

Check your understanding

1. What have historians learned about ancient Egyptians by studying mummies?
2. Where did all ancient Egyptians originally bury their dead?
3. Which social classes changed their burial practices and how did they change them?
4. Why did many mummies have broken or worn teeth?
5. Write the sentences hidden in the table below by correctly matching the phrases in the left and right columns.

A mummy is	to assist the journey of the dead person's soul.
Natron is	to store organs that were removed from the body.
Bodies were mummified	a body that has been preserved by drying and wrapping.
Canopic jars were used	so that their souls would have a place to rest in.
Magic charms were wrapped in with the bandages	a mineral salt used to dry out dead bodies.

Apply your understanding

6. Study **SOURCE 2**.
   a. As the body of this boy is thousands of years old, what do you think would remain of it had it not been mummified?
   b. Which dating technique could be used to tell us how old it is?
   c. What might you conclude about the social rank of the boy's family from the fact that his face is painted with gold?
   d. Explain what else his mummified body might be able to tell us about beliefs, values and practices associated with death and funerary customs in ancient Egypt.
7. Referring to **SOURCES 1** and **2**, give a brief explanation of what examining mummified bodies could tell us about differences between the social classes in ancient Egypt.
8. Using the sources and other information in this subtopic, discuss as a class:
   a. why preserving bodies was so important to ancient Egyptians
   b. the similarities and differences between burial practices and ideas about death in ancient Egypt and the modern world.

9. Why would a representation of the god Anubis have played a significant role in the scene in **SOURCE 1** ? (You may need to look back to the previous subtopic to answer this question.)
10. Referring to **SOURCE 1**, suggest a hypothesis that explains why ancient Egyptian ideas about anatomy led to them throwing away the dead person's brains while other organs were preserved in canopic jars.

For sample responses to every question, go to www.jacplus.com.au.

16.8 Write like an Egyptian

LEARNING INTENTION

By the end of this subtopic, you will be able to explain how historians can now read ancient Egyptian hieroglyphs and identify how hieroglyphs were learned, written and read in ancient Egypt.

16.8.1 Unlocking the mystery of hieroglyphs

The ancient Egyptians used writing over 5000 years ago, possibly as early as 3100 BCE. At first, they used simple drawings and symbols to represent each word. They wrote on stone, pottery and paper, which they made from papyrus reeds. When the Greeks came to Egypt in the fourth century BCE and saw this writing on temple walls they called the symbols hieroglyphs, which meant 'sacred writing'.

SOURCE 1 The Rosetta Stone — interpretation of its hieroglyphs allowed scholars to learn much about ancient Egypt.



Around the fourth century CE, the secret of reading hieroglyphs was lost and it remained lost for centuries. But in 1799, a French soldier discovered a large black stone at the Egyptian town of Rosetta (now called Rashid). The stone had a written message carved in three different scripts. The scripts were: ancient Egyptian hieroglyphs; a later simplified form of hieroglyphs known as demotic; and, very importantly, ancient Greek, which could still be read and understood. So the 'Rosetta Stone', as it became known, made it possible to unlock the mystery of hieroglyphs. Thanks to many years spent by Thomas Young, who was an English scientist, and a Frenchman named Jean François Champollion, the code was broken.

Scholars could now read the many records that the ancient Egyptians had written. These included the king lists, which were kept by priests, and listed the pharaohs and how long they had reigned, as well as myths, legends, hymns, medical and legal documents, and even graffiti.

16.8.2 Writing and reading in ancient Egypt

The hieroglyphic 'alphabet' was much larger than ours — it was made up of more than 700 symbols. Some of these were simple drawings, such as a bird, and others were shapes, such as a semicircle. At first, each symbol stood for a word. As the language became more complex, some symbols came also to stand for other language elements besides single words, such as:

- the sound of a consonant (for example, the symbol for an owl also stood for the sound of the letter *m*)
- the sound of a syllable (for example, the symbol for a board game also stood for the sound of the letters *men*)
- ideas or actions (for example, the symbol for a leg shown twice stood for the idea of movement)
- signals to help the reader understand what was meant. A signal might be put at the end of a word so readers knew it had a different meaning from another of the same symbol. (If we used this technique today, we might place a sketch of a bus at the end of the word 'trip' to show that it meant 'a journey' and not 'to fall over'.)

Reading hieroglyphs

At first, hieroglyphic symbols were laid out in columns. People read down each column, from top to bottom. From about 2000 BCE, the symbols were arranged in rows, more like our writing. Sometimes they were read from left to right (as we read) and other times from right to left. So that the reader knew where to start, a symbol of a person, animal or bird was put at the start or end of the line. The direction in which the symbol faced marked the start of a line. So, if a bird faced right, you would read the line from right to left.

Sometimes a symbol was placed above another, rather than to the side of it. In this event, the symbol on top was read first.

The name of a pharaoh was always enclosed in a cartouche — a bullet-shaped oval.

SOURCE 2 Translators have been able to link hieroglyphic symbols with most of the letters of our alphabet.

Symbols for single sounds

a	b	c, k	d	e,y
f	g	h	i	j
l	m	n	o	p
q	r	s	t	u
w	x	z	th	sh

Symbols for syllables

neb	ankh	mer	mes
su	sha	ka	men

Simpler forms

Hieroglyphs were used mainly for religious purposes and in official documents. Priests and scribes could write and read using the system. This is why they can be found in tombs. But hieroglyphs took a lot of time to produce, so simpler, faster scripts were developed. Two other scripts — **hieratic script** (**SOURCE 3**) and **demotic script** — were used by ordinary people. Both these scripts used hieroglyphic symbols but in simpler forms.

hieratic script Egyptian script that was less decorative and complex than hieroglyphs

demotic script the simplest of the ancient Egyptian scripts, which was almost like handwriting

SOURCE 3 This papyrus sheet shows an Egyptian high priest presenting an offering to Osiris, the god of the afterlife. It contains both the hieroglyphic script (circled) and the simpler hieratic script (left and centre).



Writing classes

Only boys were taught to read and write. At first, they scratched messages on broken pieces of limestone and pottery. Once they could write, they used sheets of papyrus as paper and sharpened bits of reeds as pens. Their inks were solid blocks of powdered minerals, in different colours, which they mixed with water.

16.8 ACTIVITY

Work in small teams to make a sheet of 'papyrus'. Cut a sheet of thick blotting paper (or similar) into strips. Spray strips with a starch solution until they are wet but not sodden. Then lay them in two crossing layers and beat them together. (Place a sheet of lightly oiled greaseproof paper underneath so the paper can be removed once dry.) Polish the beaten sheet with a stone. Then pin down the corners (to stop curling) and place it in the sun to dry.

Use the piece of 'papyrus' you have made and the hieroglyphic symbols in **SOURCE 2** to create a message for other members of the class to translate. Put these on the display board.

HASS skills: Communicating and reflecting
History concepts: Sources, Evidence

16.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

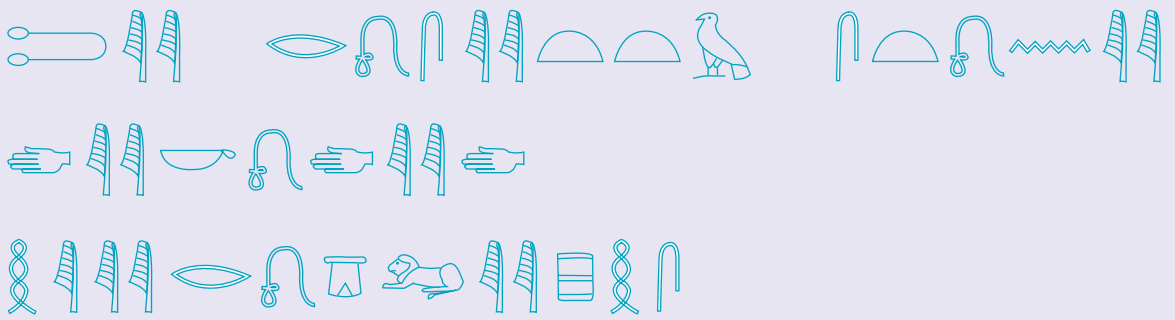
LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6	Questions 3, 5, 7	Question 2, 8, 9, 10

Check your understanding

1. Approximately how long ago was writing first used in Egypt?
2. What is the meaning of the Greek word 'hieroglyph'?
3. The first hieroglyphic symbols stood for complete words. How and why did that change?
4. How were boys taught to write?
5. What discovery made it possible for scholars to understand ancient Egyptian writing?

Apply your understanding

6. Look closely at **SOURCE 1**. Describe the feature of the Rosetta Stone that made it possible to unlock the mystery of hieroglyphs.
7. Look closely at **SOURCE 3**. Which of the two scripts looks most like modern writing?
8. Why did ancient Egyptians need to develop scripts that were more like modern writing than the earlier hieroglyphs?



9. Use **SOURCE 2** to decode this message.
10. Explain why ancient Egyptians gradually developed scripts that were more like modern writing than the earlier hieroglyphs.

For sample responses to every question, go to www.jacplus.com.au.

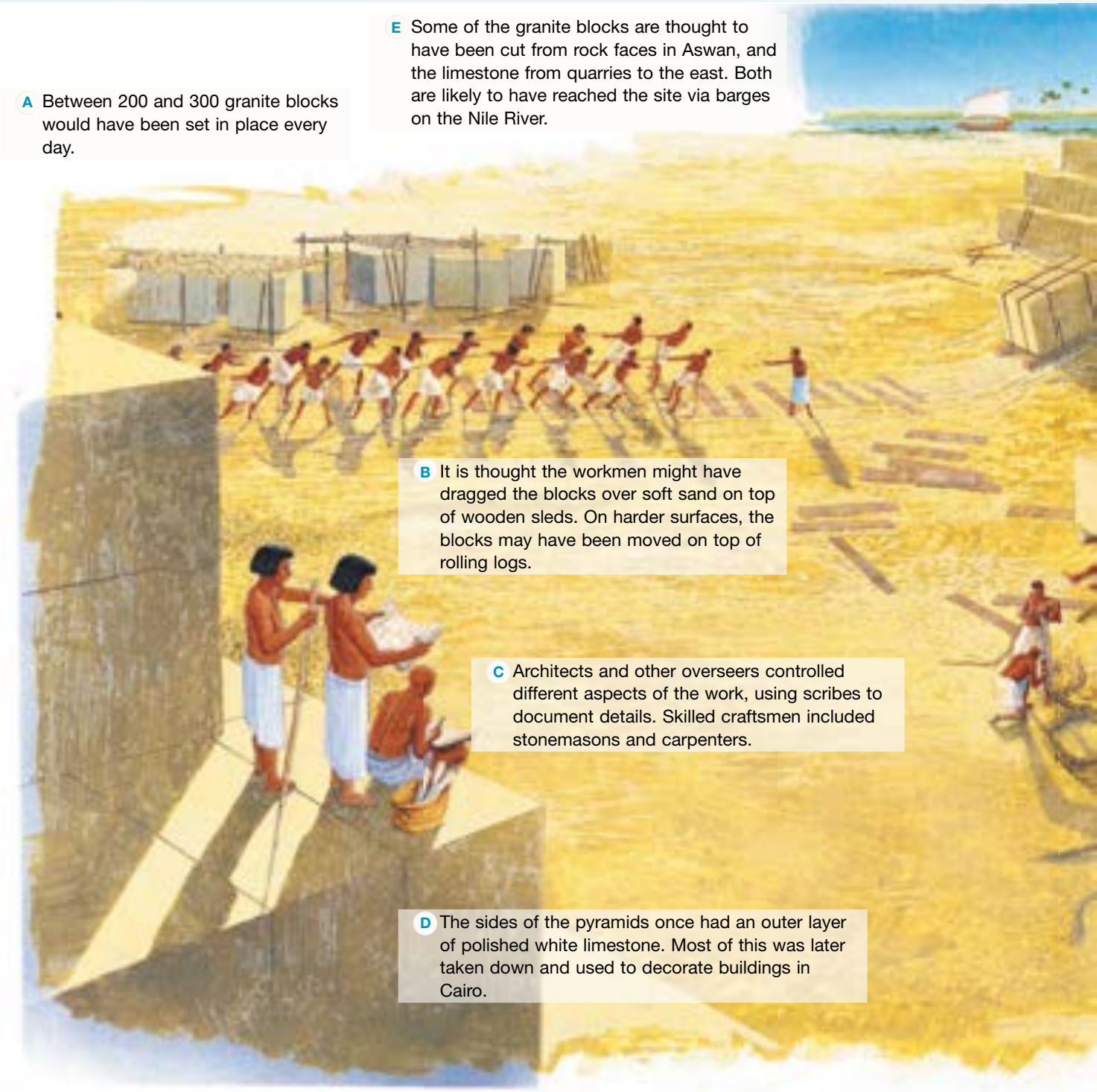
16.9 Pyramid builders

LEARNING INTENTION

By the end of this subtopic, you will be able to explain why and how ancient Egyptians, during the Old Kingdom, built their most famous legacy, the pyramids.

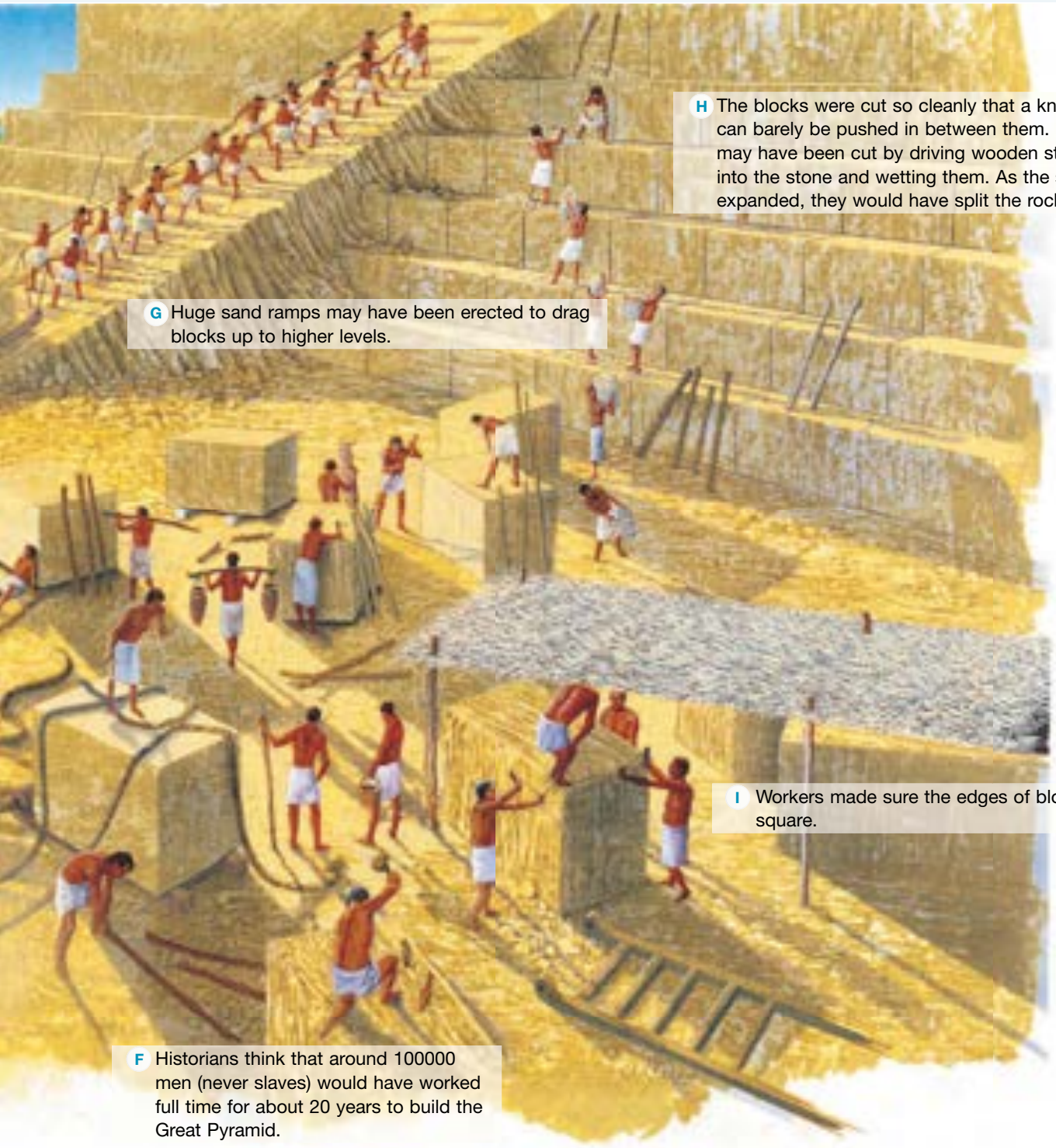
int-5978

SOURCE 1 The pyramids at Giza in Egypt are the only remaining 'wonder' of the Seven Wonders of the Ancient World.



16.9.1 Pyramids and hidden tombs

Built about 4500 years ago, the 80 or so pyramids in Egypt are the oldest human-made structures in the world. Of these, the famous three at Giza, near Cairo, are the most impressive. Their construction is an amazing feat of technology. Yet no-one knows for sure how they were built. The ancient Egyptians had only simple tools made of stone, wood and bronze. They had no cranes, computers, rock cutters or heavy earth-moving equipment.



H The blocks were cut so cleanly that a knife blade can barely be pushed in between them. Blocks may have been cut by driving wooden stakes into the stone and wetting them. As the stakes expanded, they would have split the rock.

G Huge sand ramps may have been erected to drag blocks up to higher levels.

I Workers made sure the edges of blocks were square.

F Historians think that around 100000 men (never slaves) would have worked full time for about 20 years to build the Great Pyramid.

From about 2500 BCE, the mummies and treasures of important people, such as pharaohs, were usually entombed in pyramids. This practice lasted only about 500 years, however, because robbers were a major problem. Thereafter, tombs for such people were dug into mounds and cliffs in the **Valley of the Kings**. But even these were not completely safe. Over time, they were all raided, except one — the tomb of the pharaoh Tutankhamen.

The **Great Pyramid** at Giza, built around 2550 BCE, was the tomb of the pharaoh Khufu. The other two were built for his son Khafre and grandson Menkure. The Great Pyramid, the biggest of the three, is close to 150 metres high and contains around 2 300 000 granite blocks, each of which weighs around 2.5 tonnes.

Pyramid mysteries

Some say the technology of the pyramids is so astonishing that they must have been built by an alien intelligence.

Another view is that those who built the pyramids at Giza, and the **Great Sphinx** that guards them, used knowledge and skills passed down from an old but highly advanced civilisation that existed long before the Old Kingdom in Egypt. But archaeologists and historians prefer more scientific explanations.

Heavenly sails

One treasure the robbers missed in the Great Pyramid was a 43-metre-long boat, built to carry Khufu to the afterlife. It was not found until 1954. It had been broken into 1224 pieces before being packed into a rock cavity near the base of the pyramid. The cavity was so tightly sealed that when archaeologists broke into it they could still smell the cedar oil in the wood — after 4500 years!

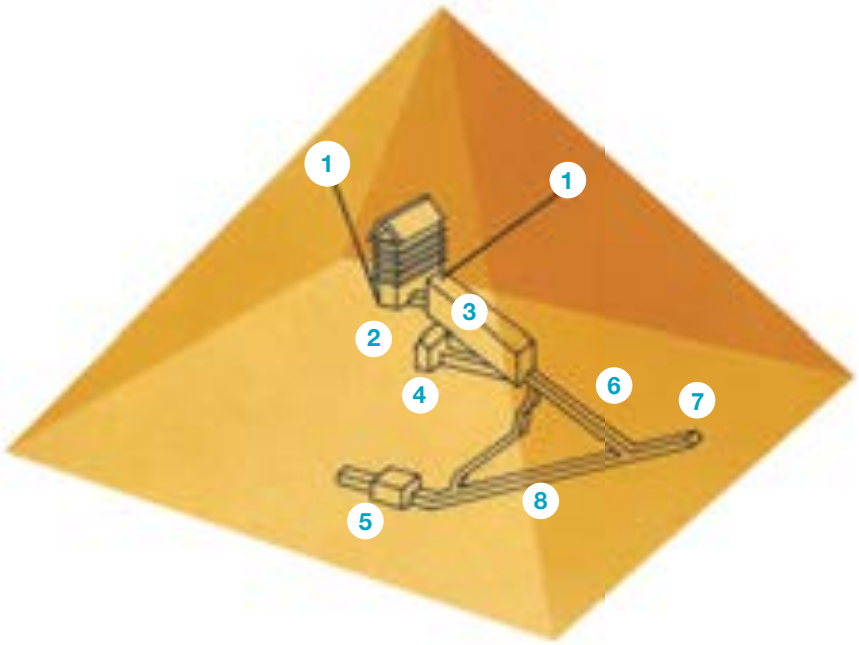
Valley of the Kings gorge on the Nile in Upper Egypt that contains many royal tombs

Great Pyramid the oldest and largest pyramid in Egypt; one of the Seven Wonders of the Ancient World

Great Sphinx monument with the body of a lion and the face of a man; located in Giza near the Great Pyramid

int-5979

SOURCE 2 Inside the Great Pyramid



1. Air shafts
2. Pharaoh's burial chamber
3. Grand gallery
4. Queen's chamber
5. False chamber
6. Ascending corridor
7. Entrance
8. Descending corridor

16.9 ACTIVITY

Use the internet to conduct research on the Giza pyramids. Prepare a short report on your findings. Include appropriate images.

HASS skills: Communicating and reflecting
History concepts: Sources, Evidence

16.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 5	Questions 7, 9, 10	Questions 3, 6, 8

Check your understanding

1. Describe the tools and equipment used by ancient Egyptian pyramid builders.
2. How many famous pyramids are there at Giza?
3. The Great Pyramid of Giza was built as the tomb of which ruler?
4. What was the main purpose of the pyramids?
5. Explain why the pharaohs stopped building pyramids after 500 years and switched to tombs dug into cliffs and mounds in the Valley of the Kings.

Apply your understanding

6. **SOURCE 1** shows the steps involved in the building of a pyramid. Select three of these steps and explain what tools and equipment would be needed by the workers in order to do their job.
7. Study **SOURCE 2**. Imagine that you are an ancient Egyptian who is planning to rob Khufu's tomb. Write a note to your accomplice explaining how to get into the pharaoh's burial chamber and what to look out for.
8. Imagine that you are a worker on the pyramid who had access to two pieces of modern equipment. Explain what modern equipment you would use and how that would change your task.
9. Many old Hollywood movies incorrectly gave the impression that the pyramids were built by slaves. Describe how the scene in **SOURCE 1**would have been different if they were correct.
10. Referring to **SOURCE 2**, suggest a reason why a false chamber would have been incorporated in the design of a pyramid.

For sample responses to every question, go to www.jacplus.com.au.

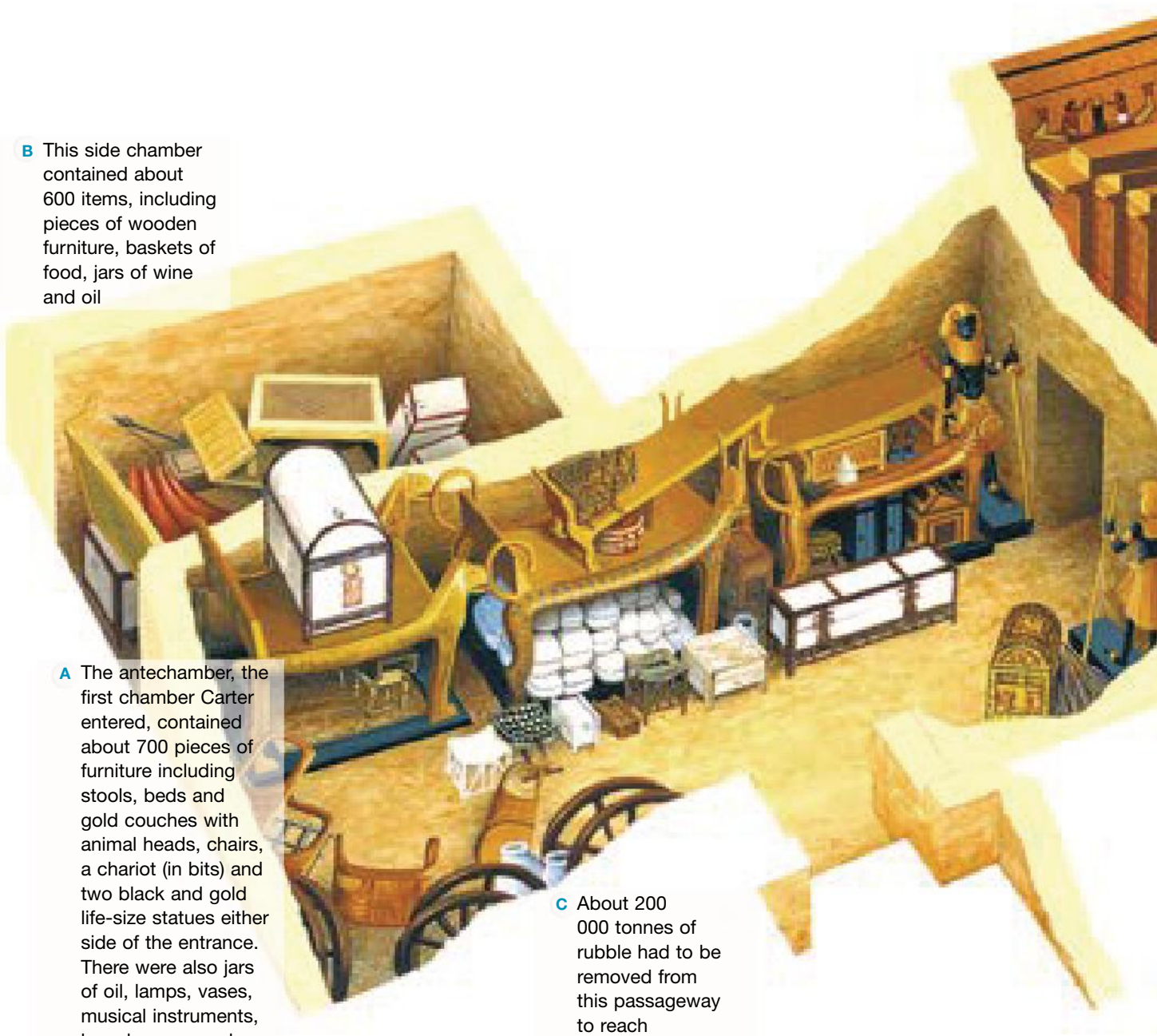
16.10 Tutankhamen, Akhenaten and Nefertiti

LEARNING INTENTION

By the end of this subtopic, you will be able to explain why the discovery of Tutankhamen's tomb was the key archaeological event of the twentieth century and describe the religious changes that were made under Akhenaten and Nefertiti.

int-5980

SOURCE 1 The discovery of Tutankhamen's tomb was described in the *Illustrated London News* of 9 December 1922 as 'the most



B This side chamber contained about 600 items, including pieces of wooden furniture, baskets of food, jars of wine and oil

A The antechamber, the first chamber Carter entered, contained about 700 pieces of furniture including stools, beds and gold couches with animal heads, chairs, a chariot (in bits) and two black and gold life-size statues either side of the entrance. There were also jars of oil, lamps, vases, musical instruments, board games and clothing.

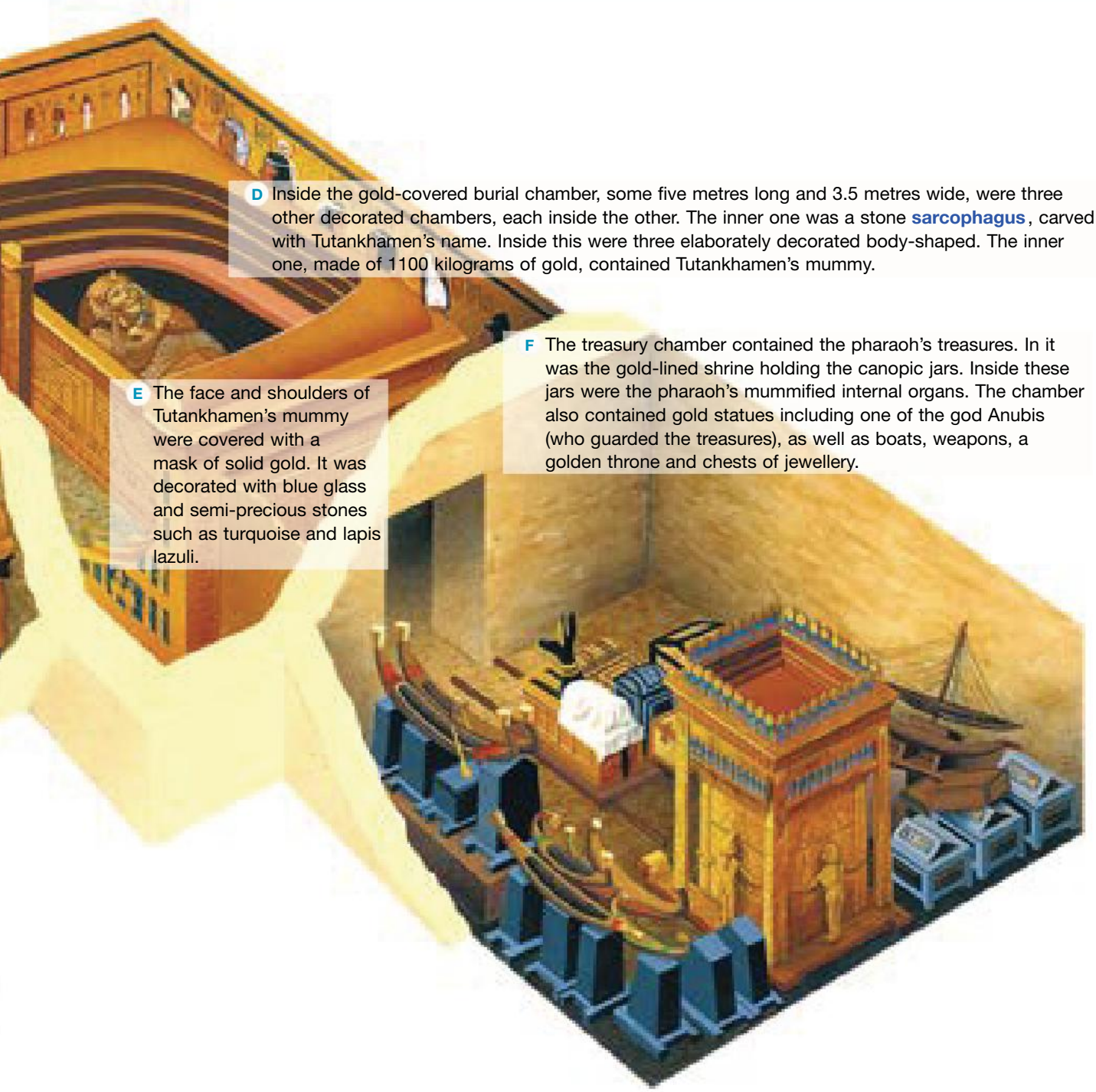
C About 200 000 tonnes of rubble had to be removed from this passageway to reach Tutankhamen's tomb.

16.10.1 An archaeologist's dream

The discovery of the tomb of Tutankhamen was the key archaeological event of the twentieth century — but not because of the man or the size of his tomb. Tutankhamen was still a teenager when he died and the tomb had only four chambers. It was important because its contents were untouched. More than 5000 objects were found, some of them priceless. We can only imagine what might have been found in the large tombs of more famous pharaohs if they had not been robbed.

sarcophagus stone or wooden coffin (often inscribed or decorated) in Egypt

sensational Egyptological discovery of the century'.



D Inside the gold-covered burial chamber, some five metres long and 3.5 metres wide, were three other decorated chambers, each inside the other. The inner one was a stone **sarcophagus**, carved with Tutankhamen's name. Inside this were three elaborately decorated body-shaped. The inner one, made of 1100 kilograms of gold, contained Tutankhamen's mummy.

E The face and shoulders of Tutankhamen's mummy were covered with a mask of solid gold. It was decorated with blue glass and semi-precious stones such as turquoise and lapis lazuli.

F The treasury chamber contained the pharaoh's treasures. In it was the gold-lined shrine holding the canopic jars. Inside these jars were the pharaoh's mummified internal organs. The chamber also contained gold statues including one of the god Anubis (who guarded the treasures), as well as boats, weapons, a golden throne and chests of jewellery.

In 1922, the British archaeologist Howard Carter found the tomb of Tutankhamen. He had looked for it for years in the Valley of the Kings without success. Then he decided to dig up an area around some old workers' huts. To his excitement, a step was uncovered, carved into the rock. More digging revealed the sealed entrance to a passageway that carried the seal of Tutankhamen. Yet more digging to remove the tonnes of rubble in the passageway revealed the stone door to the tomb.

SOURCE 2 Head of the 19-year-old pharaoh Tutankhamen



A hole was cut in the door and Carter inserted a lit candle into the darkness behind. He later said: 'At first I could see nothing … But presently, as my eyes grew accustomed to the light, details of the room emerged slowly from the mist, strange animals, statues and gold — everywhere the glint of gold'.

SOURCE 3 Translated inscription Tutankhamen had carved into a stone column, marking a return to the worship of many gods

I found the temples fallen into ruin, with their holy places overthrown and their courts overgrown with weeds. I reconstructed their sanctuaries, I endowed the temples and made them gifts of all precious things. I cast statues of the gods in gold and electrum, decorated with lapis lazuli and all fine stones.

16.10.2 A new mystery?

The last significant pharaoh before Tutankhamen was Akhenaten, who became pharaoh in about 1353 BCE, under the name Amenhotep IV. In the fifth year of his reign he appears to have initiated a religious revolution in Egypt. He erected a new temple to the sun disk god Aten, changed his name to Akhenaten, meaning 'he who serves Aten' and decreed that in place of the many ancient gods of Egypt the people must worship only the Aten. Images of Akhenaten and many traces of the new religion were deliberately destroyed after his death.

Akhenaten's first wife was Nefertiti. She was depicted as a very elegant and beautiful woman in a limestone bust dated c. 1340 BCE (see **SOURCE 4**) and in many images worshipping Aten with her husband.

Tutankhamen was married to the third daughter of Akhenaten and Nefertiti, and was only about nine years old when he became pharaoh in about 1336 BCE. Under Tutankhamen, Egypt made a complete return to the traditional gods. In inscriptions he was referred to as the good ruler who restored 'what was ruined'. He died aged just 19, leaving no heir to the throne. The head of his mummy is shown in **SOURCE 2**. As revealed in **SOURCE 5**, it now appears that Tutankhamen might not have been alone in his tomb.

SOURCE 4 A limestone bust of Nefertiti. It is dated c. 1340 BCE and is held in the Egyptian Museum Berlin.



SOURCE 5 'Egypt's Queen Nefertiti may lie concealed in Tutankhamun's tomb, say archaeologists', ABC News, 5 October 2015

A British archaeologist, Dr Nicholas Reeves, from the University of Arizona, has used high-resolution scans, including radar and thermal imaging, to peer into hidden chambers in King Tutankhamun's underground tomb. Using these scans, he believes that Queen Nefertiti is buried there also.

…

His theory is that Nefertiti has lain undisturbed behind what he believes is a partition wall for more than 3000 years. The archaeologist believes the boy king, who died unexpectedly at 19, was buried in a rush in an underground burial chamber that was probably not intended for him.

16.10 EXERCISE

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Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 5, 7	Questions 3, 8, 11, 12	Questions 6, 9, 10, 13, 14

Check your understanding

1. Why was Tutankhamen's tomb such a rare and significant discovery?
2. How did Howard Carter find Tutankhamen's tomb?
3. Explain the meaning of the following concepts and terms: burial chamber, treasury chamber, sarcophagus.
4. Who were Akhenaten and Nefertiti?
5. What big change did Akhenaten bring to Egyptian society and religion?

Apply your understanding

6. Using **SOURCE 1**, identify and select one of the types of items that were found in each of the following: the antechamber, the side chamber, the burial chamber, the treasury chamber. Explain what archaeologists and historians might discover about life in ancient Egypt from each of your four chosen items.
7. Where (see **SOURCE 1**) was Tutankhamen's head (**SOURCE 2**) found?
8. Read Tutankhamen's inscription in **SOURCE 3**.
   a. Who caused Egyptian religion to change before Tutankhamen's reign?
   b. How would you account for the temples having 'fallen into ruin'?
   c. Describe the effect of Tutankhamen's reign on Egyptian religion and explain why Tutankhamen might have found it necessary to undertake the works referred to here.
9. Describe the way that Nefertiti is portrayed in **SOURCE 4**, the limestone bust.
10. Look again at **SOURCE 1** and read **SOURCE 5**.
    a. What was Dr Reeves's hypothesis about Nefertiti and Tutankhamen's tomb?
    b. Where in **SOURCE 1** do you think the partition wall and hidden chambers could possibly be?
11. What evidence did Reeves offer to support his hypothesis?
12. Reeves's theory was immediately criticised by other archaeologists. What does this tell you about contestability in history?
13. Think about all you have learned about the ancient Egyptians in this topic.
    a. Discuss and explore the way the ancient Egyptian people might have felt about Akhenaten's religious changes.
    b. Explain why we have no real evidence of what ordinary Egyptians thought about these changes.
14. Based on what you now know about religious issues from the reign of Akhenaten to the death of Tutankhamen, write a paragraph explaining what we can conclude about change and continuity in this period of ancient Egyptian history.

For sample responses to every question, go to www.jacplus.com.au.

16.11 Expansion and fall

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- describe ancient Egypt's relations with other countries through trade and war
- explain how historians and archaeologists have divided Egypt's long history
- identify the reasons for Egypt's eventual decline and fall.

16.11.1 From the Old Kingdom to the New Kingdom

Throughout history, all empires have been created by force and all have eventually fallen. There were periods in Egypt's long history when it suffered from **civil wars** and invasions. There were also times of strong governments that drove invaders out of the land and took control of other countries (see the timeline in subtopic 16.1).

One of the worst times was the First Intermediate Period. The collapse of the Old Kingdom was followed by a century of bloodshed as nobles fought each other for control of the country. This made it easy for foreigners to move into the Nile Delta.

Contacts and conflicts

Egypt's relations with other countries involved trade as well as war. Egypt traded with the Phoenicians and others to the north but its most important trade was with Nubia to the south. Egypt traded beer, wine, cheese, oil, linen and tools for Nubian copper, gold, jewels, ebony, ivory, exotic animals and slaves (see **SOURCE 1**). Yet Egypt was also often in conflict with Nubia. During the Middle Kingdom, it took part of Nubia and built forts to control the routes to its gold mines. Around the same time, Egypt attacked the Libyans and other desert tribes to its north.

civil war war between rival factions within one state or country

SOURCE 1 A scene on a wall of the tomb of Sobekhotep. It shows Africans, probably Nubians, carrying ebony logs, leopard skins, gold rings, giraffe tails and a live baboon.



SOURCE 2 Wooden models of Egyptian soldiers of the Middle Kingdom in four columns



DID YOU KNOW?

Egypt's army was at first made up mostly of peasants called up whenever needed. By New Kingdom times, Egypt had a permanent army with chariots, archers and infantry armed with spears, battle axes, swords and daggers. It appears also to have included conscripted prisoners of war and foreign **mercenaries**.

Wars of the New Kingdom

Egypt was again weak in the Second Intermediate Period when the Hyksos invaded from the north-east. This time was followed by the New Kingdom, the time of Egypt's greatest power. At the start of this period, the armies of Pharaoh Ahmose defeated the Hyksos who had occupied Egypt. Ahmose also regained control of northern Nubia. In the fifteenth century BCE, Egypt defeated a coalition of **Asiatic** princes at the Battle of Megido. The territory occupied by modern Israel, Lebanon and Syria became part of the Egyptian Empire. Later pharaohs fought against the Hittites to keep control of these lands. In these wars Egypt plundered its defeated enemies and gained more wealth from the tribute (treasure, slaves and livestock) that had to be paid by conquered rulers.

mercenaries people who fight for a foreign country for money or other rewards

Asiatic peoples of Asia, including the Middle East

16.11.2 Decline and fall

Egypt became weaker after the time of Rameses II. Libyans and 'Peoples of the Sea' invaded the Nile Delta. These invaders were defeated many times (see **SOURCE 3**) but gradually Egypt lost its unity and its empire. The priests came to control Upper Egypt, while Lower Egypt was ruled by princes. In the Late Dynastic Period the country fell under the control of Nubians. In about 663 BCE the Assyrians took most of Egypt into their empire. Bronze Age Egypt had no iron ore and could not match the Assyrians' iron weapons. Later, Egypt fell under the rule of the Persians, followed by the Greeks and then the Romans.

SOURCE 3 From an inscription in the temple of Pharaoh Rameses III at Thebes describing a victory over the 'Peoples of the Sea', in about 1188 BCE

> Year 8 under the majesty of [Rameses III] … foreign countries made a conspiracy. No land could stand before their arms … they were coming forward toward Egypt … I have the river mouths prepared like a strong wall, with warships, galleys and coaster … The troops consisted of every picked man of Egypt. They were like lions … The chariotry consisted … of every good and capable chariot-warrior. Those who reached my frontier … were dragged in, enclosed on the beach, killed and made into heaps …

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Mediterranean world > **Egypt — the Old Kingdom**
- The Mediterranean world > **Egypt — the Middle Kingdom**
- The Mediterranean world > **Egypt — the New Kingdom**

16.11 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 5	Questions 2, 6, 8	Questions 3, 7, 9, 10

Check your understanding

1. Why were foreigners able to invade Egypt's Nile Delta during the First Intermediate Period?
2. During which times was Egypt strongest and weakest?
3. List the lands that Egypt controlled during its strongest period.
4. Name the groups that invaded Egypt after the time of the New Kingdom Pharaoh Rameses II.
5. Why was Egypt unable to match the military might of the Assyrians?

Apply your understanding

6. Analyse **SOURCE 1**.
   a. Describe the details in the source.
   b. Make a list of the things the Africans, probably Nubians, are carrying.
   c. Outline what **SOURCE 1** can probably tell us about Egypt's trade with Nubia.
7. Study the models of soldiers in **SOURCE 2**. Identify the two items that you can see the soldiers carrying.
8. Analyse the inscription of Rameses III in **SOURCE 3**.
   a. Describe its style.
   b. Suggest why it would be written in such a style.
   c. Imagine that you are a high ranking official in the time of Rameses III. In the style of SOURCE 3, write a message congratulating the Pharaoh on his victory.
9. Identify the groups that dominated Egypt during the Late Dynastic Period and afterwards and list them in chronological order.
10. Using all three sources as your evidence, examine and write a short explanation of the roles played by war and trade in Egypt's rise and decline. In your answer, you could describe Egypt's changing relations with Nubia and explain why Egypt fought other peoples, how wars enriched Egypt during the New Kingdom and why Egypt eventually declined and collapsed.

For sample responses to every question, go to www.jacplus.com.au.

16.12 Rameses II—Egypt's greatest pharaoh?

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- describe the ruler whom many consider to have been ancient Egypt's greatest pharaoh and outline the campaigns that earned him fame,
- explain the questions about the reliability of sources that portray him as such a great leader.

16.12.1 Who was Rameses II?

You have already encountered several rulers of ancient Egypt. They include: Narmer, the first pharaoh of both Upper Egypt and Lower Egypt; Khufu, for whom the Great Pyramid was built; Hatshepsut, the most famous of Egypt's queens; and Tutankhamen, who became famous because his tomb was discovered with its contents untouched. However, many historians have regarded Rameses II, who ruled Egypt between c. 1279 and 1212 BCE, as the greatest of all pharaohs.

Rameses II (sometimes spelled *Ramses* and *Ramesses*) was probably born about 1303 BCE. He was a son of King Seti I. Rameses was in his early twenties when he became Egypt's ruler. He held that position for longer than any other pharaoh. Because of his military campaigns and building projects, including temples and cities, he became known as Rameses the Great.

The warrior king

In about 1278 BCE, Rameses' navy defeated the sea pirates who had been attacking Egyptian trading ships in the Mediterranean Sea. Rameses commanded an army of possibly 100 000 men. He gained fame through many battles in which Egypt fought the Hittite Empire to its north and the Nubians to its south. During these campaigns, Rameses' forces repelled invasions, regained territories Egypt had lost under previous pharaohs and secured Egypt's borders.

SOURCE 1 The head of the colossal statue of Rameses II at the Temple of Luxor in central Egypt



16.12.2 Fighting the Hittites

Over 20 years, from about 1277 BCE, Rameses led a series of campaigns against the Hittite Empire. In the first campaign, Rameses defeated several Palestinian princes and captured Amurra, a **vassal state** of the Hittite Empire in Syria.

In the following year, Rameses led his armies to attack the Hittite-controlled city of Kadesh. His army consisted of four divisions, with Rameses personally leading the Amun division. However, the waiting Hittite army ambushed another Egyptian division as it was crossing a river, causing the soldiers to flee. According to Egyptian records, in the ensuing battle, Rameses found himself isolated from his forces but, almost single-handed, he defeated an overwhelming Hittite force, killing vast numbers as he escaped (see **SOURCE 3**). Although the Battle of Kadesh was a **stalemate** and the Hittites remained in Syria, Rameses declared the battle a great Egyptian victory.

SOURCE 2 This relief sculpture in Luxor shows Hittite soldiers being crushed under the wheels of Rameses II's chariot at the Battle of Kadesh.



In later campaigns, spread between the seventh and twenty-first years of his reign, Rameses captured Hittite territory. But neither side was able to win a decisive victory and, in about 1258 BCE, the conflict ended with a peace treaty.

Great ruler or great bragger?

Historians have a vast number of primary sources about Rameses' achievements because, more than any other pharaoh, he was a great builder of monuments that glorified his deeds. Enormous numbers of huge statues were constructed, portraying him as a handsome, smiling and powerful ruler. At his temple at Abu Simbel, each of the four statues of Rameses II carved out of the face of a cliff is almost 20 metres tall. Records of his exploits, including scenes of him crushing the Hittites, were engraved deeply on monuments and temples throughout Egypt. So great was his reputation that nine future pharaohs took his name.

vassal state a state whose ruler recognises another, more powerful ruler as his overlord

stalemate a situation in a contest or conflict in which neither side can defeat the other

SOURCE 3 From a poem inscribed by order of Rameses II on the walls of five temples to commemorate his victory at Kadesh

In the midst of many peoples, all unknown,

Unnumbered as the sand,

Here I stand,

All alone;

There is no-one at my side;

My warriors and chariots afeared [frightened],

Have deserted me …

… Two thousand and five hundred pairs of horses were around,

And I flew into the middle of their ring,

By my horse-hoofs they were dashed all in pieces to the ground …

SOURCE 4 Rameses II in a detail from sculptures and hieroglyphs on his temple at Abu Simbel



DID YOU KNOW?

During the 1960s, an international operation was conducted to save the temple at Abu Simbel and its statues. The entire site was carefully cut into sections and moved to higher ground. This was done to save it from being submerged beneath the rising water behind Egypt's new Aswan High Dam.

16.12 ACTIVITIES

1. Use the internet to find other images and inscriptions about Rameses II. Create a poster to display these images and inscriptions.
   HASS skills: Communicating and reflecting
   History concept: Significance
2. Using evidence from all sources in this subtopic, evaluate the significance of Rameses II in a response of at least one page to the following question: Which is more likely — that Rameses II was significant as a great leader or as a great bragger?
   HASS skills: Evaluating
   History concepts: Significance, Contestability

16.12 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4, 6	Questions 5, 7, 8	Questions 2, 9, 10

Check your understanding

1. Name three groups of enemies defeated under Rameses II.
2. Why did he come to be known as Rameses the Great?
3. Who did Rameses II's forces fight at the Battle of Kadesh?
4. Was the Battle of Kadesh really an Egyptian victory?
5. How did the conflict with the Hittites end in 1258 BCE?

Apply your understanding

6. Study **SOURCE 1**. Describe the impression of Rameses II that is conveyed by this colossal head and explain why he would have wanted to be portrayed this way.
7. Look at **SOURCE 2** and read **SOURCE 3**.
   a. According to **SOURCE 2**, what happened to Hittite soldiers at the Battle of Kadesh?
   b. According to **SOURCE 3**, why were Rameses II's soldiers not at his side, how many enemies did he face and how did he defeat them?
   c. Do **SOURCE 2** and **SOURCE 3** give conflicting or supporting evidence?
   d. Are these sources reliable or unreliable? Give reasons for your answer.
   e. How might the soldiers who fought for Rameses II have felt about what was inscribed in **SOURCE 3**?

For help with the skill of Evaluating, see topic 1 Concepts and skills in HASS.

8. What problems for historians are created by the fact that all four sources in this subtopic and most other primary sources about Rameses II were produced on his orders?
9. Place the main events of Rameses II's life on a timeline.
10. Using **SOURCES 3** and **4**, describe how Rameses II wished to be remembered.

For sample responses to every question, go to www.jacplus.com.au.

16.13 Egypt's heritage

LEARNING INTENTION

By the end of this subtopic you will be able to identify how ancient Egypt left lasting legacies and describe the challenges modern Egypt faces in preserving this cultural, architectural and artistic heritage.

16.13.1 The greatest legacies

The ancient Egyptian civilisation lasted for thousands of years. The Egyptians discovered how to make paper. They created a unique writing system, invented a calendar similar to the one used today and produced a system of mathematics that enabled them to make complicated calculations. Yet very little of ancient Egypt's culture has been handed down. In modern Egypt, nearly all people follow the religions of Islam or Christianity rather than the ancient beliefs of the land, and there is no connection between the arts, society and systems of government of modern and ancient Egypt.

SOURCE 1 'Ruins of 7000-year-old city found in Egypt oasis', ABC, 30 January 2008

Ancient ruins in Egypt's Fayyum oasis have been found by US archaeologists using electro-magnetic surveys. These date from the period of the first farmers 7000 years ago. The city is buried underneath sand, with details still to be revealed but the ruins date to the Neolithic period between 5200 and 4500 BCE. The location of the remains indicate it would originally have been at the edge of a lake, with a network of walls and roads revealed.

'The artefacts consist of the remains of walls and houses in terracotta or dressed limestone as well as a large quantity of pottery and the foundations of ovens and grain stores,' said Supreme Council of Antiquities Chief, Zahi Hawwas.

Egypt's greatest legacies to modern times are its archaeological wonders, especially its pyramids, tombs and temples, which have amazed generations. In the past, many of Egypt's archaeological treasures were taken to other lands, where they ended up in museums or private collections. There has been much debate about whether they should rightfully be returned to Egypt. Whatever happens in the future, we can be sure that people will continue to be fascinated by such artefacts, especially the many mummies that are displayed in museums throughout the world.

Ongoing discoveries

Egypt continues to yield up fascinating discoveries. In 1999, archaeologists discovered a tomb complex thought to contain thousands of mummies from the time when Egypt was ruled by Greeks and Romans. This was seen as proof that these conquerors adopted much of Egypt's culture. In 2008, another group of archaeologists discovered the ruins of a city from the time of Egypt's first New Stone Age farmers. Ancient Egypt has yet to reveal all its secrets.

SOURCE 2 The painted wood coffin of Pharaoh Rameses IV (1153–1147 BCE)



SOURCE 3 The mummy of Katebet, a woman of wealth and high status who died around 1300 BCE



SOURCE 4 Pyramids at Giza. The Great Pyramid of Khufu towers above the others.



16.13 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4, 5	Questions 2, 6, 7	Questions 8, 9, 10

Check your understanding

1. How has Egypt's culture changed since ancient times?
2. Name one invention devised in ancient Egypt.
3. What usually became of ancient archaeological treasures that were taken from Egypt?
4. What did archaeologists discover in Egypt in 1999?
5. What are ancient Egypt's greatest legacies?

Apply your understanding

6. Why do mummies and coffins, such as those in **SOURCES 2** and **3**, continue to fascinate people?
7. On Katebet's mummy, below the image of painted arms, are from top to bottom: a winged goddess, a scarab, an image of Anubis and a shabti figurine. Use the knowledge you have gained from this topic to explain the significance of at least two of these.
8. How would the appearance of the Great Pyramid (as illustrated in **SOURCE 4**) have been different in ancient times from the way it appears today? *(Hint:* Refer to subtopic 16.9.)
9. Explain how the discoveries in Egypt's Fayyum Oasis (see **SOURCE 1**) provide further evidence of continuity of ancient Egypt's civilisation.
10. Describe the historical significance of the discoveries described in **SOURCE 1** for our understanding of New Stone Age times.

For sample responses to every question, go to www.jacplus.com.au.

16.14 SkillBuilder: Analysing and corroborating sources

LEARNING INTENTION

This SkillBuilder shows you how to analyse and corroborate sources. Analysing and corroborating sources is part of the Analysing HASS skill.

16.14.1 Tell me

What are the main ancient Egyptian primary sources?

Primary sources from ancient Egypt include pyramids, tombs, temples, mummies, coffins and written records on stone and papyrus. They also include art such as models, statues and the paintings that decorated papyruses, coffins, canopic jars and the walls of tombs and temples.

Why is it important to analyse and corroborate ancient Egyptian primary sources?

It is important to analyse and corroborate ancient Egyptian primary sources because almost all of our knowledge about ancient Egypt comes from primary sources. Works of art, in particular, tell us much about the lives of Egypt's rulers. Some also provide evidence about ordinary Egyptians. Some show peasants and labourers working in the fields, artisans busy at their trades and women grinding grain, weaving cloth and brewing beer.

16.14.2 Show me

How do we analyse and corroborate ancient Egyptian primary sources?

When you study a primary source, you need to think carefully about the clues it provides and ask questions about its accuracy, usefulness and reliability. You need to ask questions such as:

- What is it?
- Who created it and when was it created?
- Who or what was it created for?
- For what aspect of ancient Egyptian history does it provide useful evidence?
- Is the evidence it provides accurate and reliable and how can we tell this?
- What conclusions can we draw from the source about ancient Egyptian society?

SOURCE 1 A fragment of a scene on a wall panel in the tomb of Sobekhotep, a senior Egyptian treasury official during the reign of Thutmose IV (c. 1419–1386 BCE)



These questions have been applied to **SOURCE 1**.

- *What is it?* It is a scene from a wall panel in a tomb.
- *Who created it and when was it created?* We cannot know the name of the artist/s who created it but we do know that it was created around 1419 to 1386 BCE.
- *Who or what was it created for?* It was painted to decorate the tomb of an Egyptian official named Sobekhotep.

- *For what aspect of ancient Egyptian history does it provide useful evidence?* It provides evidence that ancient Egyptian craftspeople included talented artists, such as those who created this scene. It shows Egyptian craftsmen manufacturing jewellery so it provides useful evidence for such work. Therefore, it would be useful for any study of the skills and methods of Egyptian craftsmen.
- *Is the evidence it provides accurate and reliable and how can we tell this?* We might assume that the artists who depicted such scenes based them on what they saw in Egypt. However, to test the accuracy and reliability of this source we would need to compare it with other artworks and written manuscripts that describe the same kinds of work.
- *What conclusions can we draw from* **SOURCE 1** *about ancient Egyptian society?* We could conclude that crafts, such as manufacturing jewellery, were highly organised with specialised workers in factory-type workshops. This meant that agriculture produced a surplus that freed such workers from the need to produce food. There must also have been a privileged class that consumed the luxury products produced in the workshops. There was probably also foreign trade in these products.

16.14.3 Let me do it

Complete the following exercise to practise this skill.

16.14 ACTIVITIES

1. Use the six questions to interpret **SOURCE 2** as evidence for the lives of the people of ancient Egypt.

SOURCE 2 A fragment of a painting in the tomb of Nebamun. It was made around 1350 BCE and shows a banquet scene divided into two registers (levels).



2. Apply your skills to answer the following questions.
   a. Using your answers to the questions on **SOURCES 1** and **2**, write a brief general statement about work and social life in ancient Egypt.
   b. Explain how you would differentiate between the primary and secondary sources for ancient Egypt.
   c. In this SkillBuilder you have worked with paintings from wall panels in tombs. Identify five other types of primary sources that a historian could use for a study of ancient Egypt.
   d. Explain why it is sometimes difficult to identify the origin and purpose of ancient Egyptian primary sources.

16.15 Thinking Big research project: Ancient Egyptian archaeological excavation

Scenario



An Australian university is planning to conduct some archaeological excavations in Egypt and is taking the unusual step of inviting a small number of school students to assist. To apply for this role, interested students have been asked to complete the following task and submit it to the university.

Task

You are to identify sites in Egypt where significant remains from Egypt's ancient past could be unearthed during an archaeological excavation and explain what types of traces might be found at these sites. Then compile all your research into an application for the job of research assistant. Follow the steps detailed in the **Process** section to complete this task.





Process

- Open the projectsPLUS application for this topic. Click the **Start new project** button to set up your project group. Working in small groups will enable you to share responsibility for the project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find examples of sites you could use to begin your research. You can add further archaeological sites to the Research forum if you wish. In the **Media centre** you will find an assessment rubric and some weblinks that will provide a starting point for your research. Remember to record details of your sources so you can create a bibliography to submit with your completed project. Add your research notes and source details to the relevant topic pages in the Research forum. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered, if you wish.
- Revisit the timeline in the Overview for this topic. Then browse through all subtopics in this topic to help you to select the best sites for excavation.
- Select your archaeological sites.
- Conduct research to find information and a suitable image for each site by reading relevant sections of the topic and by using the resources listed in your Media centre.
- Make notes using these resources and the weblinks in your Media centre.
- Write up your findings under the heading for each site in your Research forum.
- You can view, share and comment on other group members' findings. Be sure to explain the reasons for choosing each site and to enter the source for any information you find online.
- Email your completed task and your bibliography to your teacher for assessment and feedback.

on Resources

ProjectsPLUS Ancient Egyptian archaeological excavation (pro-0228)

16.16 Review

16.16.1 Key knowledge summary

16.2 Examining the evidence

- Pyramids, temples, tombs, mummies and artworks, such as tomb wall paintings, models and statues, provide a huge amount of archaeological evidence.
- Scholars have been able to read ancient Egyptian written primary sources since the code for hieroglyphs was broken in the nineteenth century.

16.3 The gift of the Nile

- Civilisation could never have developed in Egypt without the Nile.
- The annual flooding of the Nile provided fertile soil for farming.

16.4 The people of Egypt

- Egyptian society was layered like a pyramid.
- Most ordinary people were peasants but others were engaged in a variety of skilled occupations.
- Women had fewer rights than men but more rights than women in most other ancient societies.

16.5 Pharaoh rules!

- Pharaohs came from some 30 dynasties over ancient Egypt's long history.
- Pharaohs were believed to have god-like powers but also had vast responsibilities.

16.6 Gods and the afterlife

- Ancient Egyptians had many different gods.
- They believed in an afterlife and buried possessions they might need in that afterlife.
- Burial customs have provided most of our evidence for ancient Egypt.

16.7 Mummies unwrapped

- Mummification was carried out to preserve bodies so that a dead person's soul would have a home.
- Mummification was a complex process that was carried out with great care wherever possible.

16.8 Write like an Egyptian

- The ancient Egyptians were probably the first people to use writing after the Sumerians.
- Early hieroglyphs took a long time to produce so the Egyptians developed simpler, faster scripts.

16.9 Pyramid builders

- During the Old Kingdom, pyramids were built to house the mummies of pharaohs.
- The Egyptians built them with tools made of stone, wood and bronze.
- Because the contents of the pyramids were robbed, later pharaohs were entombed in the Valley of the Kings.

16.10 Tutankhamen, Akhenaten and Nefertiti

- Tutankhamen's tomb is highly significant because, unlike tombs of greater pharaohs, its contents had not been robbed.
- Before Tutankhamen's reign, Akhenaten carried out a religious revolution, decreeing that Egyptians must worship only Aten, above all other gods.
- Nefertiti was Akhenaten's first wife and a woman of great influence in ancient Egypt.

16.11 Expansion and fall

- Egypt's relations with other countries involved trade and war.
- During times of strength, Egypt drove out invaders and dominated other lands.
- During times of weakness and division, Egypt suffered invasions.

16.12 Rameses II — Egypt's greatest pharaoh?

- Rameses II has been regarded as Egypt's greatest pharaoh because of his military achievements and the monuments glorifying him.
- His greatness is contestable mainly because the evidence of it was constructed on his orders.

16.13 Egypt's heritage

- Archaeological treasures are Egypt's greatest legacies.
- There is ongoing archaeological work in Egypt and significant discoveries are continually being made.



16.16.2 Key terms

afterlife life after death
amulet charm believed to protect against evil
artisans skilled craftspeople
Asiatic peoples of Asia, including the Middle East
canopic jars jars used to store the liver, lungs, intestines and stomach of the person being mummified
civil war war between rival factions within one state or country
deities gods or goddesses
delta low, triangular area where a river fans out as it nears the sea
demotic script the simplest of the ancient Egyptian scripts, which was almost like handwriting
Great Pyramid the oldest and largest pyramid in Egypt; one of the Seven Wonders of the Ancient World
Great Sphinx monument with the body of a lion and the face of a man; located in Giza near the Great Pyramid
hieratic script Egyptian script that was less decorative and complex than hieroglyphs
Inundation the seasonal flooding of the Nile
mercenaries people who fight for a foreign country for money or other rewards
mummy body that has been embalmed
natron a mineral salt used to dry out dead bodies
papyrus paper made from crushing reeds
sarcophagus stone or wooden coffin (often inscribed or decorated) in Egypt
shadoof irrigation device used to lift water from the river
stalemate a situation in a contest or conflict in which neither side can defeat the other
Valley of the Kings gorge on the Nile in Upper Egypt that contains many royal tombs
vassal state a state whose ruler recognises another, more powerful ruler as his overlord

16.16.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Perplexing pyramids and mysterious mummies. What were the ancient Egyptians thinking?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views.

on Resources

eWorkbook
Customisable worksheets for this topic (ewbk-4292)
Reflection (ewbk-4405)
Ancient Egypt crossword 1 (ewbk-4402)
Ancient Egypt crossword 2 (ewbk-4404)
Ancient Egypt revision quiz (ewbk-4403)
Student learning matrix (ewbk-4394)

Interactivity
Ancient Egypt crossword (int-7693)

16.16 Review exercises

Multiple choice

1. In Egypt the Inundation was which of the following?
   - **A.** A temple
   - **B.** An annual period of flooding
   - **C.** A bucket used for irrigation
   - **D.** A writing tool
2. The Nile is formed by the joining of which two rivers?



   - **A.** The Murray and Darling
   - **B.** Green Nile and Yellow Nile
   - **C.** Red Nile and Black Nile
   - **D.** White Nile and Blue Nile
3. After the pharaoh, the next most powerful official was:
   - **A.** the president.
   - **B.** the prime minister.
   - **C.** the vizier.
   - **D.** the lord high executioner.

4. Skilled artisans in ancient Egypt included:
   - **A.** peasants and slaves.
   - **B.** stone masons and paper makers.
   - **C.** scribes.
   - **D.** nobles and priests.

5. Which of the following women ruled Egypt as pharaoh from 1479 to 1458 BCE?
   - **A.** Nefertiti
   - **B.** Cleopatra
   - **C.** Hatshepsut
   - **D.** Neber

6. The Great Pyramid was built during which of these periods of ancient Egyptian history?
   - **A.** The Old Kingdom
   - **B.** The First Intermediate Period
   - **C.** The Middle Kingdom
   - **D.** The Second Intermediate Period



7. In ancient Egypt, a woman's social rank depended on the rank of which of these?
   - **A.** Her mother and father
   - **B.** Her brother or sister
   - **C.** Her cousins
   - **D.** Her husband or son

8. Which of the following gods were associated with death, tombs and the afterlife?
   - **A.** Seth and Horus
   - **B.** Osiris and Anubis
   - **C.** Isis and Hathor
   - **D.** Amun-Ra and Thoth

9. When a body was mummified, where were most internal organs stored?
   - **A.** Refrigerators
   - **B.** Cupboards
   - **C.** Cellars
   - **D.** Canopic jars

10. The tomb of Tutankhamen was a significant archaeological find because:
    - **A.** Tutankhamen was a powerful pharaoh.
    - **B.** the tomb was enormous.
    - **C.** it was the only royal tomb that had not been robbed.
    - **D.** there was a curse on the tomb.

11. With which two groups did New Kingdom Egypt have wars?
    - **A.** Hyksos and Hittites
    - **B.** Greeks and Persians
    - **C.** Romans and Assyrians
    - **D.** Phoenicians and Israelites

12. With which two groups did Egypt trade?
    - **A.** Peoples of the Sea
    - **B.** Nubians and Phoenicians
    - **C.** Sumerians and Babylonians
    - **D.** Chinese and Indians

Short answer

13. Look closely at **SOURCES 1**. During the time of the Roman Empire this obelisk was taken from Egypt and placed in a public area in Constantinople (now Istanbul).

a. Referring to the symbols in subtopic 16.8, see if you can identify some of the hieroglyphs.

b. What does the transporting of this enormous obelisk from Egypt to Constantinople suggest about Roman attitudes to Egyptian culture?

SOURCE 1 A section of a huge Egyptian obelisk engraved in neat hieroglyphs



14. In subtopic 16.4 you read about Hatshepsut, who became regent of Egypt following the death of her husband, Thutmose II (who was also her half-brother). Hatshepsut was able to rule as regent because the heir, Thutmose III, was only three years old. But instead of handing over to the heir, Hatshepsut had herself crowned as pharaoh.

Use the internet and your library to find out more about Hatshepsut. Look particularly for images of her mortuary temple, which has nearly 200 statues and carvings glorifying her achievements. One inscription in the temple states that her father, Thutmose I, appointed her as his successor and ordered his subjects to obey her. Hatshepsut also claimed to be the daughter of the god Amun-Ra.

Using the information you have found, in about one page of writing:

a. identify the difficulties that would be faced by a woman trying to achieve such a position in ancient Egyptian society

b. explain why Hatshepsut would have found it necessary to make claims involving her father and a god to support her right to the throne

c. evaluate her right to be considered a most significant individual in the history of ancient Egypt.



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 16 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

16.1 Overview

eWorkbook
- Ancient Egypt Timeline exercise (ewbk-4571)

Video eLesson
- Ancient Egypt (eles-1835)

Interactivity
- Interactive timeline (int-4293)

16.3 The gift of the Nile

My World History Atlas
- Overview > Early river civilisations
- Overview > Early urban civilisations

16.7 Mummies unwrapped!

Interactivity
- Instructions to a priest for preparing a mummy (int-5977)

16.9 Pyramid builders

Interactivities
- The pyramids at Giza are the only remaining 'wonder' of the Seven Wonders of the Ancient World (int-5978)
- Inside the Great Pyramid (int-5979)

16.10 Tutankhamen, Akhenaten and Nefertiti

Interactivity
- The discovery of Tutankhamen's tomb (int-5980)

16.11 Expansion and fall

My World History Atlas
- The Mediterranean world > Egypt — the Old Kingdom
- The Mediterranean world > Egypt — the Middle Kingdom
- The Mediterranean world > Egypt — the New Kingdom

16.15 Thinking Big research project: Ancient Egyptian archaeological excavation

ProjectsPLUS
- Ancient Egyptian archaeological excavation (pro-0228)

16.16 Review

eWorkbook
- Reflection (ewbk-4405)
- Ancient Egypt crossword 1 (ewbk-4402)
- Ancient Egypt crossword 2 (ewbk-4404)
- Ancient Egypt revision quiz (ewbk-4403)
- Crossword (doc-32121)
- Student learning matrix (ewbk-4394)

Interactivity
- Ancient Egypt crossword (int-7693)

To access these online resources, log on to **www.jacplus.com.au**.

17 Ancient Greece

17.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Spartans, the Olympics and the birth of democracy. Was ancient Greece the happening place to be?

17.1.1 Links with our times

In 2004, the Summer Olympic Games, officially known as the XXVIII Olympiad (28th Olympiad), were held in Athens, the capital of modern Greece. Its motto, 'Welcome Home', was chosen because Greece was the birthplace of the Olympics. According to Greek tradition, the first ancient Greek Olympics were staged in 776 BCE. As we will see in this topic, the Olympics are far from being our only legacy from Greece. Greeks have settled in many places, bringing their culture with them. More people of Greek descent live in Melbourne than in any city except Athens. Much more importantly, many ancient Greek ideas were handed down to the present through other cultures. Ancient Greek influences are all around us.

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-4293) Ancient Greece Timeline exercise (ewbk-4573)
Video eLesson	Ancient Greece (eles-1836)

SOURCE 1 Statues called caryatids on the Acropolis, Athens, Greece



int-4294

SOURCE 2 A timeline of ancient Greece















BCE

3000 — **c. 3000** The Minoan civilisation develops on Crete.

1500

1400 — **c. 1400–1200** The Great Age of Mycenae flourishes.

1300

1200

1100 — **c. 1150** The Greek 'Dark Ages' (to c. 750): Many Greeks migrate from the mainland to the Aegean islands and the coast of Asia Minor.

1000 — **c. 1000** Dorians settle in Sparta and other Mycenaean sites.

900

800 — **c. 800** The Greek alphabet is developed.

700 — **c. 750** The Greek archaic period (to c. 490)

600 — **c. 490** Greek Classical Age (to c. 323): a period of great achievements in art, literature and drama

500 — **508** Democracy is introduced in Athens.

490 The Persian Wars begin.

460–445 The First Peloponnesian War.

400 — **431–404** The Peloponnesian War is waged between alliances led by Athens and Sparta.

403–371 Sparta dominates the Greek world.

300 — **336** Alexander the Great becomes ruler of Greece.

371 The Thebans defeat the Spartans.

200

334 Alexander the Great invades the Persian Empire.

100 — **146** The Romans conquer Greece.

0

CE

17.2 Examining the evidence

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the archaeological and written sources for ancient Greece and explain the gaps in our knowledge.

17.2.1 How do we know about ancient Greece?

Every year millions of people visit Greece to marvel at the many surviving traces of its ancient civilisation. These include the shells of magnificent buildings such as the Parthenon and Erechtheion on the **Acropolis** of Athens, and the National Archaeological Museum, which holds the world's largest collection of ancient Greek artefacts. They also visit the extensive ruins of the original Olympic Games at Olympia and other sites, such as the god Poseidon's temple at Sounion and the sanctuary at Delphi, which the ancient Greeks called the 'navel of the Earth'. There are also great collections of Greek art in other parts of the world, including the famous Parthenon Marbles, which were taken from the Parthenon by the British diplomat Lord Elgin more than two hundred years ago and are now displayed in the British Museum in London.

acropolis stronghold on high ground in an ancient Greek city-state

SOURCE 1 Some of the many marble sculptures that once adorned the Parthenon in ancient Athens



SOURCE 2 Mycenaean soldiers painted on pottery. Mycenae was the earliest civilisation on the Greek mainland.



SOURCE 3 A theatre mask used in performances of plays in ancient Athens. Beside the mask you can see the excavated remains of an ancient Greek amphitheatre in Aphrodisias on the Turkish coast. It was in open-air theatres like this that ancient Greek actors performed wearing such masks.





Written sources

The Greeks also left many written records. Ancient Greek writers are still read today. Among the best known are the works of the epic poet Homer, the historians Herodotus (c. 484–425 BCE) and Thucydides (c. 460–403 BCE), the philosophers Plato (c. 428–348 BCE) and Aristotle (c. 384–332 BCE), and playwrights such as Sophocles (c. 495–405 BCE). Their works and other written records add much to our understanding of ancient Greece.

SOURCE 4 Part of the ancient Greek temple called the Parthenon, viewed from below the Acropolis of Athens



17.2 ACTIVITY

Design a theatre mask to represent a different kind of character from the one depicted in **SOURCE 3**. Use plasticine or other suitable material to make this mask.

HASS skills: Communicating and reflecting
History concepts: Sources, Evidence

17.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6	Questions 2, 5, 7	Questions 3, 8, 9, 10

Check your understanding

1. What is the main reason that millions of people visit Greece each year?
2. Name an ancient Greek writer whose works are still read today.
3. Where were the original Olympic Games held?
4. What was the earliest civilisation on the Greek mainland called?
5. Who was Herodotus?

Apply your understanding

6. Look closely at **SOURCE 1**.
   a. Describe the details of the scene depicted in this sculpture.
   b. What opinion could you form from this source about the artistic skills of ancient Greek sculptors?
   c. Use this source to develop a hypothesis about the wealth and values of ancient Athens.
7. What do you think we might learn from **SOURCE 2** about:
   a. the skills of Mycenaean potters
   b. the arms and armour of Mycenaean soldiers?
8. What kind of character do you think the mask shown in **SOURCE 3** was meant to represent?
9. Look closely at the building in the top left of **SOURCE 4**. Describe a feature of this ancient building that you recognise as having influenced the style of many modern-day public buildings.
10. Write a short summary of what you have discovered about ancient Greece from these four sources.

For sample responses to every question, go to www.jacplus.com.au.

17.3 The Minoans and Mycenaeans

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the first ancient Greek civilisation, the Minoans, and the Mycenaeans, who conquered them around 1375 BCE.

17.3.1 Minoan civilisation

Civilisation in Greece began before 3000 BCE when people started to grow crops and herd animals on Crete, the largest of the Greek islands. The archaeologist Arthur Evans was the first to excavate their cities. He called these people Minoans after their legendary King Minos. During the fourteenth century BCE, their peaceful civilisation appears to have been overrun by the more warlike Mycenaeans of mainland Greece.

By about 2500 BCE the Minoans had built towns. They had also learned to make tools, weapons and ornaments from bronze and to create beautiful pottery. The main Minoan city, Knossos, dates from about 1900 BCE. The walls of the buildings in Knossos were decorated with scenes of Minoan life, including athletes leaping and performing acrobatics on the backs of wild bulls (see **SOURCE 1**).

SOURCE 1 A fresco (wall painting) from Knossos showing young Minoan men and women leaping on the back of a bull

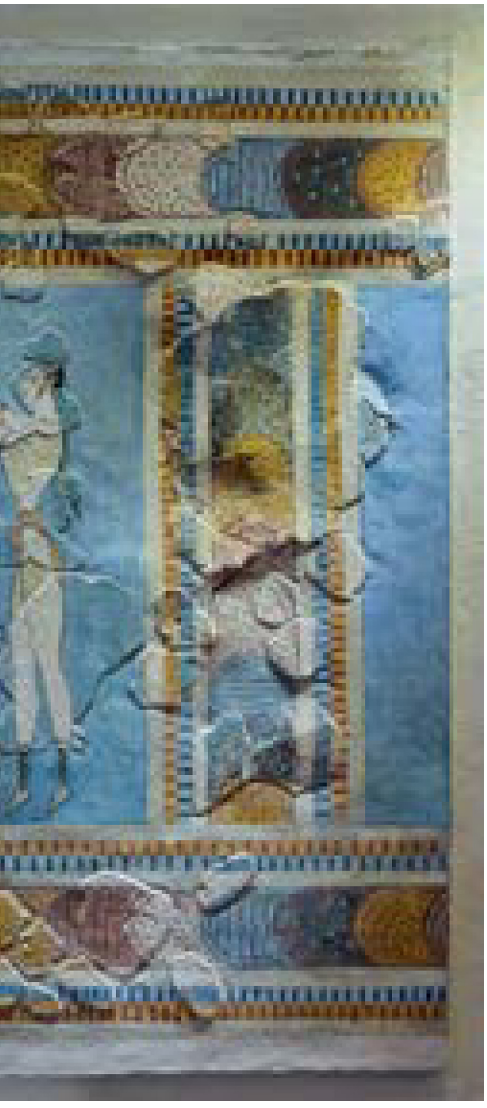


Around the time that Knossos was built the Minoans were building palaces, and most Minoans were living in large coastal towns. These were probably centres of their extensive sea trade. There is evidence that the Minoans set up trading bases on several Greek islands and exchanged goods with Egypt, Syria and other civilisations. The Minoans used a written language we call Linear A. It disappeared suddenly about 1450 BCE and it is still not understood. Around 1700 BCE the Minoan cities were destroyed following the eruption of a volcano on the island of Santorini, which triggered a massive tsunami. The cities were rebuilt but were destroyed again by earthquakes in about 1450 BCE.

17.3.2 The Mycenaeans

Most archaeologists believe that by about 1375 BCE, Mycenaean invaders from small kingdoms such as Mycenae, Athens and other hilltop cities on the Greek mainland had conquered the Minoans. Mycenaean civilisation flourished between about 1400 BCE and 1200 BCE. The Mycenaeans were great seafarers and traders and were highly skilled in the use of bronze. They appear to have copied some aspects of Minoan culture. The warrior ruling class lived in palaces and enjoyed music, dancing and sport.

The Mycaenaeans spoke an early form of Greek. Their written language, which we call Linear B, has been translated since its code was cracked in 1952. The earliest Mycenaean stories to appear in written sources are Homer's *Iliad* and *Odyssey*. These epic poems had been handed down by word of mouth for centuries before they were written down. The *Iliad* tells the story of how in about 1200 BCE the Mycenaeans laid siege to, and finally captured and destroyed, the city of Troy in Anatolia (present-day Turkey).



SOURCE 2 Crete, Greece and Egypt at the time of the Minoan and Mycenaean civilisations



Source: Map drawn by Spatial Vision.

Homer's *Iliad* and the Trojan War

The story told in the *Iliad* is so popular that it has been told and retold, even by Hollywood in a twenty-first century movie. Whether any part of the story is true is still a mystery. Some archaeological discoveries have only added to the debate. The story was probably passed down by storytellers for three centuries before it was recorded in writing by Homer. Homer is believed to be a Greek who lived in the eighth century BC. However, some scholars think that his poems were the work of several people.

As the *Iliad* tells the story, there are several main characters. Among them are:

- Agamemnon, the king of Mycenae
- Menelaus, the king of Sparta and brother of Agamemnon
- Helen, the wife of Menelaus
- Priam, the king of Troy
- Paris, son of Priam
- Odysseus, a Mycenaean warrior hero.

According to the *Iliad*, the war started because Paris abducted Helen and took her to Troy. As Homer tells the story, Agamemnon gathered a great Greek navy and led a ten-year siege of Troy that included huge battles outside the city's walls. Troy was finally defeated by Mycenaean trickery. Pretending to have given up the siege, the Greeks left a giant wooden horse with their hero Odysseus and about twenty other warriors hidden inside. Seeing that the Greeks had sailed away, the Trojans thought that the Greeks had left the horse as a gift. After the rejoicing Trojans dragged the horse into the city, Odysseus and his companions crept out and opened the city gates for the returning Greeks, who seized and destroyed Troy.

SOURCE 3 A scene from one of the wall paintings found at Tiryns, a Mycenaean site from the fourteenth to thirteenth centuries BCE



Fact or fiction?

Even in ancient times the truth of the *Iliad* was doubted (see **SOURCE 4**). Until the late nineteenth century CE, the story was thought to be simply a myth. Then, in 1870, a German amateur archaeologist, Heinrich Schliemann, began digging on what he believed was the site of ancient Troy. He used the *Iliad* to help find its location and he discovered the ruins of a city that could have been Troy (see **SOURCE 5**). However, later excavations showed that the level Schliemann identified as Troy was hundreds of years too early.

SOURCE 4 From *The Histories*, written by the ancient Greek historian Herodotus (c. 484–425 BCE)

... had Helen really been in Troy, she would have been handed over to the Greeks with or without Paris' consent; for I cannot believe that either Priam or any other kinsman of his was mad enough to be willing to risk his own and his children's lives and the safety of the city, simply to let Paris continue to live with Helen.

SOURCE 5 At Canakkale, about 300 km south-west of Istanbul in Turkey, Schliemann dug up these city ruins. Later excavations have shown that the site contains ruins of nine different settlements, built one on top of the other.



The Mask of Agamemnon?

Four years later, Schliemann excavated Mycenae to find the grave of Agamemnon. He found at least five royal graves filled with gold and other treasure. His most exciting finds were several gold masks, including one pictured in **SOURCE 6** that became known as the 'Mask of Agamemnon'. Many archaeologists doubt that this really is Agamemnon's death mask for several reasons:

- Schliemann had a record of faking archaeological finds and he could have had the mask made.
- The grave where the mask was found is about 300 years earlier than the supposed date of the Trojan War.
- The 'Mask of Agamemnon' looks very different from the masks, including **SOURCE 7**, found covering the remains of other Mycenaean chieftains.

There is still no clear evidence that the Trojan War really happened or that the grave Schliemann unearthed at Mycenae was in fact the grave of King Agamemnon.

SOURCE 6 The gold 'Mask of Agamemnon'. Heinrich Schliemann claimed to have found it in 1876 when he excavated graves in Mycenae. It is held in the National Archaeological Museum, in Athens.



SOURCE 7 Another Mycenaean gold mask from excavated graves in Mycenae, now held in the National Archaeological Museum, in Athens



17.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4, 5, 8, 12	Questions 2, 6, 9, 13, 15, 17	Questions 7, 10, 11, 14, 16, 18

Check your understanding

1. Describe the achievements of Minoan civilisation by around 1700 BCE.
2. What appears to have caused the collapse of Minoan civilisation?
3. Who were the Mycenaeans?
4. What role might the Mycenaeans have played in the destruction of Minoan Crete?
5. According to legend, what caused the Trojan War?
6. How did the Mycenaean Greeks win the Trojan War?
7. What was the main effect of the Trojan War?

Apply your understanding

8. List the main events in the rise and fall of Minoan civilisation in chronological order.
9. Study **SOURCE 1**.
   a. Describe what is depicted in this Minoan wall painting.
   b. Do you think the Minoans did such things for sport or could there be another explanation for the scene? Give reasons for your answer.
10. Referring to **SOURCE 2**, explain how the location of Crete would have helped the Minoans to trade with other civilisations and how the Minoans would have benefited from trade.
11. Analyse **SOURCE 3**. What might it be possible to say about Mycenaean art and everyday life, using it as your evidence?
12. In **SOURCE 4**, what does Herodotus doubt about the account of the Trojan War in the *Iliad*?
13. The *Iliad* was an epic poem, whereas Herodotus was trying to write history. How would this have led to him taking a different perspective on the cause of the Trojan War?
14. Why is it likely that the walls in **SOURCE 5** are not the walls of ancient Troy?
15. Compare **SOURCES 6** and **7**.
   a. Describe the features of the mask in **SOURCE 6**.
   b. Describe the features of the mask in **SOURCE 7**.
   c. If both of these masks were really found in the graves at Mycenae, why do you think a decision was made to call **SOURCE 6** rather than **SOURCE 7** the mask of Agamemnon?
16. Choose two sources in this subtopic and determine three questions you would ask about each of them to assess their accuracy, reliability and usefulness for a study of Minoan and/or Mycenaean history.
17. Why do you think other archaeologists and historians have contested Heinrich Schliemann's interpretation of his findings about Troy and Agamemnon?
18. Describe the main changes that took place in the ancient Greek world between 3000 BCE and 1200 BCE.

For sample responses to every question, go to www.jacplus.com.au.

17.4 The 'Dark Age' to the Archaic Period

LEARNING INTENTION

By the end of this subtopic, you will be able to identify the geographical features of Greece and explain how they influenced the development of Greek civilisation from about 1150 BCE to 490 BCE.

17.4.1 The influence of geography

From their heavily fortified cities, the Mycenaean kings dominated the south of Greece from around 1600 BCE to 1200 BCE. But soon after 1200 BCE, Mycenaean culture suffered a sudden and violent collapse. This was followed by the Greek 'Dark Age', which lasted almost four hundred years. We know very little about ancient Greece between 1150 BCE and the development of the Greek alphabet around 800 BCE.

SOURCE 1 The origins of Greece



Source: Map drawn by Spatial Vision.

What we do know is that the landscape, climate and natural resources of Greece had a huge influence on its civilisations in this period and later. As you can see in **SOURCE 1**, 75 per cent of the Greek mainland is mountainous. This meant that settlements were isolated from each other, overland travel was difficult and only about 20 per cent of the land was useful for farming. This caused the Greek settlements to turn to the sea for contacts and trade.

Ancient Greece had long, hot summers and short, cool and wet winters. Rainfall was unreliable and long droughts could cause hunger, but floods could also destroy food crops. However, soils in many of the valleys were suitable for growing barley, oats and some wheat, while the uplands provided slopes for grazing sheep and goats and growing grapes and olives. Most ancient Greeks were small farmers who lived in small villages. They provided the staples of the Greek diet — bread, wine and olive oil — as well as products from the herds — wool, skins, cheese and occasionally meat.

Trade

Although sudden storms made sea travel in ancient times very dangerous, the Greeks also relied on the sea for trade in bronze, timber and other materials they lacked. Some wheat also had to be imported because from around 600 BCE, the Greek population increased and wheat did not grow well in the steep terrain and limestone soils. The Greeks imported it and other foods from Egypt, southern Italy and around the Black Sea. They exported olive oil, wine and pottery.

17.4.2 The development of the Greek city-states

The Greek 'Dark Age', c. 1150–750 BCE

The period from about 1150 to 750 BCE is called the Greek 'Dark Age' partly because very little is known of it. Mycenaean palaces were looted and burned and nearly all the Mycenaean fortresses except Athens were abandoned. We do not know who the attackers were. Until the late twentieth century, historians mostly agreed that they were **Dorians** from northern Greece. Among these Dorians were people who settled in villages at the site of Sparta around 1000 BCE. However, archaeological evidence suggests that the Mycenaean kingdoms had collapsed before the Dorians moved south.

During the Dark Age, the art of writing was lost, trade collapsed and central government disappeared. A consequence was a lack of evidence for this period. Another important Dark Age development was the migration from around 1050 BCE of mainland Greeks to the Aegean islands and the coast of Asia Minor (modern-day Turkey). According to Greek legends, these

Dorians tribes from the north of Greece who moved into the south during the Dark Age

SOURCE 2 An archaeological excavation at the site of an ancient Greek settlement in what is now the Black Sea port of Odessa, in Ukraine



SOURCE 3 Athens today as seen from its port, Piraeus. The arid mountains in the background are typical of Greece.



migrants included people fleeing from the Dorians. Around the same time, the **Iron Age** reached Greece which meant the beginning of tool and weapon manufacturing using iron.

The Archaic Period and the rise of the polis

The time between c. 750 and 490 BCE is called the Archaic Period. It describes the time leading up to the Classical Period. Many changes took place in the Greek world. **Pan-Hellenic** institutions, such as the Olympic festivals, came to express a common Greek culture. Around 750 BCE, Greeks set up colonies in southern Italy, Sicily and even as far away as the Black Sea. This was probably because of a growing shortage of farming land on the dry, rocky mainland. By the early seventh century BCE, throughout the Greek mainland, islands and colonies, a new kind of state developed. Greeks formed **poleis** — independent, self-governing city-states such as Athens, Sparta, Corinth and Thebes that often fought each other for territory.

Iron Age period in which people learned to use iron to make tools and weapons
pan-Hellenic for all the Greeks
polis (plural **poleis**) ancient Greek city-state

17.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 4, 7	Questions 5, 8, 9

Check your understanding

1. Complete the following paragraph by selecting the correct words from the list: sea; fifth; unreliable; mountainous; isolated; hot.
   The type of civilisation that developed in ancient Greece was influenced by the _____ landscape, _____ summers and _____ rainfall. Only a _____ of the land was good for farming. Because Greek settlements were _____ from each other, the Greeks used the _____, despite the risk of dangerous storms.
2. What is meant by the Greek 'Dark Age'?
3. What became of the Mycenaean cites and writing in this period?
4. To which areas did Greeks migrate during the Dark Age?

Apply your understanding

5. Look closely at **SOURCE 1**.
   a. How much of Greece is mountainous and how would that have affected farming and travel by land?
   b. Why is the Greek coastline very long relative to the size of Greece?
   c. How would these geographical features have encouraged many Greeks to emigrate from Greece?
6. Look closely at **SOURCE 2**. What four questions would you ask about its usefulness and reliability as evidence for the establishment of ancient Greek colonies?
7. Athens (see **SOURCE 3**) was an ancient Greek city-state and is the capital of modern Greece. Describe the landscape of its surroundings.
8. Using all of the sources in this subtopic as evidence, explain why Greece became a country of independent, self-governing city-states that often fought each other.
9. Describe the broad changes that occurred in Greece between c. 1200 and 490 BCE.

For sample responses to every question, go to www.jacplus.com.au.

17.5 Government in Athens and Sparta

LEARNING INTENTION

By the end of this subtopic, you will be able to explain the different systems of government that developed in Athens and Sparta.

17.5.1 Athens — the roots of democracy

Athens and Sparta were the two most powerful city-states in ancient Greece. They had many things in common with other ancient Greek city-states. For example, they generally worshipped the same gods and used the same language and alphabet. However, city-states had their own laws and traditions and their own ruling systems.

Greek city-states (or poleis) were originally ruled by kings. Later, most came under the control of **oligarchies**. From the seventh century BCE, many poleis were for a time led by absolute rulers called tyrants who, all the same, often carried out reforms to win popular support. In most cases the aristocrats (oligarchs) eventually regained power. Then in 508 BCE, Athens introduced a new system of government called **democracy**.

Democracy in Athens was well-established by the fifth century BCE. Athenian citizens decided how their city-state would be run. At meetings of the governing assembly (called the *Ecclesia*), they voted on laws and elected officials. Membership of the Council of 500 and jury courts was rotated. This meant that all citizens could participate, and no-one became too powerful. In fact, someone suspected of trying to grab power could be ostracised. **Ostracism** meant that if 6000 citizens spoke up against a man, he could be exiled from Athens for 10 years. Citizens expressed their concern by scratching the man's name on a piece of broken pottery called an *ostrak on*.

oligarchy governing council of rich aristocrats

democracy a political system according to which citizens choose the way in which they are governed

ostracism the punishment of being banished from Athens

metic free man living in Athens but not born there; could not vote or own property but served in the army and paid taxes

But was it democratic?

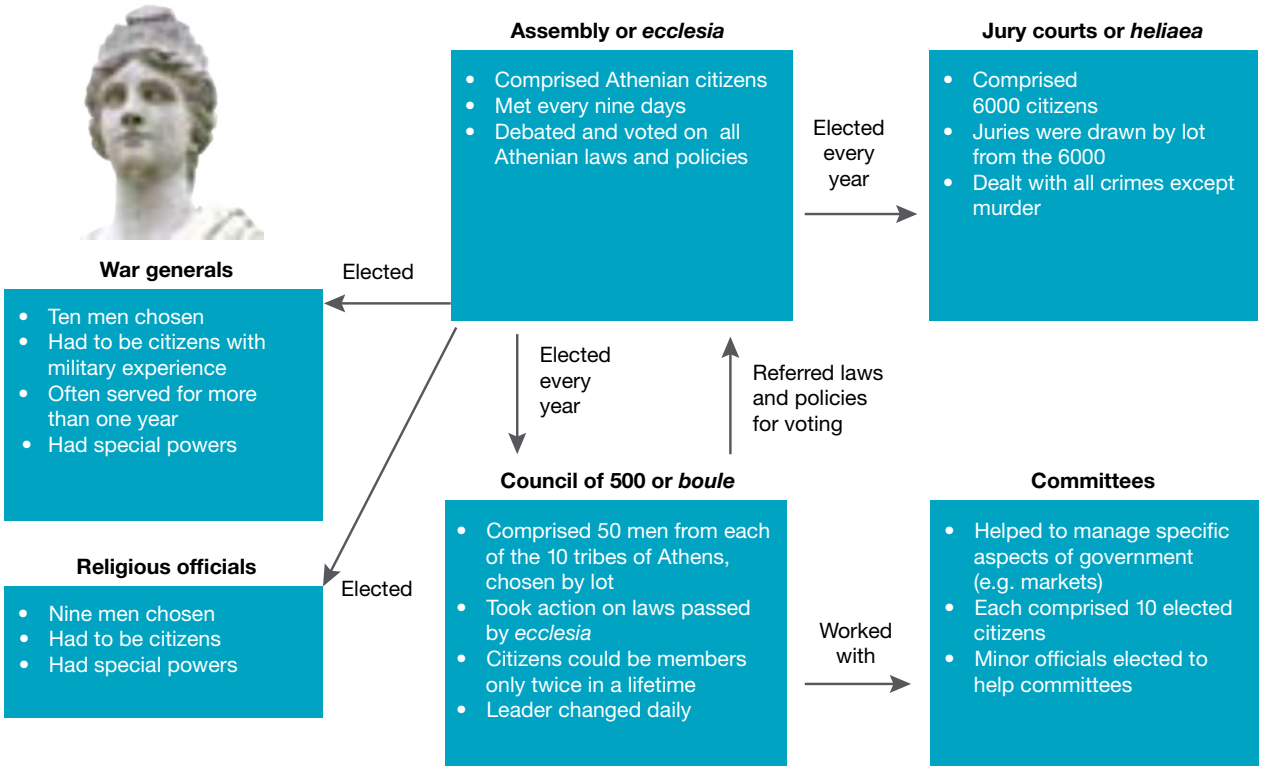
In Athens, as in Australia, only adult citizens could vote. In Australia today, most people who live here are citizens. However, during the fifth century BCE only about 45 000 of Athens' population of around 300 000 were citizens. Women and children (who made up nearly half the population), **metics** (who made up about 12 per cent) and slaves (who made up about 25 per cent) could not take part in the democratic process.

DID YOU KNOW?

All citizens were able to participate personally in the government of Athens because the citizen population was fairly small. Each citizen could discuss and vote on Athenian laws. They could also be elected to work as public officials on a fair, rotational basis. This sort of democracy is called direct democracy.

The form of democracy in Australia is called representative democracy. Australian citizens aged over 18 vote for politicians who they believe will best represent their or the community's interests. Generally, these representatives belong to political parties. The party or coalition winning most of the 151 seats in the federal House of Representatives forms the federal government. The main losing party or parties form the Opposition, whose role is to critically review what the government does. The Senate comprises 76 people — 12 from each state of Australia and two from each territory. Its role is to protect state interests.

SOURCE 1 Government in Athens



SOURCE 2 Painting of Athenian Assembly after the death of Pericles in 429 BCE



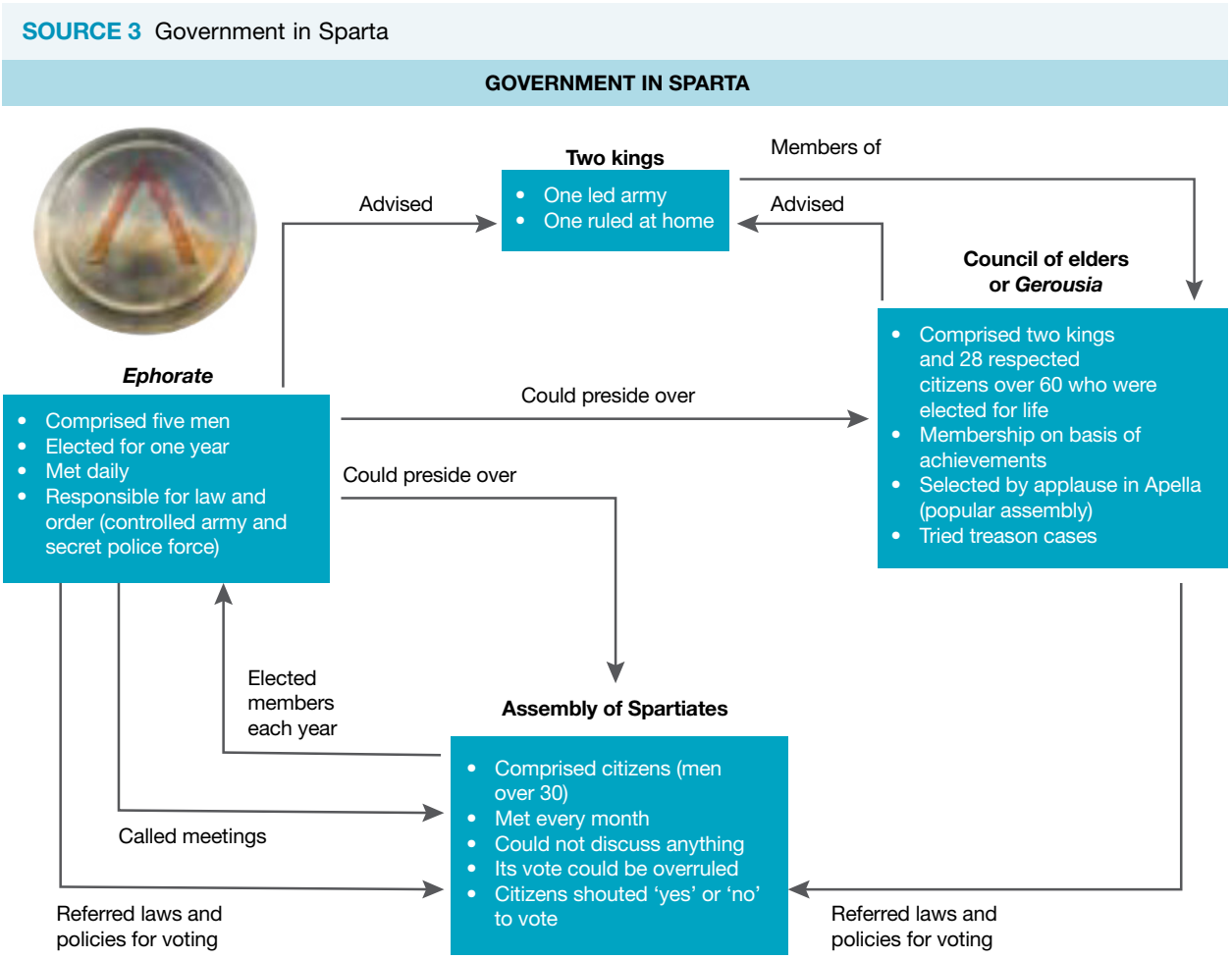
17.5.2 Spartan rule

Dorians settled at the site of Sparta around 1000 BCE. During the eighth century BCE, Sparta took control of the Laconian plain and conquered neighbouring Messenia. The Spartans made most Laconians and Messenians slaves, called **helots**, whom they controlled brutally.

Initially, Sparta was ruled by two kings who inherited their position. By about the end of the seventh century BCE, the government had become an oligarchy. Most power was in the hands of a few families who controlled the **Ephorate** and dominated the council of elders. These two bodies decided what laws and policies the Spartan citizens in the Assembly of Spartiates would vote on. Citizens could not discuss these matters. They could only shout 'yes' or 'no' to a proposal. Even if they voted 'no', this decision could be overruled.

helot slave of the Spartan state
Ephorate five-man ruling body in Sparta that advised the kings

SOURCE 3 Government in Sparta



DISCUSS

In history, we use arguments to interpret and explain the past, including how events caused changes. But we have to be careful to ensure that our reasoning is sound.

Is the reasoning sound in the following statements? Why or why not?

Statement 1: Spartan women had more rights than most other women in ancient times.

Statement 2: The modern women's rights movement, called feminism, emerged in the second half of the twentieth century.

Conclusion: Feminism came from ancient Sparta. **General capability: Critical and creative thinking**

17.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 8	Questions 2, 6, 9, 10	Questions 4, 7, 11, 12

Check your understanding

1. What did the ancient Greek city-states have in common?
2. When did Athens introduce a system called democracy?
3. What percentage of the population of Athens were citizens?
4. Why could citizens be ostracised and what happened to them?
5. What was the effect of the Spartan conquest on the Messenians?
6. Around what time did Sparta become an oligarchy and what did that mean?

Apply your understanding

7. In chronological order, list the three forms of government that existed in many Greek city-states before Athens introduced democracy. What were the differences between these forms of government?
8. Using **SOURCE 1**, explain the difference between the Assembly and the Council of 500.
9. Describe the scene in **SOURCE 2** and suggest what impression it gives of the character of the Athenian Assembly meetings.
10. Examine **SOURCE 3**.
    a. Explain who could be Spartan citizens.
    b. Describe powers held in Sparta by each of the following institutions: the Ephorate, the Gerousia and the Assembly.
11. Using **SOURCES 1** and **3** and other information in this subtopic, identify whether the following statements are true or false.
    a. In Athens, all citizens voted on laws. In Sparta, citizens (Spartan men aged over 30) could vote but their vote could be overruled.
    b. Ordinary citizens had more power in Sparta than in Athens.
    c. In both Athens and Sparta, women, slaves and non-citizens did not have the rights of citizens.
12. Use the internet to find archaeological sources from Athens and Sparta. Develop a hypothesis to suggest why there are many from Athens and so few from Sparta.

For sample responses to every question, go to www.jacplus.com.au.

17.6 Everyday life in Sparta

LEARNING INTENTION

By the end of this subtopic, you will be able to identify how Sparta became a military state, and describe how Spartan men and women lived.

17.6.1 A strong city-state

After brutally putting down a slave revolt in about 650 BCE, Sparta became a military state, and it remained so for the next 300 years. Culture and art were no longer valued, and luxuries were despised. The main role of a Spartan man was to be a brave warrior, while the main role of a Spartan woman was to bear strong children.

SOURCE 1 As the Greek writer Plutarch notes, the main aim of boys' education was to teach them to be fierce, disciplined soldiers.

The boys learned to read and write no more than was necessary. Otherwise their whole education was aimed at developing smart obedience, perseverance under stress and victory in battle. So as they grew older they intensified their physical training, and got into the habit of cropping their hair, going barefoot and exercising naked. From the age of twelve they never wore a tunic, and were given only one cloak a year. Their bodies were rough, and knew nothing of baths or oiling.

Like many settlements in ancient Greece, Sparta was a city-state. This means it was a fortified centre surrounded by a town community and farmlands. The farmlands provided the produce that people needed to survive. Like all city-states, it had its own laws and form of government. The city-state of Sparta became very powerful because it was the only one with a permanent army.

A tough life

Sparta soon dominated the **Peloponnese peninsula**. But life in Sparta was harsh. Ancient Greek writers claimed that weak or sickly male babies were abandoned on a hillside to die of exposure. However, recent archaeological evidence casts some doubt on this story.

Boys left home at the age of seven to start their military training in barracks. Everything was geared to protecting the state — personal needs did not matter.

Spartan women

Spartan women could not become citizens, vote or hold public office. However, they could own land and represent themselves in court. There is evidence that Spartan women came to own about a third of Sparta's land and wealth because so many Spartan men were killed in battle. Like boys, they were taught to be brave and outspoken.

Women wore plain clothing, cut their hair short and did not wear perfume, makeup or jewellery. They trained to keep fit, and exercised and danced naked. Their role was to bear healthy children and to be tough for their men.

Such great importance was placed on producing Spartan children that it influenced the way Spartans viewed death and funerary customs. The most honourable death for a Spartan man was to die in battle. Along with men who died in battle, women who died in childbirth were the only Spartans who were permitted to have their names on tombstones.

17.6.2 The helots and the perioeci

Unlike slaves in other Greek states, the helots were not owned by individuals. They were the property of the Spartan state, which allocated families of helots to farm the land set aside for each Spartan. Because the helots greatly outnumbered them, the Spartans lived in fear of a helot rebellion. It was probably this fear that led the Spartans to cruelly control the helots and to adopt a system that made Sparta such a harsh military state.

The **perioeci** were descended from Dorian tribes who settled in other areas around Sparta. Though perioeci men had to serve in Sparta's army if required, they were otherwise free. They were mainly craftspeople and merchants — occupations forbidden to the elite Spartans.

How did the helots react to enslavement?

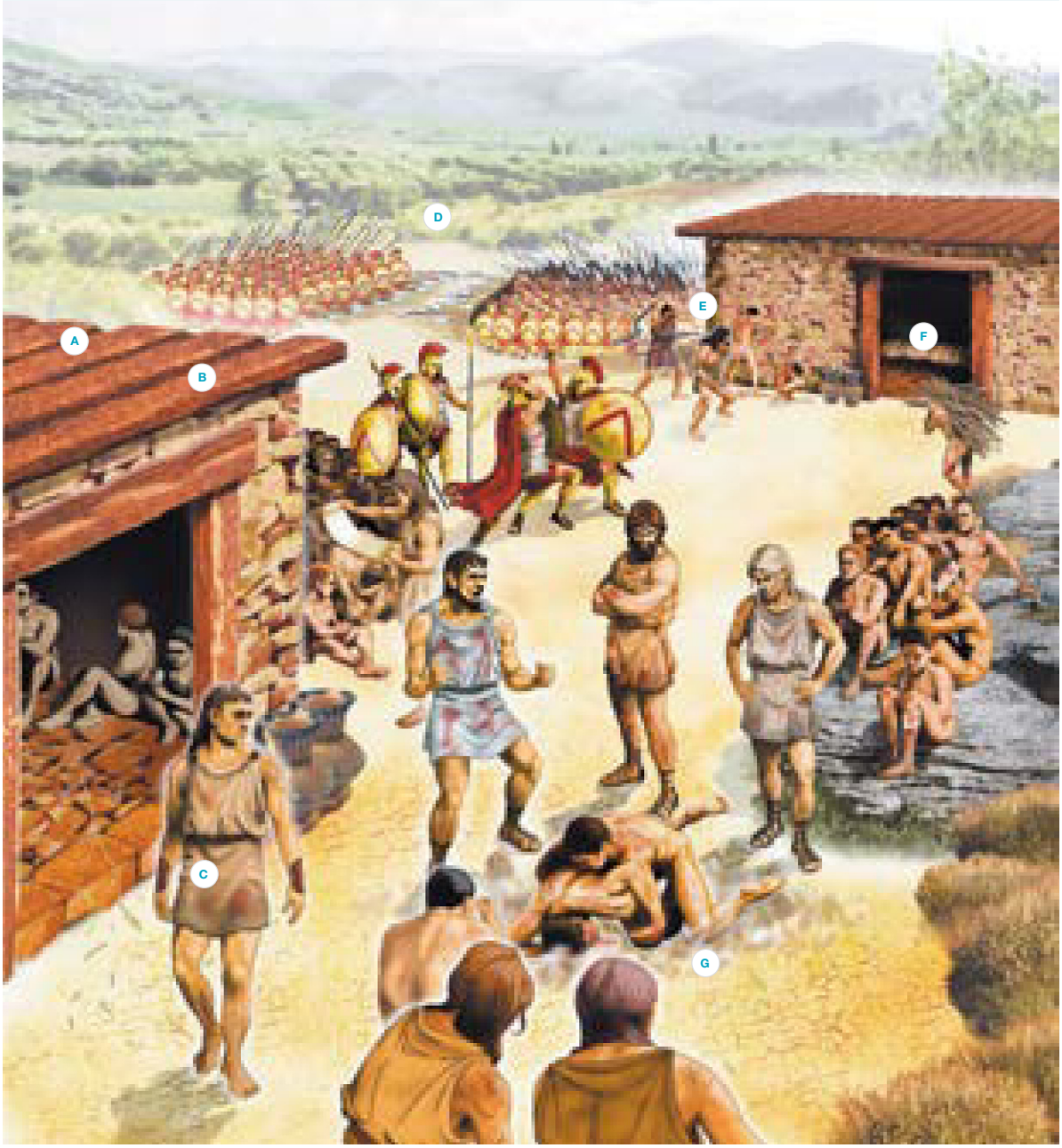
When the Spartans conquered the Messenians, reducing them to the status of slaves, it was this slavery that made the Spartan way of life possible. Spartans could only be full-time soldiers because their state provided each Spartan family with sufficient helots to work their land and to provide those families with the produce they needed.

Peloponnese peninsula the southern part of mainland Greece, joined to the north by the narrow Isthmus of Corinth

perioeci peoples of Laconian towns around Sparta who could be required to fight for Sparta but were not citizens

int-5983

SOURCE 2 Spartan males lived a harsh and disciplined life, much of which was spent in military camps.



A The army barracks and other Spartan settlements had no walls.

B Even after they married, Spartan men still ate in the army barracks as a member of a mess. To become a citizen, a man had to be a member of an army mess.

C Men lived in military camps until they were 30, when they could become a citizen and marry.

D Spartan soldiers grew their hair long and usually wore little clothing. However, when fighting or training, they wore armour and bright red cloaks. When in their phalanx formation, they stood close together, with shields touching and their spears jutting straight out ahead.

E Boys were often flogged to teach them to put up with pain and develop their courage. Being caught stealing was severely punished — though stealing itself was accepted.

F Beds were a bundle of long reeds, cut from the riverbanks, and laid on the floor.

G In the military camps, boys and young men exercised, played war games and learned about Sparta's rules of conduct. The boys enjoyed no 'home comforts' and discipline was very harsh.

Evidence suggests the Messenian helots never lost the will to regain their freedom. They rebelled against Sparta around 650 BCE and again in 464–459 BCE. It is likely that the methods used by the Spartans to suppress the helots made the helots even more rebellious. The Spartan Ephorate ran a secret police force called the Krypteia. It recruited young Spartans and sent them out for a year to spy on the helots. They were authorised to kill helots, especially those who appeared to have the kinds of qualities that might fit them to lead a helot rebellion (see **SOURCES 3** and **4**).

SOURCE 3 A description of the treatment of helots, by the ancient Greek writer Plutarch (c. 46–120 CE)

The magistrates dispatched privately some of the ablest of the young men into the country, from time to time, armed only with their daggers... they... killed all the Helots they could light upon; sometimes they set upon them by day, as they were at work in the fields, and murdered them...

Aristotle, in particular, adds, that the ephori, [ephors] so soon as they were entered into their office, used to declare war against them [the helots], so that they might be massacred without a breach of religion.

SOURCE 4 A description of the treatment of helots who had fought for Sparta against Athens in 424 BCE, by the ancient Greek writer Thucydides (c. 460–403 BCE)

The Helots were invited by a proclamation to pick out those of their number who claimed to have most distinguished themselves against the enemy, in order that they might receive their freedom; the object being to test them, as it was thought that the first to claim their freedom would be the most high-spirited and the most apt to rebel. As many as two thousand were selected accordingly, who crowned themselves and went around the temples, rejoicing in their new freedom. The Spartans, however, soon afterwards did away with them, and no-one ever knew exactly how each one of them perished.

How have historians explained Sparta's treatment of the helots?

Our only ancient sources for Sparta are a few archaeological traces and the writings of several ancient Greeks, including Herodotus and Thucydides. Almost none of our ancient written primary sources were created by Spartans and none by helots. Yet an enormous number of books and articles have been written about ancient Sparta by historians using the little evidence that exists. **SOURCES 5** and **6** are two examples.

SOURCE 5 An account of Spartan motives for suppressing the helots, from Sarah B. Pomeroy, et al., *Ancient Greece: A Political, Social and Cultural History*, 1999

The Second Messenian War [of c. 650 BC] had been a terrifying revelation of the potential risks of the helot system, and the possibility of a repetition haunted the imaginations of Spartans and their enemies. One certain way of avoiding such a catastrophe, abandoning Messenia, was unthinkable... the Spartans realized that if all potential hoplites could be mobilized and trained to the highest degree of skill possible, Sparta would enjoy an overwhelming military advantage over its helots and other enemies... In effect they waged a perpetual war against the helots and were consequently always prepared to engage in other acts of aggression when necessary.

SOURCE 6 An account of Sparta recruiting helots as soldiers, from Antony Andrewes, *Greek* Society, 1991

The other main source [of recruits] was the helots. The 700 whom Brasidas took with him to the north [in 425 BC] were still formally slaves; they were only liberated on their return home... About the same time... Sparta created a whole new class... These were helots who were already liberated at the time when they were enrolled. For the next fifty years, they were a very important part in Sparta's military effort... The training-up of such numbers from a notoriously oppressed and ill-treated class looks like an appalling risk, though no doubt, in case of trouble, the Spartans could count on the *perioikoi* [perioeci] to support them.

17.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 3, 5, 8, 9	Questions 1, 4, 7, 11, 13	Questions 5, 6, 10, 12, 14

Check your understanding

1. Why did Sparta need to develop such a strong army?
2. What was life like for Spartan women?
3. Look up the adjective 'spartan' in a dictionary. Explain why the word has the meaning it does today.
4. Who were the perioeci and the helots?
5. In what ways was the position of the helots different to that of slaves in other parts of Greece?
6. Explain how the slavery of the helots made the Spartan way of life possible.

Apply your understanding

7. Read **SOURCE 1**. Explain how you think the hardships Spartan boys had to endure would have helped them to develop obedience and perseverance.
8. Look carefully at **SOURCE 2**, and read the labels. Then answer the following questions.
   a. What did Spartan boys do to keep fit and increase their mental strength?
   b. Would Spartan army camps have been easy targets for an enemy? Explain.
   c. Why might the way Spartans lived have reduced the influence of the family? How might this have benefited the state of Sparta?
   d. Describe what an approaching phalanx of Spartan soldiers would look like. Why might it frighten their enemies?
9. Read **SOURCES 3** and **4** and analyse them by answering the following questions.
   a. What information about Spartan treatment of helots does each source provide?
   b. What kind of source is it?
   c. Who wrote each source and around when would it have been written?
   d. Why do you think each source was written and how useful is it as evidence for this topic?
   e. What more would you need to know about the author to judge the source's reliability?
10. Do **SOURCES 3** and **4** provide complementary evidence or conflicting evidence for the Spartans' treatment of the helots? Give the reasons for your answer.
11. Compare and contrast **SOURCES 5** and **6**. What conclusion does each of these secondary sources present on Spartan attitudes towards the helots?
12. How do Pomeroy (**SOURCE 5**) and Andrewes (**SOURCE 6**) differ in their interpretations of Sparta's treatment of the helots?
13. Using the sources and other information in this subtopic, explain what life was like for a helot and how the helots might have viewed their situation.
14. Using the sources and other information in this subtopic, explain how Sparta's enslavement of the helots changed everyday life in Spartan society after 650 BCE.
15. What can we tell about the effect of Sparta's almost constant involvement in warfare from the fact that the only Spartans allowed tombstones were men who died in battle and women who died in childbirth?

For sample responses to every question, go to www.jacplus.com.au.

17.7 Everyday life in Athens

LEARNING INTENTION

By the end of this subtopic, you will be able to identify the main characteristics of Athenian society in the period when Athens was at the peak of its power.

17.7.1 The very different lives of Athenian men and women

Athens was the largest of the Greek poleis. It was very different from Sparta. From the fifth century BCE, it was one of the richest and most beautiful cities in the ancient world, famous for its temples, fine public buildings and love of the arts. Plays were often performed in theatres, and its citizens had a high regard for learning.

The man was the important figure in Athenian life. He decided everything — when and whom his daughters would marry, and even whether or not new babies would live or die. Most girls were married in their early teens to men twice their age (see **SOURCE 1**).

SOURCE 1 This painting from a small Greek pottery box shows a bride being escorted to the home of her new husband after a wedding feast at her parents' home.



After marrying, a man spent most of his time away from the house. He might carry out government duties, run a workshop, work out in the gymnasium, meet his friends in the **agora** for a chat or attend dinner parties. In contrast, a woman spent virtually the rest of her life in the home. She was expected to produce children, especially sons. With the help of slaves and older daughters, women ran the household. Marriage feasts were one of the few occasions when women were able to do something other than home duties and celebrate with their menfolk.

Education

Only boys went to school. Very privileged girls might have a home tutor to teach them to read or perhaps play the lyre. Boys started school — a dawn-to-dusk affair — at around the age of seven. Their teachers read to them from papyrus scrolls, and the boys learned how to write on a wooden-framed slate (a fine-grained stone that easily splits into sheets) coated with wax. They were also taught reading (including poetry), maths, music and physical fitness.

Housing

Though most Athenian houses had two storeys, they were fairly small. Wealthy Greeks did not usually build impressive mansions, as most used their spare money to fund athletic and religious events. The home of a wealthy Greek family might have a central courtyard, a bathroom and a stone floor, rather than one made from packed earth. Apart from this, there was little difference between a mansion and the homes of poorer people.

agora large open space in the centre of a Greek city that served as a public meeting area and marketplace

SOURCE 2 One of the few regular trips women could make outside the home was to collect water from public fountains near the agora. They carried the water in an amphora.



Athenian houses were made of sun-dried bricks. All rooms faced inwards and were usually fairly dark, airless and smoky spaces. This was because windows were small and set high, and open fires were often lit indoors. Furniture was sparse, with household items mostly stored on the floor or hung from nails in the wall.

Men and women had separate living areas. The women's area was as far away as possible from the entrance and public areas of the house. It was forbidden to strangers and was often very dark.

17.7.2 Public life, death and burial

Only men could become citizens. Women generally had no legal or political rights. They could not hold public office or go shopping. They could, however, take part in some religious festivals and rituals.

Men's banquets were an important and common part of daily life as you can see in **SOURCE 3**. Slaves removed guests' sandals when they arrived and washed their feet. Lying around on low couches, the men enjoyed foods such as fish fried in olive oil, boiled vegetables, cheese made from goats' milk, bread, figs, dates and grapes. They ate with their fingers, drinking wine mixed with water.

The fifth century BCE was the peak of the Golden Age of ancient Greece. By this time, Athens was a wealthy city with a stable democracy, strong trade links, a thriving culture and a keen sense of civic pride.

Death and burial practices

Athenians, like most other Greeks, believed in an underworld, where Hades, the brother of Zeus, reigned over the dead. They believed that a person's *psyche* (spirit) left the body at the very moment of death. To make sure that the psyche would find its way to the afterlife, the dead person's mouth and eyes were closed. The body was anointed with oil, wrapped and displayed for two days while women stood by wailing, and friends and relatives visited to mourn. On the following day, the body was taken in a procession to the cemetery, which was outside the city gates of Athens, and placed in a tomb.

SOURCE 3 After a meal, men relaxed by telling jokes and riddles and playing musical instruments. Sometimes they might be entertained by singers, dancers, musicians or gymnasts.



In the seventh and sixth centuries BCE, aristocratic families erected earth mounds, upright slabs or pillars, statues and some very elaborate monuments at grave sites. But by the end of the fifth century, Athenians were burying their dead in simpler stone coffins. In both eras, the aim was to ensure that the dead were remembered. They appear to have believed that such remembrance was needed to ensure life after death.

17.7.3 A city of beauty and bustle

Like most other city-states, Athens had a prominent acropolis at the centre of its cluster of houses and a large agora (or marketplace). It was surrounded by a large area of open country.

The Acropolis

During this time, elegant buildings were erected on the Acropolis in Athens — a large, rocky hill about 150 metres high. The largest of these was the **Parthenon**, which is pictured in **SOURCE 4**. It was a temple dedicated to the goddess Athena. She was the city's patroness and protector in time of war.

The Parthenon was decorated with many beautiful sculptures as well as with carved panels of the gods, battles and festivals. During the early nineteenth century, many of these carved panels were removed, cut into pieces and shipped to Britain by Lord Elgin. He was at that time the British Ambassador to the Turkish Empire, of which Greece had been part for over a thousand years. Today more than half of the surviving panels are in the British Museum. The Greek government is trying to get the Parthenon Marbles back.

Parthenon Athenian temple dedicated to the goddess Athena

SOURCE 4 Work on the Parthenon started in 447 BCE and took 25 years to complete. Much of the building was destroyed in 1687 when it was being used by the Turks to store gunpowder, which exploded under enemy attack.



The agora

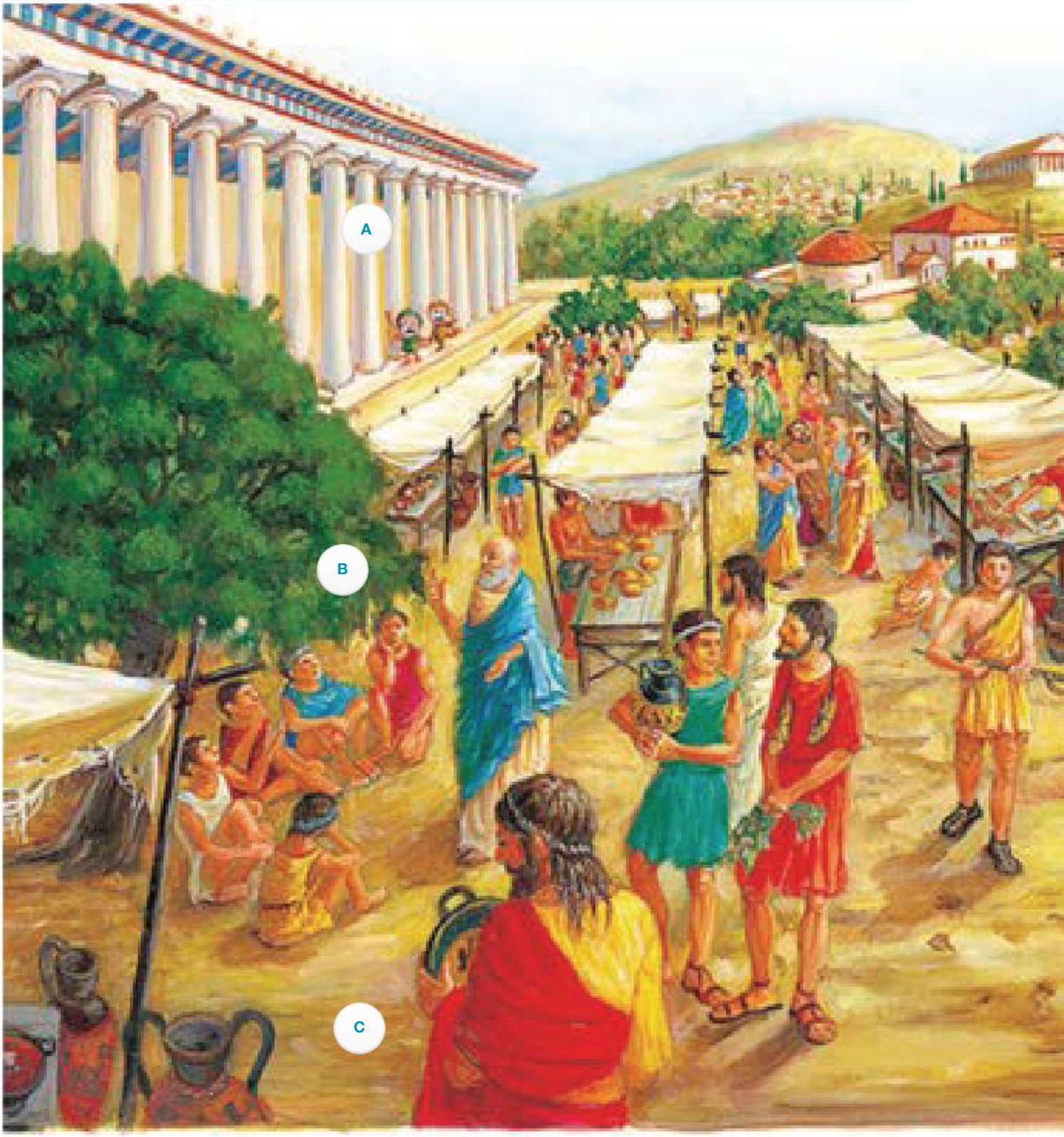
Below the Acropolis was the agora (see **SOURCE 5**). This large tree-filled square, framed by public buildings, was the place where everything happened. It was the city's centre of government. It was also the place to buy goods such as food, animals, furniture, jewellery, musical instruments and pots. Men went there to shop, learn more about new ideas, watch plays and chat with their friends. Women were rarely seen.

Attica

Most of the population of Athens lived in Attica (the surrounding countryside that was ruled by Athens). Although many were farmers, the generally dry and rocky landscape meant crops such as grain were not always easy to grow. So Athens imported grain from places such as Egypt and Sicily. It also imported timber and metals. On the other hand, crops such as olives, figs and grapes grew well. The export of goods such as olive oil and wine made Athens very wealthy.

int-5984

SOURCE 5 The agora was the political, legal, commercial and social heart of the city in ancient Greece.





A Public buildings surrounding the agora in Athens included the law courts (Heliaea), the mint, the military headquarters (Strategeion) and the Bouleuterion (meeting place of the Council of 500).

B Plays were first held in the agora and later in special amphitheatres. They began as religious ceremonies in honour of the Greek god Dionysus. He was the god of wine and merriment.

C Athenian pots were usually decorated with detailed scenes of daily life and with the stories of myths and legends.

D Slaves were bought and sold in the agora. A highly skilled slave might cost 6000 drachma; a simple wooden couch might cost 20 drachma. A drachma was the main silver coin of the ancient Greeks. Before coins were introduced, goods in ancient Greece were bought and sold by bartering.

E To build columns, ropes and pulleys were used to hoist blocks of stone into position. Metal rods joined each block to the one above and below.

F The mass of men provided an audience for philosophers such as Socrates. Works by philosophers such as Plato (Socrates' star pupil) and Aristotle (a follower of Plato) have been translated into English.

17.7 ACTIVITY

Work in small groups to design a poster or a museum display for an exhibition on everyday life in ancient Athens. Use sources and other information from this subtopic along with images and information from websites, including museum websites. For each heading select a suitable image and write a paragraph about it. Arrange your display under at least four of the following headings:

- Eating and drinking
- Clothing, hairstyles, makeup and jewellery
- Worshipping
- Entertainment
- Marriage
- Children
- Occupations.

History concept: Continuity and change

17.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 9, 10	Questions 4, 6, 8, 11, 13	Questions 2, 7, 12, 14, 15

Check your understanding

1. Describe the lifestyles of Athenian men and boys.
2. To what roles were Athenian women and girls confined?
3. Describe ways in which men were privileged in Athenian public life.
4. How were the Athenian dead prepared for the afterlife?
5. What do Athenian funeral rituals tell us about their beliefs?
6. What was the Acropolis of Athens?
7. To whom was the Parthenon dedicated?
8. How were the Parthenon Marbles lost from Greece?
9. Why did men visit the agora?

Apply your understanding

10. Examine **SOURCE 1**. Identify the bride and groom and discuss what evidence this source provides for the wealth and social class of the couple getting married.
11. What evidence does **SOURCE 2** provide for the clothing and hairstyles of Athenian women and for their position in Athenian society?
12. Describe the scene in **SOURCE 3** and discuss what Athenian women might have thought about men's banquets.
13. Look closely at **SOURCE 4** and use clues from **SOURCE 5** to explain how the Parthenon's supporting columns were built.
14. Study **SOURCE 5**. In two columns make a list of similarities and differences between the activities in the agora and what would be seen in a modern market.
15. Explain what similarities in the houses of rich and poor Athenians and changes in burial practices might suggest about the impact of democracy in Athens.

For sample responses to every question, go to www.jacplus.com.au.

17.8 Laws, myths, gods and oracles

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the main beliefs and values of the ancient Greeks as expressed in their laws, their many myths and their religious ideas.

17.8.1 Laws, myths and gods

The ancient Greeks lived in about a hundred separate city-states that often fought each other. However, they shared many aspects of their culture, which gave them a sense of shared identity. They all spoke dialects of the Greek language. They also shared the same myths, worshipped the same gods and took part in the same festivals to honour these gods.

Greek laws

There is evidence that each Greek city-state had its own laws, although no systematic collection of ancient Greek laws has survived. In some matters, such as inheritance, the laws of the city-states seem similar. But, even so, there were differences between Athens and Sparta. By the seventh century BCE, many Greek poleis chose men called 'law-givers' to make written records of their existing laws or set down new laws.

Athens is the city-state for which we have the most evidence. Athens appointed Draco as its first law-giver around 620 BCE. Around 594 BCE, he was followed by Solon, who created several new laws. Under Solon's laws, murderers were to be banished, but most crimes were punished only by fines. His laws also dealt with such matters as trade and the location and spacing of houses in Athens. Solon's laws also corrected at last one injustice that had threatened to cause civil war in Athens. In the seventh century BCE, creditors (people who were owed money) had the power to enslave those who could not repay their debts. Solon abolished this practice, freed debt-slaves and cancelled their existing debts.

Law courts were established in Athens to try cases and decide on punishments but there were no official judges or lawyers. For most court cases, decisions were made by Athenian citizens, who were chosen by lot.

Sparta's laws were not written down. However, according to ancient Greek historians, Lycurgus was the legendary law-giver who brought Sparta the 'Great Rhetra', the set of laws dictating the entire Spartan system. Most evidence suggests that these laws were probably introduced after 650 BCE. However, it is doubtful that Lycurgus actually existed and much more likely that his story was a myth.

SOURCE 1 Herodotus, *The Histories*, Book I, 66.

How the change to good government came about I will now relate. Lycurgus, a distinguished Spartan, visited the Delphic oracle, and no sooner had he entered the shrine than he was greeted with these words:

Hither to my rich temple have you come, Lycurgus,

Dear to Zeus and to all gods that dwell in Olympus.

I know not whether to declare you human or divine –

Yet I incline to believe, Lycurgus, that you are a god.

... [Lycurgus] made fundamental changes in the laws, and took good care that the new ones should not be broken. Later he reorganized the army, introducing the system of messes and the new tactical divisions of squadrons and companies... By these changes Spartan government was put upon a sound basis, and when Lycurgus died a temple was built in his honour.

Greek myths

In common with people in many societies, the early Greeks had their myths (see **SOURCE 2**), which were handed down from one generation to the next through epic poems recited by storytellers. From about 800 BCE these stories were written down. Homer's *Odyssey* and *Iliad* are the two best known of these epics. The *Iliad* tells the story of the siege of Troy. The *Odyssey* follows the ten-year homeward journey of Odysseus, hero of Troy, and his encounters with many strange creatures and great dangers. In these mythical stories, the gods behave like people, often taking sides in human conflicts.

The gods of Mount Olympus

The Greeks believed their lives were controlled by the many gods who lived on Mount Olympus in the north of Greece. These gods were **immortals** but they had all too human weaknesses. The chief god was Zeus. The other gods were his brothers, sisters, sons and daughters. Each was responsible for a different aspect of human life.

- Hera, Zeus's wife, was patroness (protector) of marriage and children.
- Ares was the god of war.
- Artemis was patroness of hunting and wild animals.
- Dionysus was the god of wine and pleasure.
- Athena was the goddess of wisdom.
- Hephaestus was the god of fire.
- Hermes was the messenger of the gods.
- Apollo was the sun god and god of law.
- Aphrodite was goddess of love and beauty.
- Poseidon was god of the sea.
- Pluto was god of the underworld.

These were the most important gods, but there were others, and there were many mythical heroes who were not immortals but had powers beyond those of ordinary people.

immortals gods who lived forever
mythology a body of myths

SOURCE 2 A relief sculpture from mid-fourth-century BCE Athens depicting two Amazons fighting a Greek warrior. In Greek mythology, the Amazons were a nation of female warriors. They were often depicted in battles with Greeks.



DID YOU KNOW?

In Greek **mythology**, the hero Heracles was not a god, but he was so strong that the gods sometimes depended on his strength. When he was still a baby, he strangled poisonous snakes. As a youth, he killed a ferocious lion. As a man he performed legendary feats that included abducting Cerberus, the three-headed hound that guarded the underworld. For a time he also held up the sky, which was normally supported by Atlas. His death came as a result of a trick played on him. He put on a poisoned robe that caused such pain that he threw himself onto a fire. The gods then took him up to dwell with them on Mount Olympus.

SOURCE 3 A **metope** from the Temple of Zeus at Olympia. The scene tells part of the myth of the 12 labours of Heracles (Hercules). It shows Atlas offering Heracles the apples of the Hesperides while Heracles and Athena hold up the sky and the world.



17.8.2 The oracles — messages from the gods

In our own times some people still believe in fortune tellers. Similarly, the ancient Greeks believed in oracles. An oracle was a place where people could question the gods about the future. It was also a message from the gods in answer to such a question. The most important oracle was at Delphi (see the map in subtopic 17.4). According to myths, Delphi was the 'navel of the world' so the Greeks built a sanctuary there. Any Greek who went to Delphi to consult the oracle had to pay a fee, sacrifice a goat and look for **omens** in its **entrails**. They would then ask questions of a priestess called the Sybil. The priests of Apollo would translate the Sybil's answers but they were usually vague enough to have many possible meanings.

metope part of the pattern of alternating motifs under the pediment (the triangular part crowning the front) of a Greek building
omen sign that predicts good or evil
entrails internal organs of an animal

SOURCE 4 From *The Persian Wars*, by the ancient Greek historian Herodotus

... the Athenians, anxious to consult the oracle, sent their messengers to Delphi... [They] went back with it to Athens. When, however, upon their arrival they produced it before the people, and inquiry began to be made into its true meaning, many and various were the interpretations which men put on it.

17.8 ACTIVITIES

1. Use your library or the internet to research a Greek myth. It could be related to the scene in **SOURCE 2** or **SOURCE 3**. Write a short summary of the myth and tell it to the class.
   HASS skills: Questioning and researching
   History concept: Sources
2. In small groups, discuss similarities and differences between the roles and importance of myths, religion and predictions of the future in ancient Greece and in modern times. You could, for example, compare the role of oracles in ancient Greece with astrologers who write the horoscope columns today. **HASS skills: Analysing**
   History concept: Continuity and change

17.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Questions
1, 4, 6	2, 5, 7	3, 8, 9, 10

Check your understanding

1. How were most crimes punished under Solon's laws?
2. Which of Solon's laws would have been popular with poor citizens in Athens?
3. What were the two meanings of the term 'oracle'?
4. Explain why the ancient Greeks consulted oracles.
5. In Greek mythology, who were the Amazons?

Apply your understanding

6. Identify reasons why most historians would doubt the story in **SOURCE 1**.
7. Suggest why the scene in **SOURCE 2** was a popular theme in ancient Greek art.
8. Identify the three figures in **SOURCE 3**.
9. Read **SOURCE 4**.
   a. Identify reasons why the message from the oracle could have many different meanings.
   b. What can you tell from this about the type of answers given to questions put to the oracle at Delphi?
   c. Why might such answers have been given?
10. Evaluate the role of shared myths and shared gods in contributing to a sense of Greek identity.

For sample responses to every question go to www.jacplus.com.au

17.9 The Olympic Games

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the ancient Greek Olympics and explain their connection with Greek religion and their contribution to a sense of Greek identity.

17.9.1 The ancient Olympics

For modern athletes, the most important competition is the Olympic Games, which attracts top competitors from all over the world in a huge range of sports. These sports include running, high jump, swimming, soccer and discus throwing. For any modern athlete, to represent his or her country at the Olympic Games is considered the greatest honour. To win a medal at the Olympic Games is usually the peak of a top athlete's career. The idea for the modern games was taken from ancient Greece, but in many ways the ancient games were very different from those of today.

The ancient Greek city-states had many religious festivals but the most important of them was held every four years at Olympia, in the city-state of Elis, to honour the god Zeus. The Greeks regarded 776 BCE as the year of the first **Olympiad**. By the sixth century BCE, the Olympic festival was attracting competitors from all over the Greek world. During each Olympiad a truce was declared between any city-states that were in conflict. As the Greeks were scattered over mainland Greece, the islands and colonies, these festivals contributed to a common sense of Greek identity. The Olympic festival continued to be held until 393 CE, when it was abolished by the Christian Roman emperor Theodosius I, who was opposed to all pagan festivals.

Olympiad a staging of the Olympic Games
hoplites Greek foot soldiers

SOURCE 1 From *History of the Peloponnesian War*, by the contemporary historian Thucydides

This summer were celebrated the Olympic Games... The Spartans were refused access to the temple by the Eleans and so prevented from sacrificing and competing in the games. This was because the Spartans had not paid the fine which had been imposed upon them by the Eleans according to the Olympic law. The Elean case was that the Spartans had made an attack... and had sent **hoplites** of theirs into Lepreum during the period of the Olympic truce.

17.9.2 The events

The main events in the ancient Olympics were running races. These included the stade (a sprint), the dolichos (a long-distance race) and a race in which the competitors ran in leg guards and helmets carrying their shields. Other events included boxing, wrestling and the pankration (see **SOURCE 2**). The pentathlon was the highlight of the festival. It included discus throwing, long jump, javelin throwing, running and wrestling. When chariot racing was added to the Olympics it became the most spectacular of all events, with up to forty chariots racing and turning at high speeds. The city-states gave many rewards to their athletic heroes but crowns of olive leaves were the only official Olympic prizes.

SOURCE 2 A fifth-century BCE Athenian vase depicting the pankration, a form of wrestling in which the only banned tactics were biting and eye-gouging.



SOURCE 3 The entrance to the ancient stadium at Olympia. The arch was added by the Romans.



DID YOU KNOW?

Games were the main part of the ancient Olympic festival, which began with a religious ceremony and lasted five days. For the amusement of the crowds there were also acrobats, plays and sideshows. As the ancient games expanded, new events were added, including poetry and music competitions. Merchants attended the games to sell souvenirs. Athletes competed naked and only men were allowed to take part in the events. At first, women were not even allowed as spectators, although this changed later.

17.9 ACTIVITIES

1. Work in groups to find out why any modern country has been excluded from the Olympic Games or has chosen not to take part in them. You can find information on this issue on the internet. Present your findings to the class.
   HASS skills: Questioning and researching
   History concept: Continuity and change
2. Use **SOURCE 2** and your imagination to write and present a sport commentary on the pankration.
   HASS skills: Communicating and reflecting
   History concept: Significance

17.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6	Questions 2, 5, 9	Questions 3, 7, 8, 10

Check your understanding

1. Where did the idea for the modern Olympic Games come from?
2. What date is given to the first Olympiad?
3. What god was honoured at the ancient Olympic festival?
4. Name three events in the ancient Olympics that are not in the modern Olympics.
5. Explain why those three events would not be held in any modern Olympics.

Apply your understanding

6. According to Thucydides in **SOURCE 1**:
   a. Which Greek city-state was refused permission to attend the Olympic Games?
   b. What evidence does this source give for reasons why a city-state could be excluded from the ancient Olympics?
7. Study the depiction of the pankration in **SOURCE 2**. Describe what it and the other events you identified in your answer to question 4 might reveal about one purpose of the ancient Olympics.
8. What does **SOURCE 3** suggest about how the Romans came to regard the Olympics when they conquered Greece?
9. Make a list of the differences between the ancient Greek Olympic Games and the modern Olympics. You could organise your notes under the following headings:
   - Locations where the games are held
   - Nationalities and gender of the athletes
   - Events
   - Rewards for winners and place-getters
   - Purpose of the Olympics
   - Periods of time from the beginning to the end of one Olympic Games.
10. Based on your work in this subtopic, how would you evaluate the historical significance of the ancient Olympics?

For sample responses to every question go to www.jacplus.com.au

17.10 Greeks, Persians and Alexander the Great

LEARNING INTENTION

By the end of this subtopic, you will be able to identify the events that briefly united the ancient Greeks, events that tore them apart and events the changed ancient Greece forever.

17.10.1 The first Persian invasion, 492–490 BCE

The city-states of Greece were often at war with each other, but most of them united when the mighty Persian Empire attacked Greece in 490 BCE and again in 480–479 BCE. Together they saved Greece from being swallowed up by the Persian Empire. In the following century Greece was again invaded, but this time by their northern neighbours the Macedonians, who would soon set out to conquer the known world.

In ancient times Persia was the land we now call Iran. Under Cyrus the Great (559–529 BCE) and his successor, Cambyses, the Persians won a great empire that included Anatolia (modern Turkey), Palestine, Syria and Egypt. In 499 BCE, the Greek cities of Anatolia, with help from Athens, revolted against their Persian overlords. The revolt failed and Persia seized the offshore Greek islands.

The Battle of Marathon

To punish Athens for supporting the rebellion, King Darius I of Persia sent a fleet to invade the Greek mainland in 492 BCE, but the fleet was wrecked in a storm. Still Darius demanded that the Greeks submit to him. When Athens and Eretria refused, Darius sent another fleet carrying a large Persian army. His forces captured Eretria in 490 BCE and then sailed for Attica. They landed on the plain of Marathon, 40 kilometres from Athens (see **SOURCE 1**). There, 10 000 Athenians and their Plataean allies defeated 50 000 Persians in a surprise attack.

SOURCE 1 Naval and land campaigns of the Persian Wars



Source: Map drawn by Spatial Vision.

17.10.2 The second invasion, 480–479 BCE

Darius died in 486 BCE but his son, Xerxes, spent several years organising a still greater invasion of Greece. His preparations included building a floating bridge to carry his army across the narrow strait called the Hellespont that separates Europe from Asia. A huge army of spearmen, archers and cavalry from all over the Persian Empire marched into Greece. It was supported by a great fleet sailing down the coast (see **SOURCE 1**). To meet the threat, 31 Greek states called off their quarrels and agreed to unite against the Persians.

Athens played the leading naval role in the conflict but Sparta led the Greek armies in major land battles. At Thermopylae in 480 BCE the Spartan king, Leonidas, held a narrow mountain pass against the Persian horde with just 300 Spartans and about 7000 other Greek hoplites. They were eventually defeated and killed, but they crucially delayed Xerxes' advance.

Naval battles

Shortly after the Battle of Thermopylae, at Artemisium, 60 kilometres from Thermopylae, a Greek fleet fought three battles against the much larger Persian fleet. Both sides suffered heavy losses, but the Persians were greatly weakened, having already lost hundreds of ships in two storms.

As the Persian fleet approached Attica, Athens was evacuated and left to be burned by the Persians. Then the Greek navy attacked the Persians at Salamis, where the sea was too narrow for the Great Fleet to be used effectively. This time the Persians were completely defeated.

SOURCE 2 A modern artist's impression of Greek and Persian infantry at Thermopylae in 480 BCE



The final clashes

At Plataea in 479 BCE, the Spartans led a Greek army of about 100 000 in destroying a much larger Persian force. Only a fraction of the once mighty invading army survived to return to Persia. The Greek fleet then sailed for the island of Samos off the coast of Anatolia. They landed and defeated the Persian army at Cape Mycale. Although fighting continued for many more years, the Greeks no longer feared Persian invasion.

SOURCE 3 From the description of the Battle of Thermopylae in Herodotus, *The Histories*, Book VII, 227

Of all the Spartans and Thespians who fought so valiantly, the most signal proof of courage was given by the Spartan Dieneces. It is said that before the battle he was told by a native of Trachis that, when the Persians shot their arrows, there were so many of them that they hid the sun. Dieneces, however, quite unmoved by the thought of the strength of the Persian army, merely remarked: 'This is pleasant news that the stranger from Trachis brings us: if the Persians hide the sun, we shall have our battle in the shade.'

17.10.3 Alexander the Great

The Peloponnesian Wars

Cooperation among the Greeks did not last long. During the Peloponnesian Wars (460–445 BCE and 431–404 BCE), Greece was divided into two camps — the states and colonies dominated by Athens and those who allied with Sparta. The second war finally ended when Sparta, with Persian help, forced Athens to surrender. Sparta came to dominate Greece until the Greek city-state of Thebes defeated the Spartans in 371 BCE.

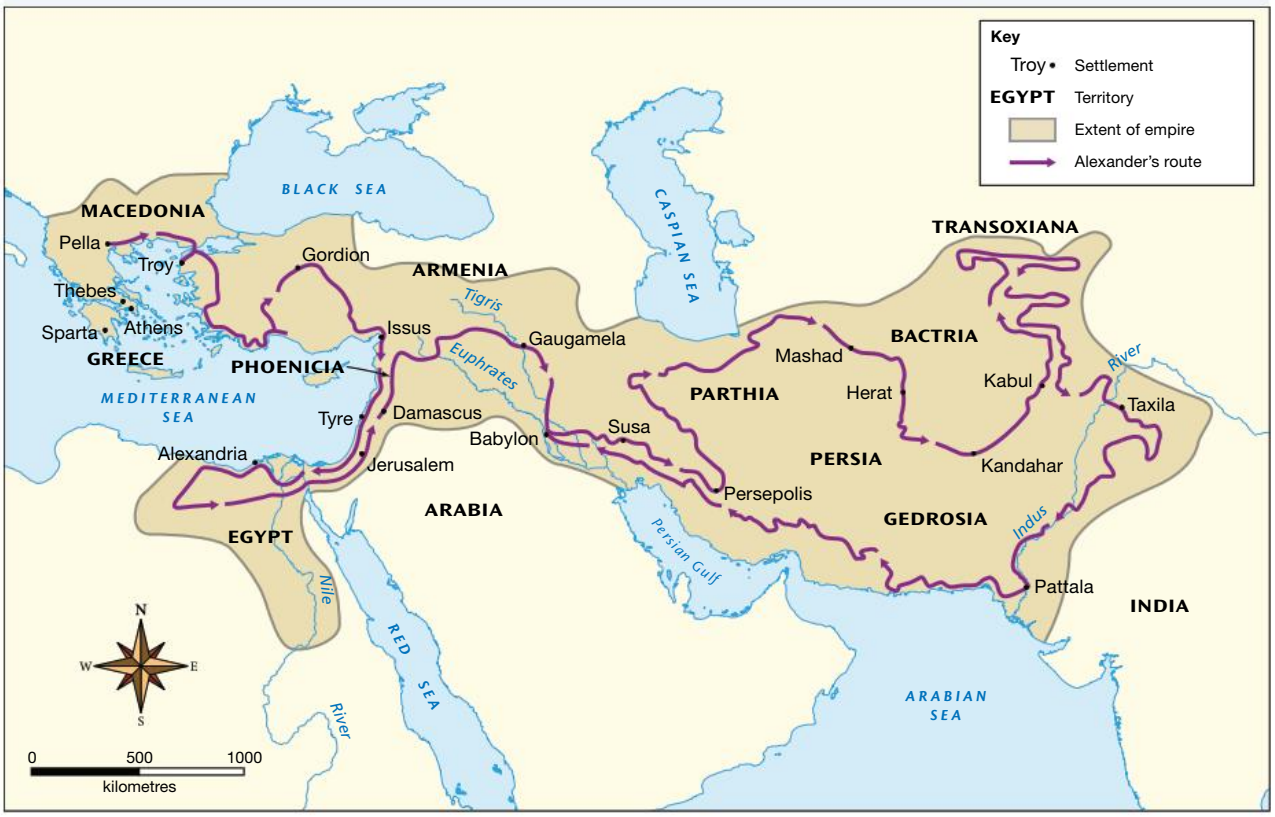
Macedon conquers Greece

After so many years of fighting each other, the Greek city-states were too weak to withstand a new invasion when Philip of Macedon conquered Greece in 338 BCE. Two years later Philip was murdered and his son Alexander (356–323 BCE) became the ruler of Macedon and Greece. When Thebes again revolted, Alexander crushed the city ruthlessly, killing 6000 of its people and enslaving the rest.

SOURCE 4 A detail from the Alexander Sarcophagus (stone coffin) showing Alexander on horseback (Sidon, in modern-day Lebanon)



SOURCE 5 The empire of Alexander the Great was established through an 11-year military campaign during which his army marched nearly 34 000 kilometres.



Source: Map drawn by Spatial Vision.

Alexander creates an empire

In 334 BCE, Alexander led an army of Greeks and Macedonians eastward to invade the Persian Empire. They defeated King Darius III in battles at Issus and Gaugamela in 333 and 331 BCE (see **SOURCE 5**).

SOURCE 6 Two sides of a silver coin of Alexander the Great, probably made around 324 BCE. The figure on horseback is believed to be Alexander. The figure at left is wearing a Macedonian cloak, Greek armour and a Persian headdress and carrying a thunderbolt. They are believed to be the only surviving images of Alexander from his lifetime.



In 330 BCE, Alexander conquered Persepolis, the Persian capital, and seized control of the empire under the title 'Great King'. But his armies pressed on. By 326 BCE, Alexander had reached India and defeated the Indian king Porus, whose forces included troops on war elephants. In every land he conquered, Alexander had cities built to strengthen his control. Many were named Alexandria.

Alexander died of fever when he was only 32 years old. His huge empire fractured into three main parts: his homeland of Macedon included all of Greece; Egypt was ruled by one of Alexander's generals, Ptolemy Soter, and his descendants for three centuries; in the east, the Seleucid Empire stretched from Syria to Afghanistan.

The age of the Greek city-states ended with Alexander. But although he adopted many of the customs of the peoples he conquered, he was devoted to Greek culture, which he spread throughout much of the east. Alexander's conquests were one important way in which Greek ideas were spread far beyond Greek shores and passed down through time.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Mediterranean world > **Persian Wars**
- The Mediterranean world > **Peloponnesian Wars**
- The Mediterranean world > **Philip of Macedon**
- The Mediterranean world > **Alexander the Great**

17.10 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Questions
1, 3, 4, 7, 8, 9	2, 10, 11, 13, 14, 17	5, 6, 12, 15, 16, 18

Check your understanding

1. What is the modern name of Persia?
2. Name the modern countries that belonged to the Persian Empire under Cambyses.
3. What did Athens do in 499 BCE that provoked a Persian invasion?
4. Why did the Persian invasion of Greece fail in 492 BCE?

5. Who was Xerxes?
6. Describe the preparations Xerxes made for the second Persian invasion of Greece.
7. Over how many years did the Greek city-states fight each other in the Peloponnesian Wars?
8. How did the results of the Peloponnesian Wars help Philip of Macedon to conquer Greece?
9. Describe how Alexander treated Greek city-states that revolted against his rule.

Apply your understanding

10. Examine **SOURCE 1**.
    a. How close did the Persian force get to Athens in 490 BCE?
    b. Who defeated the Persians at Marathon, ending the first Persian invasion attempt?
11. Read **SOURCE 3** and analyse and evaluate it using the following questions.
    a. Who wrote this source and why might it have been written?
    b. As the Spartans were all killed at the battle, how would the writer have obtained this source?
    c. How could we know that it is reliable?
12. What clues do **SOURCES 2** and **3** provide about the reasons why the Spartans and other Greeks were able to delay the Persian army at Thermopylae?
13. Study **SOURCES 4** and **6**.
    a. Describe the way that Alexander is depicted in these sources.
    b. Why do you think he is depicted like this? (Clue: normally only a god would be shown holding a thunderbolt.)
14. Study the map in **SOURCE 5** showing Alexander's conquests and compare it with a map of the same region in a modern atlas.
    a. List the ancient countries conquered by Alexander.
    b. Find the modern names of those countries.
15. Place the major battles of the second Persian invasion on a timeline with notations to show who won each battle and how they won.
16. List significant events in Alexander's career in chronological order.
17. Identify one cause of war that was significant in the Persian Wars, Philip of Macedon's conquest of Greece and Alexander's wars to build his empire.
18. Using the sources and information in this subtopic, evaluate the extent to which Greece remained the same and the extent to which it changed from the beginning of the Persian Wars to the death of Alexander the Great.

For sample responses to every question, go to www.jacplus.com.au

17.11 The heritage of ancient Greece

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the legacies left by ancient Greece for the modern world, in the fields of medicine, mathematics, science, philosophy, drama, poetry and architecture.

17.11.1 Medicine, mathematics, science and philosophy

Along with the idea of democracy and the Olympic tradition, many ancient Greek ideas have influenced later times, even up to our present age. The heritage of ancient Greece includes developments in science, mathematics, architecture, medicine, philosophy, drama and poetry. Ancient Greek civilisation reached its high point in the fifth century BCE. By the fourth century BCE, Greek culture had spread as far east as India through the conquests of Alexander the Great. After the Romans conquered Greece in 146 BCE, Rome absorbed Greek culture and contributed to the passing down of Greek ideas through the ages.

Medicine

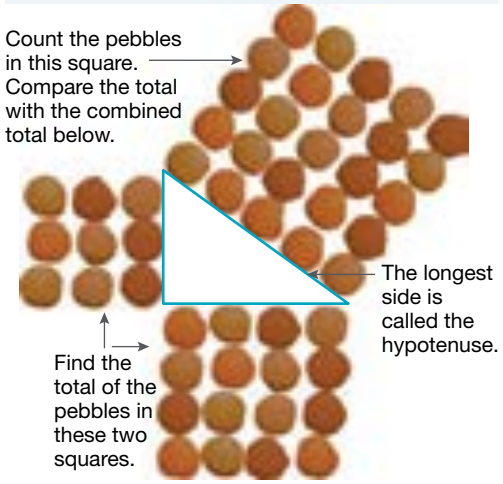
Most ancient Greeks thought that sickness or disability was a punishment from the gods. Hippocrates (c. 460–377 BCE) practised and taught medicine, changing many of its ideas and methods. Among his teachings was the then new idea that sickness was caused by problems in the body, including diet. His set of principles to guide the conduct of medical practitioners, the Hippocratic Oath, is still widely observed today.

Mathematics, science and philosophy

Ancient Greece produced some remarkable thinkers. Anaxagoras, Aristarchus and Eratosthenes developed ideas based on observations in **astronomy**, including the idea that the Earth orbited the sun. Pythagoras (c. 582–500 BCE) arranged pebbles to show the connections between space and numbers; he is remembered today for Pythagoras's theorem (see **SOURCE 1**). As well as numbers and geometry, he was also interested in astronomy (he concluded that the Earth was round), musical notes and matter. He believed all things were made up of four elements: earth, air, fire and water. Euclid also developed explanations that are still used in geometry. Thales (c. 624–546 BCE) discovered static electricity. Archimedes, who lived in the third century BCE, discovered important principles in physics.

Another achievement of the Greeks was the development of philosophy by thinkers such as Socrates, Plato and Aristotle. In the fourth century BCE, Aristotle taught that the other planets, the moon and the stars all moved around the Earth. This idea was mistakenly believed throughout Europe for nearly 2000 years after his death.

SOURCE 1 The philosopher and mathematician Pythagoras found that the square of the length of the hypotenuse (the side opposite the right angle) of a triangle was equal to the sum of the squares of the other two sides.



17.11.2 Architecture, drama and poetry

The Greeks developed building styles that are still used today. Many great modern buildings are influenced by ancient Greek styles; for example, St George's Hall in Perth has a **portico** like an ancient Greek temple.

SOURCE 2 The ruins of the Erechtheion, regarded by many as the most beautiful building on the Acropolis of ancient Athens



Theatre was very popular in ancient Greece. One of the most famous Greek playwrights is Aristophanes (c. 448–380 BCE). He wrote brilliant comic plays that are still performed today. Few women had the chance to achieve fame in ancient Greek society, but one who did was Sappho from the island of Lesbos. Born in about 600 BCE, she became the greatest poet of the ancient Greeks. Some of her poems were preserved on Egyptian papyrus (an early form of paper), but only fragments remain. There are also many ancient Greek sayings that are still used because they remain as relevant today as they were when first written. Among them are the words of the fable writer Aesop, who lived in the sixth century BCE. He wrote, for example, 'We hang petty thieves and appoint great ones to public office' and 'In union there is strength'.

astronomy study of the stars and planets

portico a roof supported by columns, usually attached as a porch to a building

17.11 ACTIVITIES

1. Use the internet to find out what international efforts have been undertaken to conserve the remains of buildings such as the Parthenon and Erechtheion and to conserve sculptures and other traces of ancient Greek culture.
History concept: Significance
2. To find out more about the legacies of ancient Greece, work in groups to research one of the following questions.
   a. What are the words of the Hippocratic Oath?
   b. What is Archimedes' Principle and is it still used today?
   c. Where and how were Greek plays performed in ancient times? And today?
   d. How did the Greek idea about the elements differ from modern scientific understanding of the elements?

HASS skills: Analysing
History concept: Continuity and change

17.11 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6	Questions 2, 5, 9	Questions 3, 7, 8, 10

Check your understanding

1. What did most ancient Greeks believe to be the cause of sickness?
2. Draw up two columns. In the left column put the following names: Hippocrates, Pythagoras, Aristotle, Euclid, Thales, Archimedes. In the right column briefly describe their achievements or mistakes.
3. Name a building that has been influenced by ancient Greek styles.
4. Who was Aristophanes?
5. What did Sappho achieve and why was her achievement very unusual in ancient Greek society?

Apply your understanding

6. Study **SOURCE 1** and use the pebble method to demonstrate Pythagoras's theorem.
7. Study **SOURCE 2**.
   a. Describe the surviving features of the Erechtheion.
   b. Why do you think it is regarded as an outstanding example of ancient Greek architecture?
8. In **SOURCE 2** what evidence do the remains of the Erechtheion provide for the quality of ancient Greek building techniques?
9. Is the observance of the Hippocratic Oath in modern times an example of continuity or change?
10. Why did only fragments of the poetry of Sappho of Lesbos survive into later times?

For sample responses to every question, go to www.jacplus.com.au.

17.12 SkillBuilder: Analysing and corroborating sources

LEARNING INTENTION

This SkillBuilder shows you how to analyse and corroborate sources. Analysing and corroborating sources is part of the Analysing HASS skill.

17.12.1 Tell me

What are the main ancient Greek sources?

Ancient Greek sources include pottery, tombs, temples, fortifications, weapons, tools, coins, theatres and written records. They also include artworks such as statues and other sculptures in stone and bronze and the paintings that decorated vases and other types of pottery.

Why is it important to analyse and corroborate ancient Greek sources?

Almost all of our knowledge of ancient Greece comes from such sources. Works of art, in particular, tell us much about ancient Greek culture, especially myths and religious ideas. Buildings and sculptures tell us about technology, skills and values. Written records tell us about Greek ideas about politics, myths, history, science and a vast range of other subjects. Not all ancient Greek sources are really primary sources as some were written long after the events they describe.

SOURCE 1 A sixth century BCE Spartan cup showing Spartan soldiers returning from war carrying a slain comrade



17.12.2 Show me

How do we analyse and corroborate ancient Greek sources?

When you study an ancient source, you need to think carefully about the clues it provides and ask questions about its accuracy, usefulness and reliability. You need to ask questions such as:

1. What is it?
2. Who created it and when was it created?
3. Who or what was it created for?
4. For what aspect of ancient Greek history does it provide useful evidence?
5. Is the evidence it provides accurate and reliable and how can we tell this?
6. What conclusions can we draw from the source about ancient Greek society?

These questions have been applied to **SOURCES 1** and **2**.

Ancient writers and many later historians have regarded Spartans as tough soldiers who would die fighting rather than surrender or run from battle. **SOURCES 1** and **2** are relevant to this issue.

1. *What is it?* It is a cup with a design showing Spartan soldiers carrying the body of a comrade killed in battle.
2. *Who created it and when was it created?* We do not know who made it but we know that it was created in Sparta in the sixth century BCE.
3. *Who or what was it created for?* We cannot know whom it was created for. It was made to be a cup but more likely as a decoration than for practical uses.
4. *For what aspect of ancient Greek history does it provide useful evidence?* It indicates that Spartans honoured their men who died in battle by carrying their bodies from the battlefield.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* Without other evidence, we cannot tell whether this source is accurate and reliable. However, several ancient Greek sources support this view of the Spartans.
6. *What conclusions can we draw from the source about ancient Greek society?* The Spartans regarded fighting bravely and dying in battle as great virtues.

SOURCE 2 Written by the Athenian general and historian Thucydides (c. 460–403) in his book, *History of the Peloponnesian War*, this extract describes the surrender of a force of 120 Spartans in the seventh year of this war between Athens and Sparta

was... made, to know if they [the Spartans] would surrender themselves and their arms to the Athenians... [Hearing] this offer, most of them lowered their shields and waved their hands to show that they accepted it. Hostilities now ceased... after consulting together they surrendered themselves and their arms...

Nothing that happened in the war surprised the Hellenes [Greeks] so much as this. It was the opinion that no force or famine could make [Spartans] give up their arms, but that they would fight on... and die with them in their hands: indeed, people could scarcely believe that those who had surrendered were of the same stuff as the fallen.

1. *What is it?* It is an account of the surrender of a force of Spartans during the Peloponnesian War.
2. *Who created it and when was it created?* It was written by Thucydides, an Athenian general and historian, in the fifth century BCE, soon after the events it describes.
3. *Who or what was it created for?* Thucydides wrote a history of the Peloponnesian War, a conflict that divided the Greeks for many years. The extract was part of that history. Its original readers would most likely have been other Athenians.
4. *For what aspect of ancient Greek history does it provide useful evidence?* It tells of an occasion when a Spartan army surrendered to Athenians rather than fighting to the death.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* In judging its accuracy and reliability, we should take into account that the writer was an Athenian general and therefore someone who had fought against the Spartans. Without other evidence, we cannot tell whether this source is accurate and reliable. However, as many other Greeks would have witnessed this event it is unlikely that Thucydides would have distorted the facts.
6. *What conclusions can we draw from the source about ancient Greek society?* We can conclude that, although the Spartans regarded fighting bravely and dying in battle as great virtues, they did not always carry out this ideal. If the source is reliable, we might conclude that Spartans were not always as heroic as many liked to think they were.

17.12.3 Let me do it

Complete the following exercise to practise this skill.

17.12 Activities

1. Ancient writers and many later historians have regarded Spartan women as being as tough as Spartan men. **SOURCES 3** and **4** are relevant to this issue. Use the following questions to analyse **SOURCES 3** and **4**.
   a. What is it?
   b. Who created it and when was it created?
   c. Who or what was it created for?
   d. For what aspect of ancient Greek history does it provide useful evidence?
   e. Is the evidence it provides accurate and reliable and how can we tell this?
   f. What conclusions can we draw from the source about ancient Greek society?

SOURCE 3 From Plutarch, *Moralia, III, Sayings of Spartan Women*, 241. Plutarch lived c. 46–120 CE. He was born in Athens but was an admirer of Sparta and was writing many centuries after the events he described.

Another Spartan woman killed her son, who had deserted his post because he was unworthy of Sparta. She declared: 'He was not my offspring... for I did not bear one unworthy of Sparta'.

Another, hearing that her son had fallen at his post, said: 'Let the cowards be mourned, I, however, bury you without a tear, my son and Sparta's'.

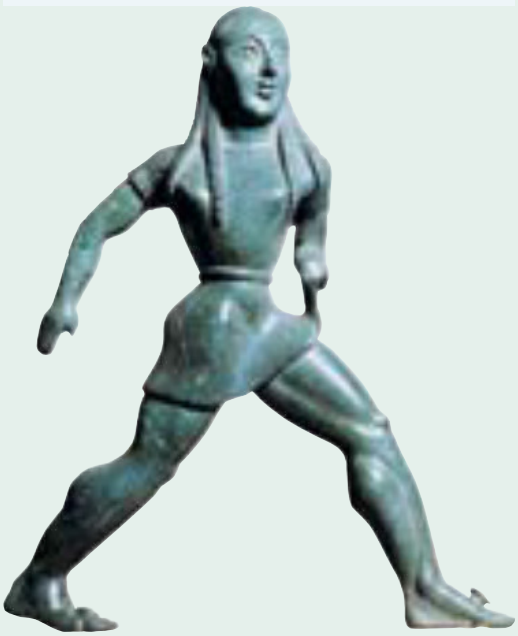
As a woman was burying her son, a shabby old woman came up to her and said, 'You poor woman, what a misfortune!' 'No, by the two goddesses, what a good fortune,' she replied, 'because I bore him so that he might die for Sparta and that is what happened for me'.

Another woman handed her son his shield, and exhorted him: 'Son, either with this or on this'.*

* In order to run from battle a soldier would have to throw away his heavy shield. A soldier who was killed in battle would be carried home on his shield.

2. Apply your skills to answer the following questions.
   a. Explain how you would differentiate between ancient Greek primary sources and secondary sources about ancient Greece.
   b. Why should **SOURCE 3**, the extract from Plutarch, be classified as secondary source?
   c. In this SkillBuilder you have worked with a Spartan cup and a bronze figure (artefacts) and written accounts by two ancient Greek historians. Identify three other types of primary sources that a historian could use for a study of ancient Greece.
   d. Explain why it is sometimes difficult to judge the reliability of ancient Greek primary sources.

SOURCE 4 A bronze figure of a running girl, 520–500 BCE, believed to have been made in or near Sparta



17.13 Thinking Big research project: Helot manifesto

Scenario

You are living during the period between the seventh and fourth centuries BCE. You are a helot, one of the many Messenian and Laconian Greeks who were enslaved by Sparta in the eighth and seventh centuries BCE, and who have suffered under Spartan control ever since. You know that the enslavement of your people has made it possible for all Spartan men to become highly trained full-time soldiers. Meanwhile you and your fellow helots are forced to work hard to provide these Spartans with their food and other needs. However, you know that your fellow helots vastly outnumber the Spartans and have never given up the desire to regain their freedom.



Task

You are to write a manifesto (declaration) that will inspire your fellow helots to unite and rise up against Sparta!

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the projectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Working in small groups will enable you to share responsibility for the project.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. In the **Media centre** you will find an assessment rubric to guide your work.
- You should first read through subtopics 17.5, 17.6 and 17.12 to select relevant information and sources.
- Find further information by using other resources and weblinks listed in your **Media centre**.
- Write your manifesto using suitable subheadings in your Research forum.
- Use examples of Spartan mistreatment of helots to inspire your fellow helots to unite and rise up against Sparta.
- You can view, share and comment on other group members' writing.
- Be sure to enter the source for any information you find online.
- Check thoroughly to ensure correct spelling and grammar, and that you have completed all elements required. When happy with your work, submit your completed task to your teacher for assessment.



on Resources

ProjectsPLUS Helot manifesto (pro-0229)

17.14 Review

17.14.1 Key knowledge summary

17.2 Examining the evidence

- There is an abundance of archaeological evidence from ancient Greek civilisation including the remains of entire buildings, amphitheatres, statues, relief sculptures and vases.
- The ancient Greeks left many written sources, including histories, poetry and drama.

17.3 The Minoans and Mycenaeans

- Minoan civilisation developed on Crete from around 3000 BCE and was destroyed around 1575 BCE.
- Mycenaean civilisation flourished between 1400 and 1200 BCE.
- The Mycenaeans were legendary conquerors of Troy, as told in the *Iliad.*

17.4 The 'Dark Age' to the Archaic Period

- Geographical features shaped the kind of civilisation that developed in Greece and its patterns of trade.
- Most Mycenaean citadels were abandoned in this period and the art of writing was lost.
- Dorians occupied much of southern Greece.
- Many Greeks migrated from the Greek mainland.

17.5 Government in Athens and Sparta

- The city-states of Athens and Sparta developed very different forms of government.
- Under the Spartan system, power was concentrated in the hands of a few families.
- Athens adopted democracy from 508 BCE.

17.6 Everyday life in Sparta

- From around 650 BCE, Sparta became a harsh military state.
- Spartan enslavement of the Messenians made the Spartan way of life both possible and necessary.
- Spartan women had more power than Athenian women.

17.7 Everyday life in Athens

- From the fifth century BCE, Athens was a rich and beautiful city with a flourishing culture.
- Men ruled Athenian society. Women were denied education and had very few rights.
- Athenian burial customs reflected those of most of the ancient Greek world.

17.8 Laws, myths, gods and oracles

- Each Greek city-state appears to have had its own laws.
- The myths and gods of ancient Greece were common to all Greek city-states.
- The ancient Greeks believed in oracles, the most important of which was at Delphi.

17.9 The Olympic Games

- The ancient Greek Olympic festival was held every four years to honour the god Zeus.
- The festival contributed to a common sense of Greek identity.
- The festival was very different to the modern Olympic Games.

17.10 Greeks, Persians and Alexander the Great

- When the Persian Empire invaded Greece, many of the Greek city-states united and they were able to inflict crushing defeats on the Persians.
- The Greek city-states were weakened by the Peloponnesian Wars and were conquered by Macedonia.
- Philip's son, Alexander the Great, became ruler of Macedon and Greece.
- Alexander invaded the Persian Empire and created a vast empire.

17.11 The heritage of ancient Greece

- The heritage of ancient Greece includes the idea of democracy and the Olympic Games.
- Other legacies of ancient Greek culture were developments in science and the arts.
- Rome absorbed Greek culture and contributed to passing down Greek ideas through the ages.



17.14.2 Key terms

acropolis stronghold on high ground in an ancient Greek city-state
agora large open space in the centre of a Greek city that served as a public meeting area and marketplace
astronomy study of the stars and planets
democracy a political system according to which citizens choose the way in which they are governed
Dorians tribes from the north of Greece who moved into the south during the Dark Age
entrails internal organs of an animal
Ephorate five-man ruling body in Sparta that advised the kings
helot slave of the Spartan state
hoplites Greek foot soldiers
immortals gods who lived forever
Iron Age period in which people learned to use iron to make tools and weapons
metic free man living in Athens but not born there; could not vote or own property but served in the army and paid taxes
metope part of the pattern of alternating motifs under the pediment (the triangular part crowning the front) of a Greek building
mythology a body of myths
oligarchy governing council of rich aristocrats
Olympiad a staging of the Olympic Games
omen sign that predicts good or evil
ostracism the punishment of being banished from Athens
pan-Hellenic for all the Greeks
Parthenon Athenian temple dedicated to the goddess Athena
Peloponnese peninsula the southern part of mainland Greece, joined to the north by the narrow Isthmus of Corinth
perioeci peoples of Laconian towns around Sparta who could be required to fight for Sparta but were not citizens
polis (plural **poleis**) ancient Greek city-state
portico a roof supported by columns, usually attached as a porch to a building

17.14.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Spartans, the Olympics and the birth of democracy. Was Ancient Greece the happening place to be?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views.

on Resources

eWorkbook
Customisable worksheets for this topic (ewbk-4293)
Reflection (ewbk-4416)
Ancient Greece crossword 1 (ewbk-4413)
Ancient Greece crossword 2 (ewbk-4415)
Ancient Greece revision quiz (ewbk-4414)
Student learning matrix (ewbk-4406)

Interactivity
Ancient Greece crossword (int-7694)

17.14 Review exercises

Multiple choice

1. Which of the following causes probably contributed to the collapse of the Minoan civilisation?
   - **A.** Lack of trade
   - **B.** A tsunami and earthquakes
   - **C.** Plagues
   - **D.** Floods
2. The earliest Mycenaean stories to appear in written sources are which of these?
   - **A.** The *Iliad* and *Odyssey*
   - **B.** The *Bible*
   - **C.** The *Koran*
   - **D.** The *Upanishads*
3. Many Greek city-states were isolated from each other due to which of these geographical features?
   - **A.** Rivers
   - **B.** Deserts
   - **C.** Mountains
   - **D.** Seas
4. In ancient Athens, ostracism meant which of the following fates?
   - **A.** Imprisonment
   - **B.** Torture
   - **C.** Enslavement
   - **D.** Exile
5. Which of the following people in Athens were excluded from the rights of citizens?
   - **A.** Farmers and soldiers
   - **B.** Poor people
   - **C.** Women, metics and slaves
   - **D.** Rich people

6. Which of the following resources did the ancient Greeks import?
   - **A.** Olive oil and grapes
   - **B.** Bronze and timber
   - **C.** Wine and beer
   - **D.** Pottery
7. Although Spartan women could not be citizens, they could:
   - **A.** vote.
   - **B.** hold public office.
   - **C.** fight in wars.
   - **D.** own land.
8. Helots were which of the following?
   - **A.** Messenians enslaved by the Spartans
   - **B.** Allies of the Athenians
   - **C.** Followers of Alexander the Great
   - **D.** Peoples of the Persian Empire
9. In Athens, the large temple dedicated to the goddess Athena was called:
   - **A.** the Agora.
   - **B.** Attica.
   - **C.** the Parthenon.
   - **D.** the Erechtheion.
10. An event that was part of the ancient Greek Olympic festival but not part of the modern Olympic Games was:
    - **A.** long distance running.
    - **B.** the high jump.
    - **C.** discuss throwing.
    - **D.** the pankration.
11. Marathon, Thermopylae and Salamis were the sites of major battles in which of these conflicts?
    - **A.** The Trojan War
    - **B.** The Persian Wars
    - **C.** The Peloponnesian Wars
    - **D.** The Macedonian conquest of Greece
12. Which of the following ancient Greeks contributed to ideas in medicine?
    - **A.** Hippocrates
    - **B.** Socrates
    - **C.** Sappho
    - **D.** Aristophanes

Short answer

13. Write an analysis of **SOURCE 1** based on the following questions.
    - **a.** What are the main details of the painting on the vase?
    - **b.** What types of skilled craft workers or artists would have created the vase?
    - **c.** Why would it have been created?
    - **d.** What evidence does it provide of ancient Greek artistic skills?
    - **e.** What evidence does it provide of ancient Greek beliefs and values?

SOURCE 1 A red-figured stamnos (a type of ancient Greek vase) from about 430–420 BCE. The mythical scene shows Helen being abducted by Theseus.



14. Alexander the Great is considered to be one of the most significant individuals not just in ancient Greek history but in ancient history generally.



Write a half- to one-page assessment of Alexander's significance using the following points as a guide:

- how Alexander maintained his power in Greece
- Alexander's invasion and defeat of the Persian Empire
- the extent of his conquests by the time of his death
- the effect of his rule on the Greek city-states
- the significance of his role in spreading Greek culture.

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 17 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

17.1 Overview

eWorkbook
- Ancient Greece Timeline exercise (ewbk-4573)

Video eLesson
- Ancient Greece (eles-1836)

Interactivity
- Interactive timeline (int-4294)

17.2 Examining the evidence

eWorkbook
- Getting to know Greece (ewbk-4407)
- Analysing an Ancient Greek visual source (ewbk-4408)
- Alexander the Great (ewbk-4409)

17.5 Government in Athens and Sparta

eWorkbook
- Acting up in Ancient Greece (ewbk-4410)

17.6 Everyday life in Sparta

Interactivity
- Spartan males (int-5983)

17.7 Everyday life in Athens

Interactivity
- The agora (int-5984)

17.8 Examining the evidence

eWorkbook
- Myths and meaning (ewbk-4411)

17.10 Greek, Persians and Alexander the Great

My World History Atlas
- The Mediterranean world > Persian Wars
- The Mediterranean world > Peloponnesian Wars
- The Mediterranean world > Philip of Macedon
- The Mediterranean world > Alexander the Great

17.11 The heritage of ancient Greece

eWorkbook
- Legacy of Ancient Greece (ewbk-4412)

17.13 Thinking Big research project: Helot manifesto

ProjectsPLUS
- Helot manifesto (pro-0229)

17.14 Review

eWorkbook
- Reflection (ewbk-4416)
- Ancient Greece crossword 1 (ewbk-4413)
- Ancient Greece crossword 2 (ewbk-4415)
- Ancient Greece revision quiz (ewbk-4414)
- Student learning matrix (ewbk-4406)

Interactivity
- Ancient Greece crossword (int-7694)

To access these online resources, log on to **www.jacplus.com.au.**

18 Ancient Rome

online only

18.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

From republic to great empire. How did Rome use war to expand its power and control most of the world?

18.1.1 Links with our times

In the early twenty-first century, we live in a world in which one superpower, the United States of America, has such enormous military power that it can dominate much of the world. The last time one power was so dominant was the age of the Roman Empire. Between the second century BCE and the second century CE, Rome came to control most of the known world. For some, Roman rule brought peace and prosperity; for others it brought slavery and death. Rome was a violent society that spread its power through wars of conquest and entertained its people with cruel public exhibitions. But it was also a society that saw great achievements in science, engineering, politics, law and literature. In the fifth century CE, the Roman Empire collapsed, but many of its achievements lived on. Roman ideas have contributed in many ways to our own society. Today, largely because of the remaining traces of its ancient greatness, Rome continues to attract more visitors than almost any city in the modern world.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4294)
Ancient Rome Timeline exercise (ewbk-4575)

Video eLesson Ancient Rome (eles-1837)

SOURCE 1 The Colosseum, where gladiators fought to the death in ancient Rome, continues to attract tourists.



int-4295

SOURCE 2 A timeline of ancient Rome















BCE

1000

900

800

753 BCE
Rome is founded, according to legend.

700

600

500

509 BCE
Rome becomes a republic.

400

390 BCE
The Gauls defeat the Roman army and sack Rome.

300

272 BCE
Rome dominates Italy.

264 BCE
The Punic Wars begin.

200

218 BCE
Hannibal invades Italy.

146 BCE
Rome destroys Carthage, ending the Punic Wars.

100

91–88 BCE
The Social War is fought between Rome and its Italian allies.

73–71 BCE
Spartacus leads the great slave revolt.

BCE
CE

27 BCE
Octavian ends the Roman Republic.

c. 30 CE
Jesus Christ is crucified.

100

43 CE
The Romans invade Britain.

200

212 CE
Roman citizenship is granted to free subjects of the empire.

303 CE
A great persecution of Christians occurs.

300

313 CE
Christianity is made legal.

378 CE
The Goths defeat a Roman army.

400

395 CE
The Roman Empire is divided into eastern and western empires.

410 CE
The Visigoths capture and sack Rome.

500

476 CE
The Western Roman Empire falls.

600

CE

18.2 Examining the evidence

LEARNING INTENTION

By the end of this subtopic, you will be able to identify and analyse a range of source material about ancient Roman history.

18.2.1 How do we know about ancient Rome?

The Romans left many written records of their times. Among ancient Roman writers who are still read today are the historians Seneca (c. 4–65 CE), Tacitus (c. 55–117 CE) and Seutonius (c. 69–140 CE). The former Roman Empire is also rich in archaeological sources. Among the millions of visitors Italy receives each year are many who travel to see traces of ancient Roman civilisation. These traces include columns and arches erected by the Roman emperors, buildings such as the Colosseum and the remains of the ancient Roman Forum.

Pompeii

Many also visit the ruins of Pompeii, which reveal a picture of what life was like for ancient Romans. Pompeii is near the Italian city of Naples. Along with the nearby town of Herculaneum, Pompeii was destroyed when Mount Vesuvius erupted on 24 August, 79 CE. The volcano threw pillars of ash and a soft porous rock called **pumice** into the air. Pompeii, its buildings and people were buried in volcanic ash more than three metres deep. Herculaneum was hit by a blast of superheated gas that killed everyone. The town was then covered in boiling ash, pumice and rocks.

When archaeologists led by Giuseppe Fiorelli excavated Pompeii in the nineteenth century, they unearthed the streets, shops, houses and other structures of the coastal resort town of 15 000 people, along with games, decorations and even graffiti, all of which were as if 'frozen in time'. They pumped plaster into cavities left by bodies in the hardened ash to create the forms you can see in **SOURCES 1** and **2**. Pompeii provides us with detailed evidence of Roman town life because:

- the town was destroyed very quickly and few people escaped
- those lucky enough to escape had no time to take their belongings
- the town was preserved undisturbed under metres of ash for more than 1700 years.

pumice lava ejected from a volcano that solidifies into a light, porous rock

SOURCE 1 Plaster casts of victims of the volcanic eruption that destroyed Pompeii



SOURCE 2 Plaster cast of a dog that was killed by the volcanic eruption

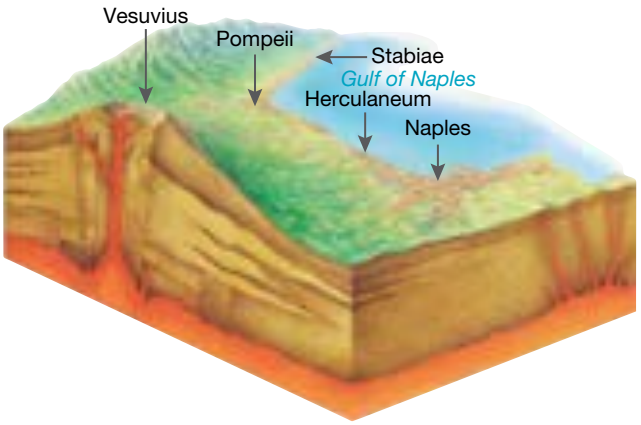


SOURCE 3 From an account by Pliny the Younger, who, as a young man, witnessed the destruction of Pompeii

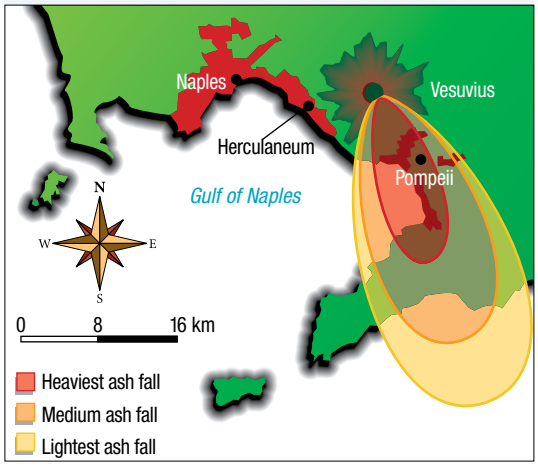
By now ash, which became hotter and thicker... was falling on the boats. This was followed by pieces of tufa [porous rock] and stones blackened, burnt and cracked by the fire... Meanwhile sheets of flame and tall columns of fire were belching forth from several parts of Vesuvius, their flashing and intensity heightened by the darkness of the night... The buildings were being frequently and violently shaken and seemed as they tottered backwards and forwards to be being moved from their foundations …

int-5982

SOURCE 4 Pompeii and Herculaneum were totally destroyed by the eruption of Vesuvius. At first, the volcano spurted a column of ash and pumice high into the air, which fell back like rain. As the energy in the eruption weakened, the column collapsed into a glowing avalanche. Herculaneum, which had escaped the earlier fallout of ash, was covered by about 20 metres of boiling 'mud' — a mixture of hot ash, pumice and rocks.



SOURCE 5 The eruption of Mt Vesuvius. The prevailing winds carried most of the fallout from the explosion south, and Pompeii was soon covered by three to four metres of ash and pumice.



Source: © Wiley composition services

18.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 5, 7	Questions 4, 8, 9, 10

Check your understanding

1. What destroyed Pompeii?
2. In what year did the eruption of Mount Vesuvius take place?
3. When was Pompeii excavated?
4. Approximately how many metres of ash and pumice covered Pompeii?
5. What pieces of evidence do the ruins of Pompeii provide us with?

Apply your understanding

6. Look closely at **SOURCE 1**.
   a. Using the information in this subtopic, explain how the archaeologists created these forms.
   b. Describe the positions of the bodies.
   c. Do you think these people died quickly? Give reasons for your answer.

7. Study **SOURCE 2**. How can you tell that this dog suffered a very different death from the people in **SOURCE 1**?
8. **SOURCE 3** is an eyewitness account.
   a. What happened to people who tried to escape in boats?
   b. How do we know that the eruption of Vesuvius was accompanied by earth tremors?
9. List three questions you would ask about each of these three sources if you were using them as evidence for the destruction of Pompeii.
10. Explain why Pompeii is considered one of our most valuable sources for understanding everyday life in the Roman Empire.

For sample responses to every question, go to www.jacplus.com.au.

18.3 The rise of the Romans

LEARNING INTENTION

By the end of this subtopic, you will be able to explain why Rome became the great power of the ancient Mediterranean world and describe the tactics they used to attain dominance.

18.3.1 Rome's origins

Rome has a very long history — from at least 753 BCE, and possibly earlier, to the collapse of the Roman Empire in 476 CE. Historians call the period 509 BCE to 27 BCE the Roman Republic and the following period the Roman Empire, because Rome was then ruled by emperors. However, Rome had been building an empire long before it was ruled by emperors.

The ancient Romans explained their origins through myths. In the myth of Romulus and Remus, twin boys were raised by a she-wolf. When they grew up they decided to establish a town on the site where the she-wolf found them. In 753 BCE, after killing his brother Remus during an argument, Romulus became the first ruler of a collection of villages on the site of present-day Rome. Over the following century these villages grew into a city, and the wolf became its symbol. The Romans and their neighbouring tribes were Latins. They lived on the plain of Latium, which had a mild climate, fertile soils and a reliable water supply from the Tiber River. The city is located where the Tiber is easy to cross and close to salt flats (salt was a very important commodity in ancient times). Rome's central location in Italy would make it easy for Roman armies to travel in several directions to combat enemies. During the sixth century BCE, Etruscan kings (from Etruria to the north) ruled Rome brutally. In 509 BCE the Romans rebelled. They expelled their last Etruscan king and developed a system of government unlike that of other city-states: Rome became a **republic**. By this time Rome was the most powerful city-state on the plain of Latium.

SOURCE 1 These items were found in a Latin (possibly Roman) tomb of a military commander who was buried about 475 BCE, soon after Rome became a republic. They include his bronze body armour, helmet, axe and spearheads (held in the National Archaeological Museum of Rome).



republic system of government in which the head of state is not a monarch

18.3.2 Rome's growing power

Over the next two centuries, Rome expanded its power through war. In 493 BCE, Rome made a treaty with the other Latin tribes to subdue the Aequi and Volsci, hill tribes that raided the plain of Latium. In 396 BCE, Rome captured the powerful Etruscan city of Veii. But a few years later the Gauls from the north defeated the Roman army and destroyed much of Rome. In time the Romans set about rebuilding their power, and by 272 BCE they had inflicted more defeats on the hill tribes and the **Etruscans**, suppressed revolts by their former Latin allies, crushed the **Samnites** and taken control of the Greek colonies in the south.

Tactics of power

By 272 BCE, Rome had almost 150 000 inhabitants and controlled most of Italy. It had become wealthy through plundering and taxing those it defeated. To control such a vast area, the Romans:

- used conquered peoples against one another
- made alliances with former rivals
- sold defeated enemies into slavery
- allowed conquered cities to keep their own local government, but forced them to supply troops for Rome
- colonised strategically important places with Roman citizens.

Etruscans advanced, civilised people who dominated early Rome from about 575 BCE to about 396 BCE

Samnites a mountain tribe of central Italy

SOURCE 2 Italy in the sixth century BCE



Source: Map drawn by Spatial Vision.

DID YOU KNOW?

In the early Roman Republic most political power was held by the heads of a few powerful families. The most powerful position was consul. There were two consuls, who commanded the military and dealt with legal disputes. The republic lasted for almost 500 years.

SOURCE 3 From a description by the ancient Roman historian Livy of a Roman victory over the Volscians in 385 BCE

The large enemy forces, relying only on their numbers... were bold only in battle cry, throwing of missiles and the first onrush of the battle; sword-fighting, holding ground, an enemy's face flashing in its fury they could not stand up to. Their front lines were driven in and panic spread to the supporting troops... then the ranks were broken in many places... After that, as the first lines collapsed and everyone saw his own turn to be killed was coming to him, they turned and ran. The Romans followed hard on their heels, and so long as they kept their weapons and fled in a packed crowd, it was the infantry's task to keep up the pursuit. But when the enemy were seen to be throwing away their weapons and scattering widely over the land, then came the moment for the cavalry squadrons to be let loose... and by riding across their path hold the column until the infantry could catch up and finish the enemy off with a regular massacre.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Mediterranean world > **Republican Rome**

18.3 ACTIVITY

Create a comic strip to demonstrate the Roman tactics described by Livy in **SOURCE 3**.

HASS skills: Communicating and reflecting
History concept: Sources

18.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions	Questions	Questions
1, 3, 6	4, 7, 8, 10	2, 5, 9, 11

Check your understanding

1. According to legend, why did the wolf become a symbol of Rome?
2. How did Rome become a republic?
3. What were Rome's geographical advantages?
4. What caused Rome to be involved in several wars between 493 BCE and 272 BCE?
5. What were the effects of these wars on Rome's power?

Apply your understanding

6. Compare **SOURCE 1** with images of Greek soldiers in topic 17. Which items in **SOURCE 1** indicate that the Latins, including Romans, were influenced by the ancient Greeks?
7. Use **SOURCE 2** to make a list of the peoples the Romans defeated to gain control of Italy.
8. Read **SOURCE 3**.
   a. According to this source, what were the weaknesses of the Volscians?
   b. When the Volscians fled, what was the task of the Roman infantry?
   c. How was the Roman cavalry used?
   d. What hypothesis could you form from this source about Roman attitudes to defeated enemies?
   e. Titus Livy (born in 59 BCE) spent more than forty years in Rome while writing his *History of Rome*. Do you think he could be biased? Give reasons for your answer.
   f. How might a Roman soldier who had been in this battle have felt about Livy's description?
9. Read **SOURCE 3**. Write an account of this battle as it might have been told by a surviving Volscian.
10. Using the sources and other information in this subtopic, identify the ways in which Rome changed between 509 and 272 BCE.
11. Explain how Rome achieved the changes that occurred between 509 and 272 BCE.

For sample responses to every question, go to www.jacplus.com.au.

18.4 The spreading empire

LEARNING INTENTION

By the end of this subtopic, you will be able to explain how ancient Rome gained power through defeat of its great rival Carthage.

18.4.1 Building the empire through war

Over the following centuries the Romans continued to expand their empire. By 146 BCE Rome was the strongest power in the area around the Mediterranean Sea. Its empire continued to grow, reaching its greatest extent in the late second century CE.

The Punic Wars

In the First Punic War (264–241 BCE), the Romans defeated Carthage, a powerful North African naval and trading city that had colonies around the Mediterranean. Rome's victory gave it control of Sardinia and Sicily and weakened a trading rival.

The Second Punic War (218–202 BCE) began when the Carthaginian general Hannibal led an invading army, including 40 elephants, over the freezing Alps and down into Italy (see **SOURCE 2**). In major battles at Trebia, Lake Trasimene and Cannae, Hannibal's force defeated Roman armies and gained allies in Italy. However, the Romans would not give in. On the advice of the general and consul Fabius Maximus, the Romans avoided further formal battles. When Rome launched counterattacks on Carthaginian Spain and North Africa, Hannibal's army had to return to defend Carthage. The Second Punic War ended with Hannibal's defeat at Zama in 202 BCE.

At the end of the Third Punic War in 146 BCE, following a long siege, the Romans finally captured Carthage. They destroyed the city totally. Every one of its people was killed or sold into slavery.

SOURCE 1 Hannibal's route and major battles in the Second Punic War



Source: Map drawn by Spatial Vision.

DISCUSS

Should we judge the actions of people from ancient worlds by the moral standards of our own age?

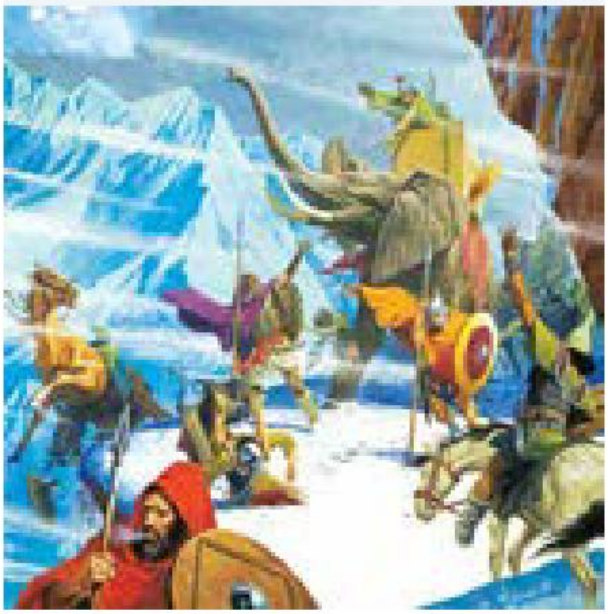
General capability: Ethical understanding

The Social War and the growing empire

In 91 BCE, Rome's Italian allies united against it. Their main grievance was that Rome would not allow them to become Roman citizens even though they provided most of the empire's soldiers. This conflict is known as the Social War. The Italian allies lost the war but won the right to be Roman citizens.

By about 30 BCE, the Roman Empire had grown to include most lands around the Mediterranean. It was extended far to the north when the Romans invaded Britain in 43 CE. They defeated the British tribes but were unable to defeat the tribes of Scotland. By 96 CE, the empire extended to the Rhine and Danube rivers in northern Europe, and to Armenia and Mesopotamia in the east (see the map in subtopic 18.6).

SOURCE 2 A modern artist's impression of Hannibal's forces crossing the Alps



Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Mediterranean world > **Punic Wars**

18.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6	Questions 2, 5, 8, 9	Questions 3, 7, 10

Check your understanding

1. Name the three major battles in which Hannibal defeated the Romans.
2. How did Fabius Maximus out-manoeuvre Hannibal?
3. What caused the Social War?
4. How far north did the Roman Empire extend by 43 CE?
5. When did the Roman Empire reach its greatest extent?

Apply your understanding

6. Use **SOURCES 1** and **2** and an atlas to:
   a. list the modern countries through which Hannibal's forces would have reached Italy
   b. describe the hazards of Hannibal's route
   c. suggest what this strategy might tell us about Hannibal as a military leader.
7. In modern times, how would we describe a power that massacred and enslaved the entire population of a city, as the Romans did the people of Carthage?
8. Identify the trade advantages, especially in sea trade, that Rome would have gained as a result of destroying the power of Carthage.
9. General Fabius Maximus advised Rome to avoid fighting formal battles with Carthage. What alternatives to engaging in major battles could Rome have used to fight Carthage?
10. Suggest reasons why being granted Roman citizenship after fighting in the Social Wars would have been so important to Rome's Italian allies.

For sample responses to every question, go to www.jacplus.com.au.

18.5 The Roman army

LEARNING INTENTION

By the end of this subtopic, you will be able to identify the key features of the Roman army and describe its role in expanding and maintaining the power of the Roman state.

18.5.1 Roman army weapons and tactics

Until the end of the first century BCE, the Roman army was made up of citizens who owned land. They had to provide their own equipment and armour. The fighting season was from late spring until early autumn, after which the soldiers returned to their lives as farmers. Fighting was popular among Romans, as a successful general could earn much glory and become very wealthy.

int-5989

SOURCE 1 Roman soldiers were well trained and well equipped.



- **A** Each legion marched into battle behind a standard — a tall pole with a silver eagle at the top. This symbol of the 'king of the birds' represented the legion's power.
- **B** Sandals had to be strong and well ventilated to stand up to long marches. A special pattern of iron studs was hammered into the leather soles to support the weight of the soldier evenly, and help protect the soles.
- **C** The dagger had a double-edged blade.
- **D** These tall, crested helmets helped soldiers see their leaders in battle.
- **E** Roman forts were often protected against attack by palisades — sharp stakes of wood dug into the ground (some with barbs attached).
- **F** Soldiers often stood side by side and overlapped their shields to form a protective cover called a testudo. The word 'testudo' comes from the Latin word for tortoise.



G The head of the heavy javelin was connected to the shaft by a long, thin strip of soft iron. When the point penetrated an enemy's shield, this strip would bend, making the javelin impossible to remove.

H The decorated leather strips on these belts showed the rank of a soldier. They also helped to protect against a groin injury.

I The short sword, about 60 cm long, was used to stab rather than slash. It was a very effective killing device at close quarters.

J The upper body armour was made up of metal strips held together by leather straps. It was very heavy.

As the area under Roman control grew, a bigger and better organised fighting force was needed. In 396 BCE, soldiers began to be paid, marking the start of Rome's professional army.

The Roman army was one of the most disciplined military forces that has ever existed. Men between the ages of 17 and 22 enlisted for around 20 years. They had to be fit.

auxiliaries soldiers in the Roman army drawn from areas conquered by Rome and made part of its empire

aqueduct structure built to carry water long distances

loot goods or property taken from a defeated enemy after a battle

18.5.2 A Roman soldier's harsh life

Soldiers were not supposed to marry, although many did in secret. As well, their food and equipment had to be paid for from their wages. Extra soldiers, called **auxiliaries**, were provided by the countries Rome had conquered.

When not marching or fighting, the soldiers, called legionaries, built camps, roads, walls and **aqueducts**. Sometimes camps were temporary; at other times, they became permanent forts that often developed into towns. They were always laid out the same way. This meant that soldiers knew how to build them and find their way around them.

Organisation of the Roman army	
Unit	**Composition**
Century	About 80–100 men
Cohort	Six centuries
Legion	Ten cohorts

Soldiers were often allowed to share the **loot** from a battle. Many were also given land when they retired. Such rewards helped to win support for military leaders who sought political power.

SOURCE 2 The Roman historian Polybius reports that discipline in the army was harsh, with penalties that included death.

A court martial composed of the tribunes is convened at once to try [a soldier for being careless on patrol duty]. If he is found guilty he is punished by the bastinado. This is inflicted as follows: the tribune takes a cudgel [short, heavy stick] and just touches the condemned man with it, after which all in the camp beat or stone him, in most cases dispatching [killing] him in the camp itself.

DID YOU KNOW?

The harshest punishment in the Roman army was decimation. It means 'removal of a tenth'. If a unit of the army was considered guilty of mutiny or cowardice, its soldiers were divided into groups of ten. Each group drew lots to decide which one would be killed. The remaining nine soldiers then had to kill their unfortunate comrade, usually by clubbing or stoning him.

18.5 ACTIVITIES

1. Use the internet to research and create an illustrated report on Roman siege engines and forts.

HASS skills: Communicating and reflecting
History concepts: Sources, Evidence

2. Use **SOURCE 1** to do the following.
   a. Sketch and label a diagram of a testudo.
   b. Explain what was meant to happen when a Roman javelin pierced an enemy's shield.
   c. Discuss why the tactics and weapons shown in **SOURCE 1** made the Romans formidable enemies.

HASS skills: Questioning and researching
History concepts: Sources, Evidence

18.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 5, 8	Questions 4, 7, 9, 10

Check your understanding

1. Why did the Roman army originally fight only between spring and autumn?
2. What began to change in the Roman army from 396 BCE and why?
3. What did Roman soldiers have to pay for out of their wages?
4. How were Roman soldiers employed when not fighting?
5. Define the following key terms: 'auxiliaries', 'aqueduct', 'loot'.

Apply your understanding

6. According to Polybius in **SOURCE 2**, what punishment was given to a Roman soldier who was careless on patrol duty?
7. Why do you think such brutal discipline was used?
8. Imagine you are a new legionary. Using **SOURCES 1** and **2** as a reference, write a letter to your family describing what you see as the good and bad aspects of life as a Roman soldier.
9. What benefits could soldiers receive and what was one motive of military leaders who provided such benefits?
10. Rome's military leaders gained personal support by granting loot from battle to the soldiers who fought under them. Suggest what dangers this practice may have presented to Rome.

For sample responses to every question, go to www.jacplus.com.au.

18.6 Citizens and rulers

LEARNING INTENTION

By the end of this subtopic, you will be able to describe Rome's changing system of government from republic to empire, and explain the significance of the class groups that the people of Rome were divided into.

18.6.1 Social divisions

After the Romans had expelled the last Etruscan king (c. 509 BCE), they introduced a system of government called a republic. In theory, all Roman citizens had a say in how the city was to be run. In practice, power was controlled by the rich upper classes. Over the next 500 years, however, more of the people got a say, although women and slaves still had no voice at all.

To qualify as a Roman citizen you had to be 25 or older, a male and freeborn (not born a slave). Whether or not you were classed as a slave depended on the status of your mother: if she was freeborn, so were you. Citizens could vote on the way Rome was ruled. They were also protected by Roman laws.

patricians members of the aristocratic families that founded the Roman Republic

plebeians all non-patrician citizens of Rome

Roman citizens were divided into two classes — **patricians** and **plebeians** (see **SOURCE 2**). Patricians came from the small number of aristocratic

families that had founded the Republic and tended to have both wealth and influence. Everyone else was a plebeian. This didn't stop some plebeians becoming very rich, but they rarely won the same influence as patricians.

There were many more plebeians than patricians, though, and in the fourth century the plebeians even went on strike to force the patricians to surrender some of their power!

One thing the plebeians won from this strike was the right to elect ten men every year as tribunes, or 'protectors of the people'. The tribunes could *veto* (Latin for 'I forbid') what any other politician was trying to do. In theory, this veto was used to protect the interests of the ordinary people.

SOURCE 1 Romans from the first century CE, depicted on an altar held in the National Museum of Rome

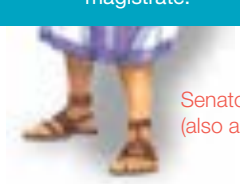


SOURCE 2 Magistrates would try to move up through the ranks as this increased their wealth and power.



Senate (300)
Comprised current and past magistrates who served for life. Managed foreign policy and controlled the money. Proposed but could not pass law. Advised magistrate.

Gave advice



Senator (also a patrician)

PATRICIANS

Consuls (2)
Managed army and affairs of government. Could veto each other.

A former consul could become a dictator (in emergencies) for six months.

Could become a censor (for 18 months).Censors conducted a census (head count) of Rome every five years.

Praetors (8)
Judges who administered Roman law

Could become governors of provinces.

Aediles (16)
Looked after particular matters of government such as public buildings, food supply and games.

Quaestors (20)
Managed financial and administrative matters.

Plebeian Plebeian



PLEBEIANS

Tribunes (10)
Representatives of the plebeians Could call meetings of the senate.

Ordinary people
Townsfolk, farmers, soldiers

Slaves
No rights. Regarded as possessions. Worked on farms, in mines, as gladiators and as prostitutes.

Patricians



18.6.2 Ruling the Roman Republic

Every year, Rome would elect more than fifty men to run the city. These men were known as **magistrates**, but they held office for only one year and they always had one or more colleague with the same degree of power. Roman politicians competed to get elected as more and more powerful magistrates. Once a man had held office as a magistrate, he became a member of the **Senate**. (The word *Senate* derives from the Latin *senex*, meaning 'old man'.) In theory, the Senate acted as a council of advisers to the consuls, but in reality they held much direct power. Meetings of the Senate were controlled by the consuls, the most senior magistrates (see **SOURCE 2**).

magistrates men elected by the citizens to run Rome for a year

Senate governing body in ancient Rome, (in theory) an advisory body of ex-magistrates

Voting in the Roman Republic

All citizens had the right to express their opinion by voting in one of several assemblies (similar to a modern parliament). These assemblies also elected the magistrates every year. Originally voting was by a show of hands, but eventually this public expression was replaced by a secret ballot. Citizens carved either 'V' (disagree) or 'A' (agree) on a small piece of wax. The pieces were then put in a container to be counted.

Democracy or not?

Although it might seem that the Roman Republic was a democracy, in reality it was not. When the republic first started, the plebeians, although citizens, had no real say, as their votes did not count as much as those of the patricians. This made the plebeians angry. In time, they set up their own assembly. The patricians were worried by this, as they knew that the plebeians (who had far greater numbers) could revolt and overrun them. So, eventually, the patricians let them elect tribunes to put forward their views. In 366 BCE, a tribune became a consul for the first time; consul was the highest rank in the republic. By 287 BCE, all decisions of the plebeians' assembly were seen as lawful. Even so, the plebeians only ever had limited power compared with that of the patricians.

DISCUSS

Was the Roman Republic a republic as we understand the term today?

General capability: Ethical understanding

DID YOU KNOW?

Every Roman province had to pay taxes to the Roman authorities. In 212 CE, Roman citizenship was granted to all free subjects of the empire. The empire's growth meant slavery for many. On the other hand, conquered people often adopted Roman ways, including styles of housing and dress, and many benefited from peace and increased trade. This peace imposed by the conquerors was called the *Pax Romana*.

18.6.3 From republic to empire

With increased wealth and opportunity, competition for power among the patricians intensified, plunging the city into chaos. In 27 BCE, the Roman Republic collapsed. So began the age of the emperors (a single ruler, often chosen by the Senate, but ruling much like a king). Although Julius Caesar (100–44 BCE) was not an emperor, his career marks the turning point from republic to empire (see **SOURCE 3**).

Julius Caesar

Julius Caesar outsmarted his political rivals and proved himself to be a brilliant general. His willingness to share the hardships of war, as well as the loot of battle, made him very popular with his soldiers. Using his loyal troops, Caesar seized power in 49 BCE by attacking the most powerful man in Rome, his great rival (and former friend) Pompey. In the ensuing **civil war** Caesar won control of Rome, and in 44 BCE he had himself appointed Dictator for Life.

civil war war between rival factions within one state or country

SOURCE 3 Profile of Gaius Julius Caesar (based on the writings of the Roman historian Suetonius)

Born 100 BCE; died 44 BCE. Class: patrician

Well built, tall, fair hair, balding (combed his hair forward), dark brown eyes

Very fit, but sometimes had epileptic fits

Ambitious, but fair man who judged men on their fighting record

Good at sword fighting, horse riding, public speaking, writing

Often wore a wreath of laurel leaves on his head (as a sign of victory)

Introduced the Julian Calendar, used for more than 1500 years

Introduced a number of land, law, tax and social justice reforms



Caesar or rex?

Rex is the Latin word for king. Romans had hated kings since before they had thrown out their Etruscan rulers in 509 BCE. After Caesar's defeat of Pompey and seizure of power, some senators accused him of acting like a king. Perhaps this is why he chose not to take the title of *rex*.

Some of the senators who had survived the civil war decided they could not permit Caesar's power grab. They arranged for his murder on 15 March, 44 BCE. Among those involved in stabbing him to death were old and trusted friends such as Marcus Brutus.

SOURCE 4 Suetonius's description of Caesar's assassination (Suetonius lived about 69–140 CE)

As soon as Caesar took his seat [in the Senate House], the conspirators crowded around him as if to pay their respects. Tillius Cimber... came up close, pretending to ask a question... caught hold of [Caesar's] shoulders. 'This is violence!' Caesar cried, and at that moment one of the Casca brothers slipped behind and with a sweep of the dagger stabbed him just below the throat. Caesar grasped Casca's arm and ran it through with his stylus; he was leaping away when another dagger caught him in the breast. Confronted by a ring of drawn daggers, he drew the top of his gown over his face... Twenty-three dagger thrusts went home as he stood there.

The Roman Empire

After Caesar's assassination, his great-nephew Octavian (later called Augustus) took control of Rome. Eventually, following a period spent eliminating his rivals, he declared himself emperor. As Augustus, he founded a dynasty (family of leaders) that ruled the empire until 68 CE.

The Roman Empire endured until 476 CE under a series of emperors who either were given the title by the Senate or simply seized power.

SOURCE 5 The Roman Empire at its peak. The empire consisted of a number of provinces, each ruled by a governor.



Source: Map drawn by Spatial Vision.

DID YOU KNOW?

Australia today is a true representative democracy. All its citizens now have the same rights and privileges, no matter what their gender, race or wealth. One of their rights is the right to vote. Australian citizens can have their own opinions and may express them without fear of being punished. Citizens aged 18 and over can vote for politicians to represent them in government by marking a ballot paper issued during an election. Elections for Federal Parliament are usually held every three years. Federal Parliament consists of two houses — the House of Representatives and the Senate.

DISCUSS

Caesar's ambition and method of seizing power was the cause of his assassination. Discuss.

General capability: Ethical understanding

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Mediterranean world > **Roman Civil Wars**
- The Mediterranean world > **Roman Empire**

18.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 4, 9, 10	Questions 3, 6, 7, 11, 14	Questions 5, 8, 12, 13, 15, 16

Check your understanding

1. Who could be a Roman citizen?
2. In theory, who had a say in how the Roman Republic was run?
3. In practice, which social class really ran Rome?
4. How did some of the ordinary people gain a share of power in the fourth century BCE?
5. What was a magistrate in ancient Rome?
6. How did a Roman become a member of the Senate?
7. When did the Roman Republic collapse?
8. How did Julius Caesar seize power?

Apply your understanding

9. To which social class do you think the Romans in **SOURCE 1** would have belonged? Give the reasons for your answer.
10. Using **SOURCE 2**, describe the roles and powers of the following: consuls, praetors, aediles, quaestors and tribunes.
11. Using **SOURCE 3**, identify and describe the characteristics of Julius Caesar that would have helped his quest for power.
12. According to Suetonius in **SOURCE 4**, how many Romans must have taken part in the assassination of Caesar?
13. How would you test the reliability of **SOURCE 4**?
14. Using the sources and information in this subtopic, what features of Rome's society, political system and growth of its empire might have made it difficult for it to remain a republic?
15. Evaluate the significance of Julius Caesar in changing the history of Rome.
16. Do you think the concerns of the senators would have been shared by the common people? Why or why not?

For sample responses to every question, go to www.jacplus.com.au.

18.7 Spartacus and Nero: two significant individuals

LEARNING INTENTION

By the end of this subtopic, you will be able to explain how Spartacus the slave leader and Nero the cruel emperor provide an insight into how power and leadership operated in ancient Rome.

18.7.1 Spartacus: leader of the great slave uprising

No two leaders could have been less alike, nor could they have played more different roles in Rome's history, than Spartacus the slave and Nero the emperor. Spartacus was a gladiator who led a massive slave rebellion that spread fear through Rome. Nero has long been regarded as a cruel and wasteful tyrant who became a symbol of the worst aspects of Roman power.

As the Roman Empire grew, so did the number of captives who were sold into slavery. Rome's wealth was built on slavery, and slaves usually had the most miserable lives of all people in its empire. Many slaves worked on the estates of rich Romans. Others were servants. For the slightest act of rebellion a slave could be put to death by being **crucified**.

Those who suffered most were miners, prostitutes and gladiators. Mineworkers rarely lived past the age of 21. Prostitutes often died young from abuse or disease. Few gladiators lived for long, as they were trained to fight to the death for the amusement of Roman crowds (see **SOURCES 2** and **3**). Unlike many slaves, however, gladiators knew how to fight.

SOURCE 1 A Roman stele (funerary monument) of a freedman (former slave), dressed in a toga, and his freedwoman wife



SOURCE 2 From an account of gladiators in combat by the Roman historian Seneca (4–65 CE)

I arrived at the Colosseum in the middle of the day... No sooner has a man killed his rival than the crowd shout for him to kill another, or be killed. In the end every fighter dies... why watch their sufferings?

In 73 BCE, at Capua, south of Rome, an event took place that started a rebellion that shook the Roman Empire. It began when a group of gladiators overpowered their guards and escaped. Their main leader was a **Thracian** gladiator called Spartacus. Their numbers soon grew to thousands as they freed other slaves and taught them how to fight. They defeated each Roman legion that was sent to crush them, and by the following year the rebel force numbered about 10 000 and was growing fast as it raided Roman towns and freed more slaves. Panic spread throughout Rome.

crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony

Thracian a native of the Roman province of Thracia

The rebels were eventually defeated. Two of their groups were wiped out by Roman legions. The main rebel force under Spartacus was at last defeated in a pitched battle in which as many as 60 000 rebels may have died fighting (see **SOURCES 4** and **5**). Six thousand were taken prisoner. To serve as an example to others who might consider rebellion, the entire 6000 were crucified along the road from Capua to Rome.

SOURCE 3 A relief sculpture depicting two gladiators named Scholasticus and Damascenus from the third century CE. The sign indicates that Damascenus died in the fight. Most gladiators' lives ended this way, although a few very successful fighters were able to buy their freedom.



SOURCE 4 From an account of the slave revolt by the Greek historian Plutarch (c. 46–120 CE)

Spartacus... was a Thracian from the nomadic tribes and not only had a great spirit and great physical strength, but was... most intelligent and cultured... Spartacus had grown to be a great and formidable power but... could not expect to prove superior to the whole power of Rome, and so he began to lead his army towards the Alps... His men, however, would not listen to him. They were strong in numbers and full of confidence …

... both consuls were sent out to deal with what was considered a major war and a most difficult one to fight …

SOURCE 5 From Plutarch's description of the final battles of the revolt

Crassus's troops killed 12 300 men, but he found only two of them who were wounded in the back. All the rest died... fighting back against the Romans.

... Spartacus... surrounded by enemies, still stood his ground and died fighting to the last.

DID YOU KNOW?

Slaves had no rights at all until a law enacted by Emperor Claudius banned the practice of torturing or killing them. In reality, however, this law often failed to protect them. A few educated slaves led fairly comfortable lives and some slaves were granted their freedom or were able to save enough money to buy it, but for most slaves life was harsh.

18.7.2 Nero: emperor, party-thrower and murderer

Nero Claudius Caesar Drusus Germanicus was the adopted son of Emperor Claudius. Nero was just 17 when he became emperor in 54 CE after his mother, Agrippina, had Claudius poisoned. At first Nero behaved like a competent and fair ruler, but within five years he had murdered his step-brother and his mother and divorced his wife and step-sister Octavia, whom he later murdered.

Nero sought popularity by spending vast sums of money raised by taxes on parties and public spectacles. Among the many terrible things attributed to him, Nero had high-ranking senators tortured and killed for treason so that he could confiscate their property to fund his wasteful lifestyle. By 68 CE, Rome's provinces rebelled against him. Fearing execution, Nero committed suicide.

SOURCE 6 An account of Nero's lifestyle by the ancient Roman writer Suetonius (c. 69–140 CE)

He gave an immense variety of entertainments... parties, chariot races in the Circus, stage plays, a gladiatorial show... and actually raced four-camel chariots! At the Great Festival, as he called the series of plays devoted to the eternity of the Empire... all kinds of gifts were scattered to the people...

Nero practiced every kind of obscenity, and... finally invented a novel game: he was released from a cage dressed in the skins of wild animals, and attacked the private parts of men and women who stood bound to stakes.

SOURCE 7 An extract from Alexander Canduci, *Triumph and tragedy: the rise and fall of Rome's immortal emperors*, published in 2010

Nero was a conundrum [riddle]. His creative and artistic side sat uneasily next to his bloodthirsty paranoia [mental illness marked by fear of being persecuted] and... disregard for others... In the aftermath of the fire [the Great fire of Rome in 64 CE], rumours spread that Nero was the culprit who had started it. In order to throw suspicion off himself... Nero... began a campaign against the Christians... feeding them to the beasts at the great games, crucifying them and setting them alight.

SOURCE 8 An extract from an article written by Robert Draper 'Rethinking Nero', published in *National Geographic* in 2014

The case against Nero... would appear to be open and shut. And yet... his death was followed by outpourings of public grief... mourners long continued to bring flowers to his tomb...

The dead do not write their own history. Nero's first two biographers, Suetonius and Tacitus, had ties to the elite Senate and would memorialise his reign with lavish contempt…

Nero's early reign was golden. He banished Claudius's secret trials, issued pardons, and when asked for his signature on a death warrant, moaned, 'How I wish I had never learned to write!'

SOURCE 9 The site of Rome's Circus Maximus, where, according to Suetonius, Nero drove a chariot in a race



18.7 ACTIVITIES

1. Working in small groups, write a racing commentary on Nero's chariot race in a style that would have won favour with him.
   HASS skills: Communicating and reflecting
   History concepts: Sources, Evidence
2. Imagine you are a slave who has joined Spartacus. Write a letter to your fellow slaves telling them your reasons.
   HASS skills: Communicating and reflecting
   History concept: Significance

18.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 4, 7, 9	Questions 2, 6, 10, 11, 12	Questions 5, 8, 13, 14, 15

Check your understanding

1. Which group in Roman society benefited most from slavery?
2. What do you think would have been the worst jobs for slaves?
3. Why were the gladiators able to launch a slave revolt?
4. How did Nero become emperor of Rome?
5. What crimes did he commit against his own family?
6. How did he gain popularity?

Apply your understanding

7. Freedmen and freedwomen were former slaves. The toga was a sign of Roman citizenship. How does **SOURCE 1** provide evidence that some slaves were able to advance in Roman society?
8. Read **SOURCE 2**.
   a. How can you tell that not all Romans approved of gladiatorial combats?
   b. Do you think many Romans would have shared Seneca's perspective? Why do you think this?
9. Using **SOURCE 3** as your evidence, how long do you think a gladiator's career would be likely to last?
10. Read **SOURCES 4** and **5**. Explain what these sources say about:
    a. how big a threat the slave revolt posed to the power of Rome
    b. why Spartacus was finally defeated
    c. the courage of Spartacus and the other rebels.
11. For what two sides of Nero's character does **SOURCE 6** provide evidence?
12. Does **SOURCE 7** accept or support the view of Suetonius?
13. **SOURCE 8** questions the accepted view of Nero.
    a. How does it cast doubt on the reliability of Suetonius?
    b. What does it suggest about how the common people of Rome regarded the changes brought about by Nero?
    c. How does this interpretation differ from that of **SOURCE 7**?
14. Identify and describe ways in which people's lives were changed by Nero.
15. Explain why Spartacus should be regarded as a significant individual in Roman history.

For sample responses to every question go to www.jacplus.com.au.

18.8 Living in the Roman Empire

LEARNING INTENTION

By the end of this subtopic, you will be able to describe daily life for Roman citizens, both rich and poor, and identify the social and cultural changes that came as the Roman empire expanded.

18.8.1 Changing Roman society

Around 90 per cent of people in the Roman Empire were peasants who lived on farms or in villages. Far fewer lived in towns and cities. Wherever they were, the poor lived very differently from wealthy Romans. Some plebeians became wealthy through trade but most were skilled or unskilled workers, shopkeepers or **tenant farmers**. As more slaves were used as workers, increasing numbers of poor citizens became unemployed. By contrast, wealthy Romans usually did no physical work and lived in luxurious villas with baths and even underfloor heating. As the empire grew, so did the gap between the rich and the vast numbers of the poor.

Large Roman towns were well planned, with government buildings and a **forum** where the citizens could gather. Within the city of Rome were expensive villas for the rich and fine government buildings. The rich feasted at banquets where they ate lying on their sides on couches while being entertained by dancers and musicians. Some made it a habit to overeat then vomit so they could continue to feast.

Meanwhile, the poor survived on bread and porridge and lived in rented slums without kitchens, toilets, heating or running water (see **SOURCE 1**). Their drinking water came from public fountains and they washed in public baths. To keep the poor from rebelling, the ruling classes provided free grain, public baths and toilets and cruel forms of entertainment. They also encouraged the poor to live in colonies in conquered lands.

tenant farmers poor farmers who rented small plots of land

forum open meeting place of a town or city

SOURCE 1 From a description of housing conditions of the poor by the Roman writer Juvenal, first century CE.

We live in a city shored up with slender props... for that is how the landlords stop the houses from falling down.

The impact of slavery on social change

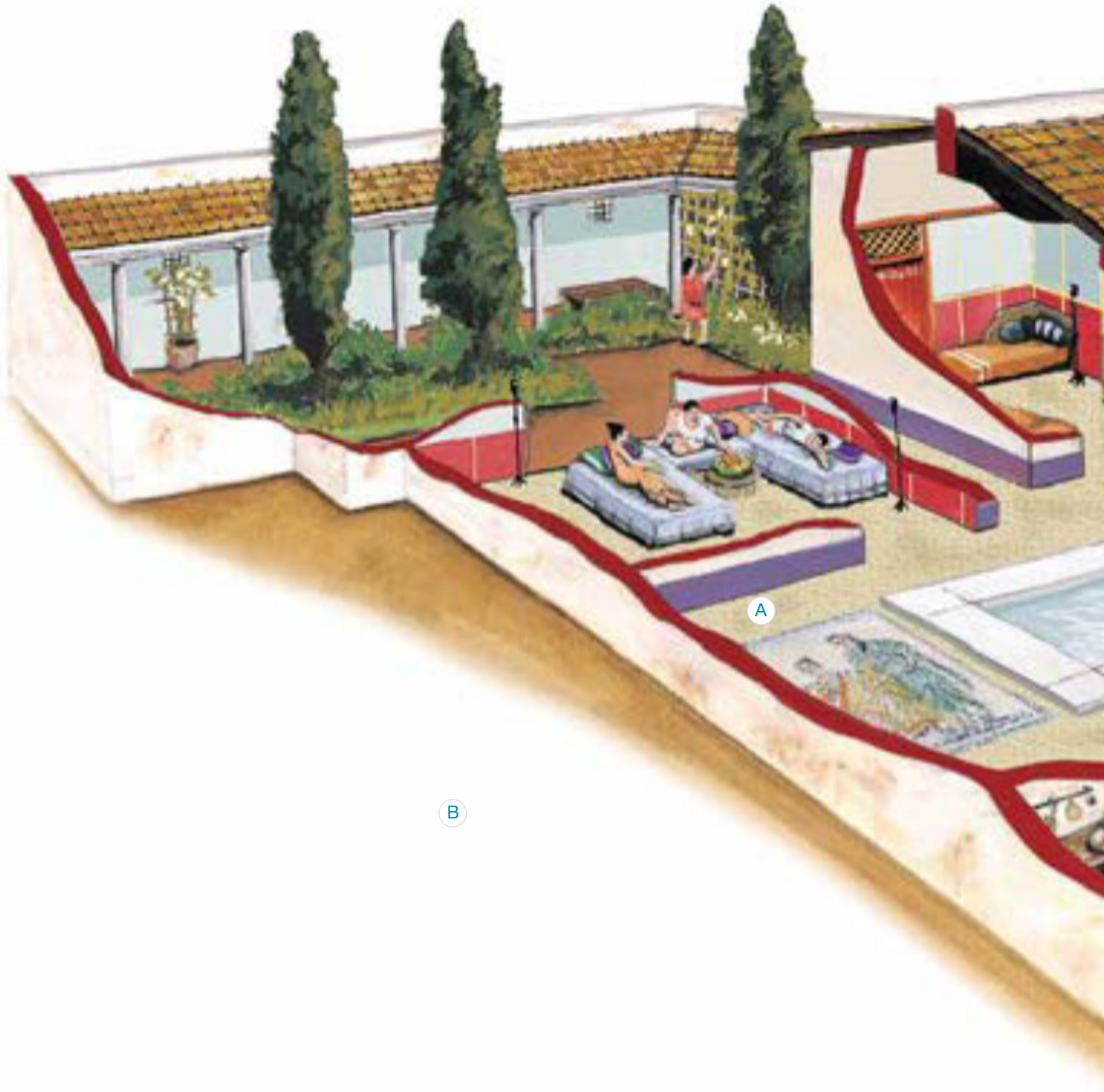
The main reason for the existence of large numbers of poor citizens in Roman towns was the vast number of conquered peoples who became slaves. The increased use of slave labour changed Rome from a society based mainly on small farmers to one based more on large agricultural estates owned by the very rich and worked by slaves. Many of the city-dwelling poor were displaced Roman citizens who moved from the countryside to towns and survived on casual work or on the dole.

DID YOU KNOW?

Public entertainments included executions, live animal hunts, fights between tormented animals and contests between gladiators and animals. So many lions were captured for wild animal shows that the species disappeared in the Middle East.

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SOURCE 2 A typical villa of the type occupied by wealthy Romans

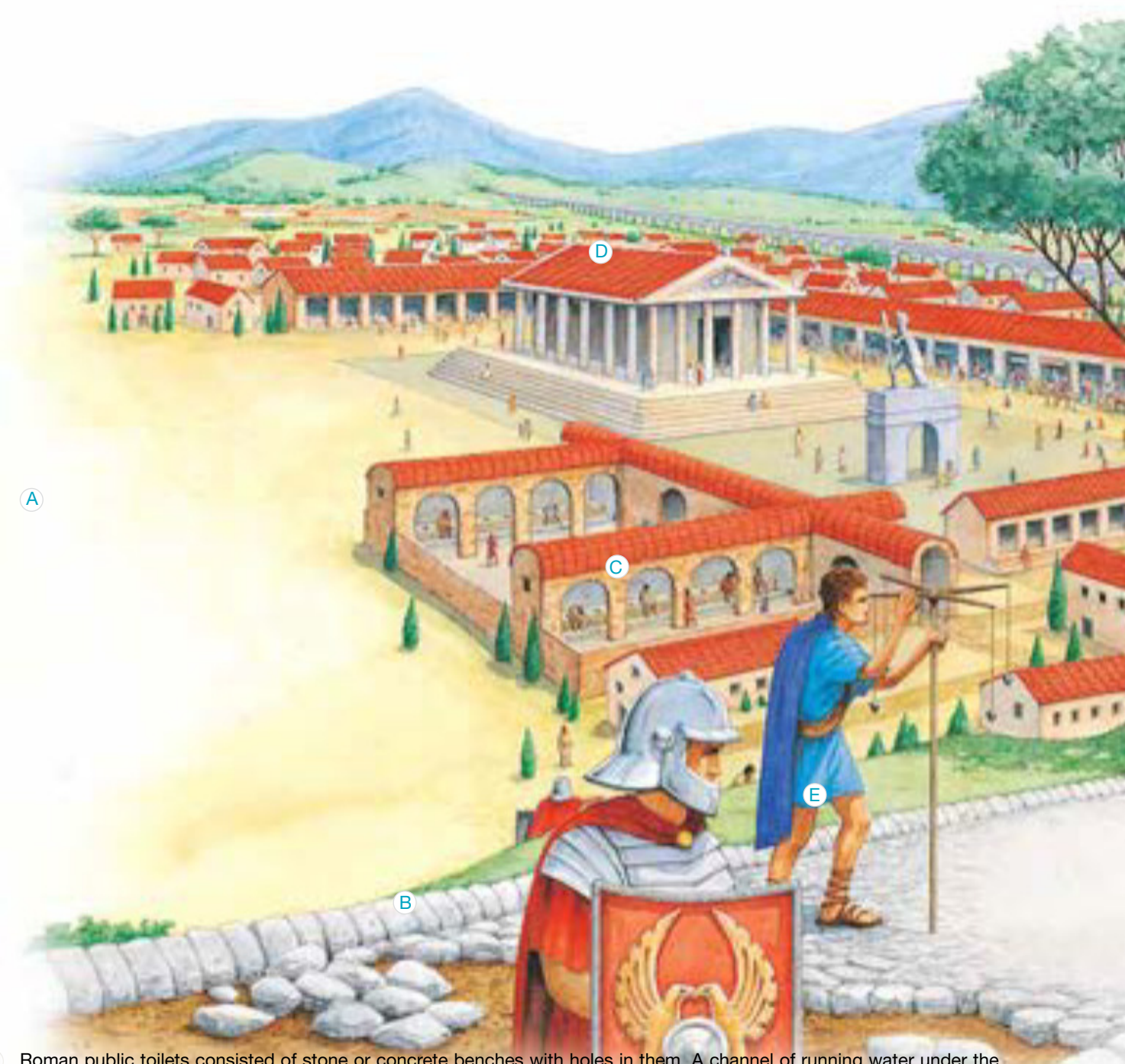


- **A** The atrium, or central courtyard, contained a shallow pool. The pool was filled by rain that entered through an opening in the roof (through which light also entered).
- **B** The solid high external walls had few or no windows.
- **C** The lararium, or household shrine, was also usually erected in the atrium.
- **D** Small olive oil lamps made of pottery or bronze provided lighting in the evening.
- **E** Furniture consisted mainly of beds, couches, low tables and chairs, which sat on a mosaic or tiled floor. The floor was sometimes heated from beneath.


C
D
E

int-5992

SOURCE 3 The general layout of cities throughout the Roman Empire followed the pattern set for the city of Rome.



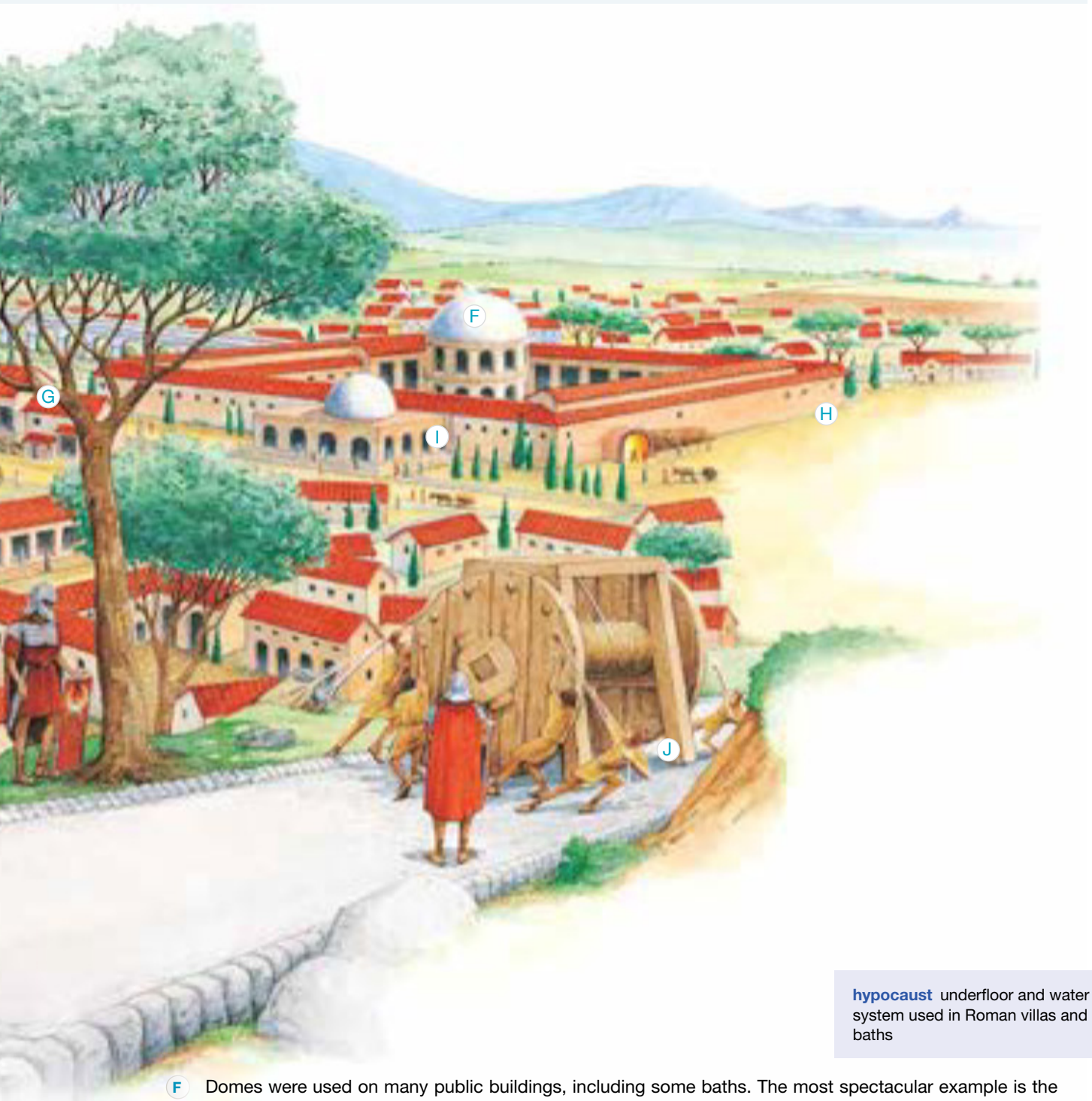
A Roman public toilets consisted of stone or concrete benches with holes in them. A channel of running water under the holes removed human waste. A sponge on the end of a stick was used for cleaning.

B Roman roads were usually straight, and often very long. They were usually laid on a bed of rubble, over which was poured a layer of concrete or gravel. Sometimes stone slabs were placed on top. They were slightly higher in the middle so that water and debris could wash off easily.

C The Romans further developed the Etruscans' arch to produce, first, the singletunnel vault (many arches joined together, one behind the other), then the cross-vault (two tunnel vaults crossing at right angles) and then the revolutionary dome.

D Aqueducts allowed water to flow down to a settlement by means of gravity. To ensure that the water flow did not stop, they had to be built very precisely.

E The Romans were also able to fire bricks, and to use building tools such as rulers, chisels, squares (to measure angles) and a surveying instrument called a groma. By lining up the two weighted strings on the end of each bar of the groma with landmarks, engineers were able to build roads that were straight and level.



hypocaust underfloor and water heating system used in Roman villas and public baths

F Domes were used on many public buildings, including some baths. The most spectacular example is the dome on the Pantheon, a temple built to all the gods in around 120 CE. Spanning 43 metres in diameter, it is still the second biggest in the world.

G Building was revolutionised when the Romans found out how to make concrete. It was discovered that when a volcanic dust called pozzolana was mixed with lime and water, it set into a hard material.

H People went to the public baths every day to wash and to socialise. The complexes contained hot and cold pools, saunas, reading rooms, hair salons, dressing rooms, exercise yards and shops. Some of them held thousands of people.

I The water in the public baths was heated by a **hypocaust**. Slaves kept large fires burning in the basements of buildings or outside them. The hot air was fed under the floors and up through a series of tunnels to heat some of the pools.

J Roman cranes were large wooden structures, powered by a big wheel turned by slaves.

18.8.2 Roman culture

Rome produced a rich culture, but it was probably enjoyed by less than five per cent of the population. These Romans were influenced by the cultures of some of the peoples they conquered, especially the Greeks. From Greece, the Roman armies brought back paintings and statues. Rich Romans used Greek slaves to educate their children and to decorate their homes and public buildings with paintings, sculptures and statues. Many Roman statues of Roman leaders and gods were copies of Greek statues.

The Romans adopted and imitated Greek literature. Homer's *Odyssey* was translated into Latin and plays were performed at festivals. Many of these plays were comedies that ridiculed everyday events. Roman writers produced histories, poetry and books on military tactics, law and medicine. Among the most famous was the poet Virgil. His greatest work was the *Aeneid*, which tells the story of Aeneas, who, according to legend fled from the destruction of Troy and founded Rome. Virgil's success showed that some Romans could rise from poor backgrounds. He was the son of a peasant. Horace, another great Roman poet, was the son of an ex-slave. Both were encouraged by Augustus and benefited from the tradition of noble **patronage**.

Virtues

Among the ideas of the ancient Romans, **virtue** was considered very important. Roman writers and philosophers praised such virtues as family values, patriotism and justice. In schools, boys were taught to read, write and use Roman numerals. They also learned **rhetoric** and logical thinking and studied the works of great classical writers.

DID YOU KNOW?

Roman fathers had total power over their families, including the power to kill their children or sell them into slavery. Girls received little schooling other than in household skills. Married women had few rights and could be killed if they committed adultery.

18.8.3 Roman technology

The Romans built some 84 000 kilometres of roads, as well as countless bridges, walls, aqueducts, temples and public buildings, including baths. They had no earthmoving equipment, steel cranes, power tools or computer-aided design, yet the way they built many of these structures was not bettered for nearly 2000 years.

As the Roman Empire expanded, it became important to master the skills needed to build it, protect it and connect and service its various parts. Roads, walls and towns had to be built, and towns needed facilities such as water supply, toilets and **public baths**. Much of the work was done by the army. The Romans became so good at engineering and construction that many of their structures are still used today.

patronage supporting and encouraging authors and artists
virtue moral standard or value
rhetoric the art of public speaking
public bath public building complexes containing baths of varying temperatures, and sports and beauty facilities; a popular meeting place for Roman citizens

DID YOU KNOW?

Roman engineering was so good that many Roman public buildings still stand. They supplied running water and sewerage to the homes of wealthy people who could afford pipes, taps and flushing toilets. Some blocks of flats for the poor, on the other hand, were so badly built that they fell down within a few years. Fires were such a problem in Rome that in the year 6 CE a fire-fighting force, called the Cohortes Vigilium, was set up.

18.8 ACTIVITIES

1. Draw a mind map to compare the lives of the rich and poor in the Roman Empire.
   History concepts: Perspectives, Empathy
2. Use the internet to research the construction and features of one famous Roman structure. You could choose, for example, the Pantheon, the Colosseum, the buildings of the Roman Forum or the Baths of Diocletian.
   HASS skills: Questioning and researching
   History concepts: Sources, Evidence

18.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 10	Questions 2, 6, 7, 11, 13	Questions 4, 8, 9, 12, 14

Check your understanding

1. What occupations were most plebeians engaged in?
2. Why did large numbers of plebeians become unemployed?
3. Describe some ways in which privileged Romans were influenced by Greek culture.
4. What virtues were praised by Roman writers and philosophers?
5. What powers did Roman fathers have within their families?
6. How was the education of boys different from that of girls?
7. What facilities were needed in a Roman town?
8. What did the Romans do about the risk of fires?

Apply your understanding

9. What evidence does **SOURCE 1** provide about the housing of the poor in Rome?
10. Imagine you are a member of the wealthy Roman family who own the villa depicted in **SOURCE 2**. Describe how you would furnish and decorate your house and what preparations you would make for your first banquet.
11. Examine **SOURCE 3**.
    a. Describe a Roman public toilet.
    b. Explain how aqueducts worked.
    c. Explain how public baths were heated.
    d. Draw and label a diagram to explain how Roman roads were built.
12. How would you account for the housing of the poor being so inferior, as described in **SOURCE 1**, when the Romans had the excellent building skills shown in **SOURCES 2** and **3**?
13. Imagine you are one of the plebeians driven from the countryside to the city and with no choice but to live in a slum like those described in **SOURCE 1**.
    a. How would you feel about the social changes that had brought this about?
    b. How would you regard those who could live in a villa like that shown in **SOURCE 2**?
14. Using the sources and information in this subtopic, explain how the growth of the Roman Empire changed Roman society.

For sample responses to every question, go to www.jacplus.com.au.

18.9 Death and the Romans

LEARNING INTENTION

By the end of this subtopic, you will be able to describe death and burial practices in ancient Rome, and identify the significance of commemorations of the dead as an expression of family identity and status.

18.9.1 Beliefs and funeral customs

Death and the customs associated with funerals provide an enormous amount of primary source evidence for ancient Roman society and its values and beliefs. Roman cemeteries were located outside the boundaries of cities. The inscriptions and sculptures on tombs and altars, along with writings about death, reveal a lot of what Romans believed about honouring the dead and about souls and an afterlife.

SOURCE 1 This stele (upright stone slab) served as the grave marker of a Roman family group of former slaves with a male child.



On Roman ideas about life after death, we have the writings of just a few highly educated Romans and they expressed various different beliefs. However, at least some and possibly many Romans appear to have believed that souls went on living after the death of a body and that they might be judged in an afterlife. Sometimes a coin was placed in or over the dead person's mouth. This custom appears to have been adopted from the Greeks, who believed a coin was needed to pay the ferryman who transported souls of the newly dead across a river that separated the underworld from the world of the living.

Regardless of beliefs about an afterlife, Romans thought that they had a duty to care for their dead ancestors. When a family member died, their closest relative would close the eyes of the deceased and all family members would mourn, calling out the dead person's name. After the deceased person's body was washed and anointed, it would be dressed in clothes that reflected their position in Roman society; for example, a deceased male citizen would be dressed in a toga.

Funeral processions took place between the deceased's home and the cemetery. Ceremonies were held at both places. They included chanting and a eulogy, which was a formal speech honouring the deceased. Families who could afford it would also sacrifice an animal in the presence of the dead body.

18.9.2 Tombs and commemorations

Throughout most of the period of the Roman Empire, dead bodies were usually cremated and the ashes were kept in urns. But this was later mostly replaced by burial. If they could afford it, people would have the body of a dead family member placed in a sarcophagus (a stone coffin). Wealthy Romans often owned very grand tombs that had several chambers for family visits. Poorer Romans had small, simple tombs. In the city of Rome, those who could not afford tombs used the catacombs. These were large networks of tunnels cut into soft rock below the city.

Following funerals, the dead continued to be commemorated in several ways. An epitaph would be inscribed on the tomb, often recording the deceased's span of life and information about their family relationships, occupations and any public offices they held. Each year, the dead were honoured during the nine-day festival called the Parentalia. In addition, portrait busts of a dead family member were often made of bronze or stone to be displayed in homes of wealthy families.

SOURCE 2 An inscription on this sarcophagus reveals that it was donated by two Roman citizens to their friend. The figures on the sarcophagus are a cobbler (shoemaker) and a spinner (a maker of thread for cloth). It is probable that one of these occupations was that of the deceased and the other was that of the donors.



18.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 5, 7	Questions 1, 4, 8	Questions 3, 6, 9, 10

Check your understanding

1. Describe what family members did at home and at the cemetery following a family member's death.
2. What does the custom of placing a coin on or in a dead person's mouth reveal about:
   a. the influence of Greek myths on Roman ideas
   b. the belief, held by at least some Romans, in an afterlife?
3. Where did the funeral ceremonies take place in ancient Rome?
4. What was a sarcophagus?
5. How different were the tombs and burial places of the rich and the poor?

Apply your understanding

6. The child in **SOURCE 1** is wearing a toga, a symbol of Roman citizenship. Explain what this tells you about the possibility of moving up in Roman society.
7. Form a hypothesis that might explain the gift of the sarcophagus in **SOURCE 2**.

8. In a style that would appeal to their families, write a eulogy for any one of the figures in **SOURCE 1** or **SOURCE 2**.
9. Use the sources and other information in this subtopic to explain some things about Roman society that we could discover from evidence about funeral customs. Use the following headings: attitudes to the dead, beliefs about an afterlife, occupations, social classes, changes enabling movement between social classes.
10. There were at least 40 networks of ancient catacombs under the city of Rome, often decorated with wall paintings. Explain why the catacombs are important to Roman historians and archaeologists.

For sample responses to every question, go to www.jacplus.com.au.

18.10 Roman law and religion

LEARNING INTENTION

By the end of this subtopic, you will be able to explain the significance of Roman religion and laws to Roman government, daily life and values.

18.10.1 Roman law

During the period of over 1200 years between Rome's foundation in 753 BCE and the fall of the Western Roman Empire in 476 CE, there were many changes that affected Roman society. None were more important than changes in law and religion.

It is probable that when Rome was ruled by Etruscan kings there were no laws other than a king's decisions. However, the system of government in the Roman Republic created the need for written laws to prevent the patrician class from always dominating matters of law and magistrates from interpreting the law unfairly. According to ancient Roman historians, in 451 BCE, ten Roman citizens were given the job of recording the laws that were in practice. These laws were approved and adopted in 450 BCE as the Twelve Tables (see **SOURCE 1**). These dealt mostly with the rights of citizens because women, children and slaves came under the authority of the male head of the family.

SOURCE 1 Three laws from the Twelve Tables

Table IV, law 2: If a father sell his son three times, the son shall be free from his father.

Table V, law 1: Females shall remain in guardianship [under the control of their fathers] even when they have attained their majority [became adults].

Table XI, law 1: Marriages should not take place between plebeians and patricians.

As Rome's society and economy became more complicated, new laws were added as the need arose. Roman law came to cover a huge range of matters that affected everyday life. These included crime and punishment, property, trade, industries, sex, slavery and politics. Although all Roman citizens were supposed to have the same rights under the law, the rich could often use bribery to get an advantage (see **SOURCE 2**).

SOURCE 2 From the Roman writer Petronius, who lived in the first century CE

What use are laws when money calls the tunes and people without a gentleman's income have no real rights at all?

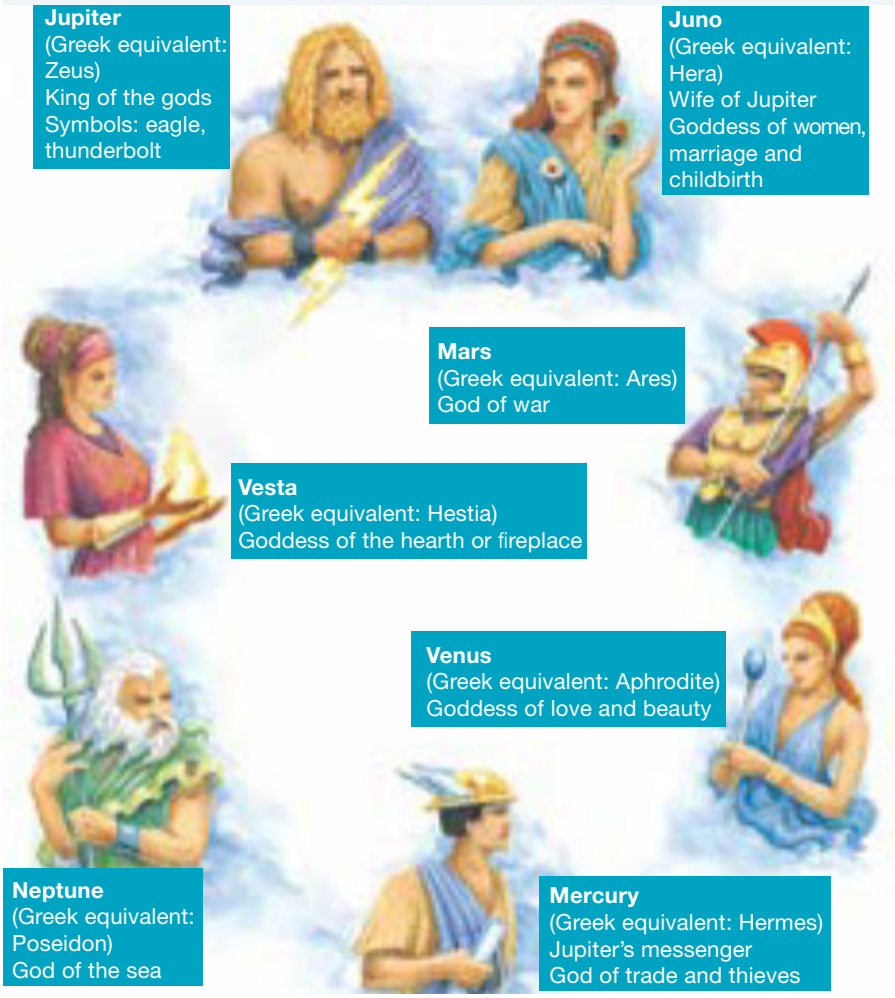
Changing laws

Over the many centuries of the Roman Empire, Roman law changed by many means. These included magistrates' decisions, decrees of the Senate, votes in the assembly, decisions of the jurists (a small group who were responsible for giving expert legal opinions) and edicts (orders) of emperors. Emperors increasingly assumed powers to create completely new laws. For example, in 212 CE, Emperor Caracalla issued an edict giving Roman citizenship to all free people within the Roman Empire. During the age of the emperors, Roman law became less harsh. New laws gave some protection to women, children and the poor.

18.10.2 Roman religion

The Romans believed in hundreds of gods and goddesses. They usually tolerated the religions of people they conquered as long as those people were willing to pay homage to the Roman emperor. Romans believed that religion was closely related to government and that other religions were a danger only if they threatened Rome's authority. Roman religion did not tell people how to live better lives and there was no fixed belief about an afterlife. It was more concerned with performing rituals in return for protection from misfortune.

SOURCE 3 Some Roman gods and goddesses and their Greek equivalents



Roman state religion

The Roman authorities built temples to the gods, conducted regular rituals to please them, and organised religious festivals with processions, music and animal sacrifices. Roman homes also had shrines at which families sacrificed to their household gods.

Romans believed that it was important to know the will of the gods before political decisions were made.

They believed that the gods sent signs, or omens; the skill of reading them was called **divination**. Methods of divination included studying the entrails of sacrificed animals, rolling dice, **astrology** and consulting oracles. Some oracles were inscriptions written on tablets. These were shuffled like cards by a child, who then gave one to the person seeking to discover the will of the gods.

Adopted gods

As the empire expanded, Romans adopted more gods from the people they conquered, especially the Greeks. The Greek sea god Poseidon was identified with Neptune, the Roman god of water. The Greek god Zeus was identified with Jupiter, the most important of all Roman gods. Several Egyptian and Persian gods were also adopted. Mithraism, the cult of Mithras, the Persian god of light, held that there was life after death. Mithras was especially popular among Roman soldiers. When the Romans decided to worship Sulis, a goddess of the Celts, they equated her with the Roman goddess Minerva and changed her name to Sulis Minerva.

SOURCE 4 The Pantheon, the largest Roman temple. It was built between 118 and 128 CE.



18.10.3 The spread of Christianity

Christianity arose in Roman Palestine (Judea) in the first century CE. It was based on the teachings of Jesus Christ, a Jew who preached that he was the son of God and that through faith people could receive forgiveness for their sins and gain eternal life. Jewish religious leaders saw Jesus as a threat, so they had him arrested and condemned to death. When Pontius Pilate, the Roman governor, approved the sentence, Jesus was executed by crucifixion.

Jesus' followers continued to spread his teachings, which offered hope especially to slaves and the poor. Christianity did not encourage rebellion, but the Romans saw it as a threat because Christians refused to worship the emperor, recognising only the Christian god. Several emperors ordered persecutions of the Christians, including mass executions. This persecution ended when, in 313 CE, Emperor Constantine legalised Christianity. It became the state religion of the Roman Empire in 391 CE.

divination the skill of reading omens
astrology interpreting the influence of the stars on human affairs

SOURCE 5 Account by the Roman historian Tacitus (c. 56–117 CE) of the persecution of Christians by the Emperor Nero

Dressed in wild animals' skins [the Christians] were torn to pieces by dogs, or crucified, or made into torches to be ignited after dark. Nero provided his Gardens for the spectacle, and... mingled with the crowd... Despite their guilt as Christians, and the ruthless punishment it deserved, the victims were pitied. For it was felt that they were being sacrificed to one man's brutality rather than to the nation's interest.

SOURCE 6 From the Edict of Milan, in which Emperor Constantine granted religious freedom. An edict is a formal command.

... no one whatsoever should be denied freedom to devote himself either to the cult of the Christians or to such religion as he deems best suited for himself...

DID YOU KNOW?

Roman priests and priestesses were state officials who performed rituals to maintain the goodwill of the gods towards the Roman state. The most important priestesses were the Vestal Virgins, who kept the fire burning on the altar of the goddess Vesta. Vestal Virgins could be executed if they were found to have had sexual relationships.

18.10 ACTIVITY

Use the internet and your library to find out how Emperor Constantine came to legalise Christianity and why he is considered to be a significant individual in Roman and religious history.

History concept: Significance

18.10 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 5, 9, 12, 13	Questions 3, 6, 10, 11, 15, 17, 18	Questions 2, 7, 8, 14, 16, 19, 20

Check your understanding

1. What were the Twelve Tables?
2. Why did the Roman Republic need written laws?
3. How did the nature of law-making change under the emperors?
4. What were the purposes of Roman religious rituals and festivals?
5. How did Roman religion change as the empire expanded?
6. Where and when did Christianity begin?
7. Why did Christianity have a special appeal for slaves and the poor?
8. The Romans were tolerant of other religions, so why did they persecute the Christians?

Apply your understanding

9. In **SOURCE 1**, what do Table IV, law 2 and Table V, law 1 reveal about the powers of fathers over their children?
10. Why would the patricians have supported Table XI, law 1?
11. In 445 BCE, a new law allowed marriages between patricians and plebeians. What does this suggest about the growing influence of the plebeians and the ability of Roman law to change?
12. In **SOURCE 2**, what did Petronius think about the fairness of the Roman legal system?
13. Using **SOURCE 3**, list three Greek gods and/or goddesses and their Roman equivalents.
14. The Pantheon (**SOURCE 4**) is considered an architectural wonder. What does the construction of such a building suggest about the importance of religion to the Romans?

15. Using **SOURCE 5**, describe types of punishments that were dealt out to Christians.
16. How can you tell that Tacitus disapproved of these punishments but also disapproved of Christians?
17. Read the extract from the Edict of Milan in **SOURCE 6** and explain why it was a turning point in Roman history.
18. What would you identify as the most significant changes in Roman law and religion over the history of the Roman Empire?
19. How would key groups in Roman society (patricians, plebeians, slaves, Christians and non-Christians) have regarded these changes? For example, how would a Christian in 313 CE have felt upon reading the Edict of Milan?
20. When Roman law was changed to make Christianity the state religion of the Roman Empire, persecution of Christians ended but it was replaced by persecution by Christians of those who followed the old Roman religion. What conclusions about continuity and change in religion and law can you draw from this?

For sample responses to every question, go to www.jacplus.com.au.

18.11 Decline and fall

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the power struggles within Rome that gradually destroyed its unity, economy and ability to defend itself from invasion.

18.11.1 A weakening empire

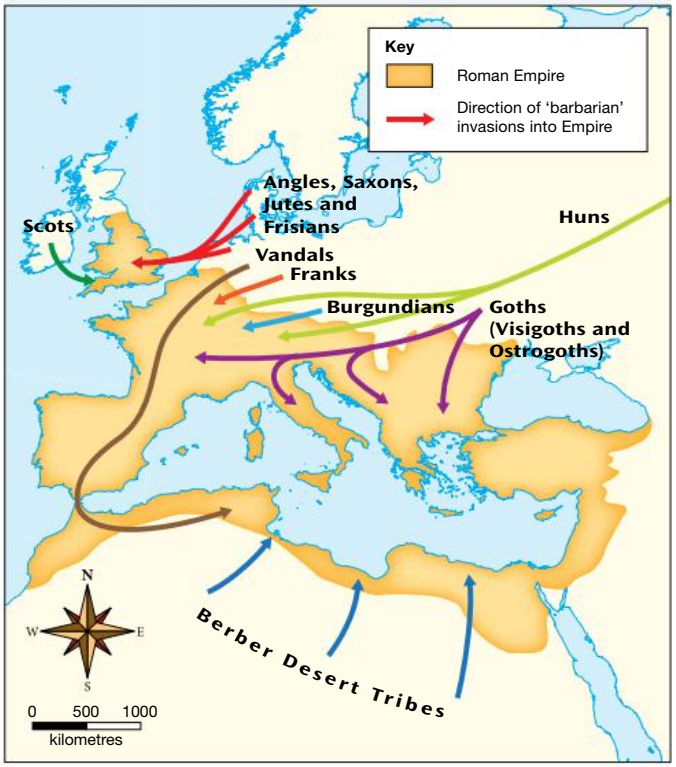
barbarians the Roman term for all peoples who lived beyond the borders of the empire

The Roman Empire began to weaken from about 180 CE as rival Roman army generals fought each other for power. Trade that had enriched the empire began to decline as transport over long distances became more dangerous and tribes of **barbarians** increased their raids into the empire's lands.

In 284 CE, Emperor Diocletian, a Roman general who had won power through his soldiers, divided Rome into Eastern and Western empires under two separate emperors. Diocletian believed this would create stronger government, but the problems remained. From 307 to 310 CE civil war raged as six rival emperors competed for power. The victor, Constantine, ordered the building of a new capital, to be called New Rome, on the site of the old Greek city of Byzantium. The city was soon renamed Constantinople (Istanbul in modern Turkey).

In 378 CE, the Visigoths defeated Rome's armies. Emperor Theodosius (379–395 CE) agreed to allow them to form a separate state within the Roman Empire, while the Visigoths pledged to defend the empire's frontiers. Theodosius was more successful in reuniting the empire in 394 CE after the Western Empire broke away under a rival emperor. However, following the death of Theodosius the split into Eastern and Western empires became permanent.

SOURCE 1 The weakening of the Western Roman Empire. The arrows show the directions from which different barbarian groups invaded the empire.



Source: Map drawn by Spatial Vision.

18.11.2 The empire falls

There were vast movements of peoples through Europe in the fifth century CE. Burgundians and other 'barbarian' tribes invaded Gaul, while Angles, Saxons and Jutes from Germany and Denmark attacked Britain and Vandals, another Germanic tribe, invaded Spain. The Roman armies left Britain in 410 to defend the city of Rome, which was sacked by the Visigoths that same year.

These invasions were not part of any general plan. Several barbarian groups who swept into the Roman Empire were fleeing other hostile tribes. For example, the Ostrogoths from eastern Europe were retreating before the Huns, who had overrun their homelands. This made it possible for Rome to form alliances with some groups against others. In 451, an alliance of Romans, Visigoths and Burgundians defeated the Huns. However, in 455 Rome was pillaged by the Vandals, and in 476 the last Western Roman emperor, Romulus Augustulus, was deposed by Odoacer, a German chief.

Historians past and present have suggested several reasons for the fall of the Roman Empire. The following mind map outlines some of them. War and economic collapse stand out as the key reasons.

SOURCE 2 Detail from The Big Game Hunt, a mosaic of the third to fourth century CE found at the Villa dei Casale, Piazza Armerina, Sicily



SOURCE 3 Reasons for the fall of the Roman Empire

Reasons for the fall of the Roman Empire

Civil wars
The involvement of Roman army legions in civil wars reduced Rome's ability to hold its frontiers.

Christianity
Some early writers claimed that Christianity weakened Rome because it made many people into pacifists.

Declining health
Some writers argued that lead poisoning through water carried in lead pipes caused a decline in Roman health and intelligence.

The changing Roman army
As attacks on the empire increased, ever more barbarians were recruited into the Roman army. The army's loyalty could no longer be taken for granted. Roman legions were essential for the empire's survival, but they were rebellious and a huge drain on Rome's finances.

Economic collapse
Farm labour was increasingly performed by slaves, which threatened the livelihoods of small farmers and farm workers. These citizens became an unproductive burden on the state. As Rome lost control in the provinces, trade became more difficult and Rome lost the taxes it had received from these areas.

The barbarians
Pressures from large groups of barbarians on several of the empire's frontiers were increasingly hard to withstand.

Moral decline and corruption
Some early writers pointed to a decline in morals. Roman emperors increasingly came to power through corrupt means, and several of them were assassinated.

18.11 ACTIVITY

Conduct research and present a report to the class on one of the barbarian groups that contributed to the fall of the Roman Empire.

HASS skills: Questioning and researching
History concepts: Sources, Evidence

18.11 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 7	Questions 1, 5, 9	Questions 3, 6, 8, 10

Check your understanding

1. In what year did the Roman Empire begin to weaken?
2. Why did Diocletian divide the Roman Empire?
3. What event in 378 CE showed Rome's weakness?
4. Why did Rome abandon Britain in 410 CE?
5. Define the term 'barbarian' in your own words.

Apply your understanding

6. Study **SOURCE 1**.
   a. Who were the peoples who threatened the empire?
   b. Which part of the empire did each group threaten?
7. **SOURCE 2** depicts traders loading ships. Explain why declining trade would have been both a cause and a result of the weakening of the Roman Empire.
8. Create a timeline of developments that led to the fall of the Western Roman Empire.
9. Identify reasons in **SOURCE 3** that you think would have contributed most to the decline of the Roman Empire.
10. What made it possible for Rome to form alliances with some barbarian groups against others?

For sample responses to every question, go to www.jacplus.com.au.

18.12 Heritage of Rome

LEARNING INTENTION

By the end of this subtopic, you will be able to explain how the spread of Christianity and the survival of Roman power in the Eastern Empire helped to preserve Roman culture, despite its decline in western Europe and evaluate the reasons for Rome's fall and its legacy.

18.12.1 The Eastern Roman Empire and Christianity

As the Western Roman Empire collapsed, it broke up into kingdoms ruled by non-Romans, although many people in these states continued to see themselves as Roman. Europe was entering what have been called the Dark Ages. Wars were frequent, population levels fell and cities almost disappeared, along with long-distance

trade and literacy. However, the Eastern Roman Empire lived on for almost one thousand years, and Roman legacies survived to influence later ages.

When Odoacer deposed Romulus Augustulus, he had no wish to become emperor. Rather, he recognised the authority of the Eastern Roman emperor in Constantinople. The Eastern Roman Empire maintained Roman law along with its heritage of Greek and Roman culture. It kept Latin as the language of its court. In the sixth century, the Eastern emperor Justinian tried to restore the Western Empire. He was successful, but only briefly. As the **medieval** Byzantine Empire, the Eastern Roman Empire lasted until 1453 CE, when Constantinople was overrun by the Ottoman Turks.

Roman Christianity

The adoption of Christianity as the Roman state religion changed the Christian Church more than it changed the Roman Empire. The power of Roman Christianity was now supported by the power of Christian Roman emperors. Until the late fourth century, many Romans continued to hold **pagan** beliefs, and there were several different sets of beliefs within the Christian Church. Church leaders used the support of emperors to suppress rival interpretations of the Christian gospels, which were declared to be **heresy**. The continuing power of the Roman Christian Church was secured when Clovis, king of the Germanic Franks, gained control of Gaul and converted to Roman Christianity in the 490s. As the Christian Church outlived the Roman Empire, it helped to conserve Roman culture, which continued to be an important influence on ideas in medieval Europe.

medieval of the Middle Ages

pagan name used to refer to people who believed in non-Christian gods

heresy an opinion or belief that contradicts orthodox beliefs, especially in religion

SOURCE 1 From Hugh Trevor-Roper, *The Rise of Christian Europe*, 1966

In... some respects... the barbarians preserved rather than destroyed the Empire... The barbarian Christian kings who rule over Italy, France and Spain in the fifth and sixth centuries still regard themselves as Roman... they still acknowledge themselves subject to the emperor in the East; they still respect Roman traditions, Roman methods.

SOURCE 2 A mosaic in the Hagia Sophia, in Istanbul. This church was built on the orders of the great Eastern Roman emperor Justinian I (527–565 CE). The mosaic shows Emperor Constantine presenting the Virgin Mary with the city of Constantinople and Justinian presenting her with the Church.



DISCUSS

In history, we use arguments to interpret and explain the past, including how events caused changes. But we have to be careful to ensure that our reasoning is sound.

An **argument** is a group of sentences arranged so that the sentence called the conclusion is said to follow from the other sentences that are called the premises.

A **logical argument** is one in which the conclusion does follow from the premises.

A **fallacy** is a misleading argument, an argument based on reasoning errors.

One of the most common reasoning errors is assuming that because one event or change came before another event or change, the first event must be a cause of the second event. We call this a cause and effect fallacy.

An example could be the following argument:

Premise 1: In 284 CE, the Roman Emperor Diocletian divided Rome into Eastern and Western empires under two separate emperors.

Premise 2: The Western Roman Empire declined and fell during the following two centuries.

Conclusion: Dividing the Roman Empire caused the Western Roman Empire to collapse.

This argument might seem reasonable until you consider what you get if you use the same kind of reasoning for a different argument. For example:

Premise 1: The team ate big servings of oranges during half-time in the game.

Premise 2: The team scored its winning goals in the second half of the game.

Conclusion: Eating oranges caused the team to win.

The reasoning error with both arguments is assuming that the first event must be the cause of the second event without demonstrating any causal link between the two events.

Working in small groups, develop an erroneous argument about the cause of one other event in ancient Roman history. Use the same reasoning errors as in the above examples. Each group then presents its erroneous argument to the class. In a whole class discussion, decide whether or not the arguments can be changed to make them logical and, if so, then what needs to be done with each argument to make it logical.

General capability: Critical and creative thinking

DID YOU KNOW?

Roman law continued to form the basis of law codes in much of Europe in the Middle Ages and even in modern times. The Roman language, Latin, is the basis of modern Italian, French, Spanish and Portuguese. There are also many Latin words in English.

18.12.2 Passing on the culture

The classical books of ancient Roman writers influenced later writers. In the **Middle Ages**, Christian monks toiled at copying these books by hand. Many of these ancient writers are still widely read today. As Greek learning had been adopted by the Romans, the ideas of ancient Greece were also passed on. Latin, the language of the Roman Christian Church, became the language of the Church and of scholars in the Middle Ages. Despite the barriers caused by differing national languages, all educated writers and thinkers could communicate in Latin. Even today some sciences use Latin terms. For example, in botany they are used to classify plants.

Middle Ages between ancient and modern historical periods (generally between the fifth and fifteenth centuries)

In the fifteenth century the Renaissance brought a revival of interest in Roman ideas, arts and architecture. Roman influences can be seen in many buildings constructed from that time until the twentieth century. In the eighteenth century, ideas and institutions from the ancient Roman Republic influenced leaders who adopted new republican forms of government.

European unity

The Roman Empire was replaced by many different states. However, the idea of some kind of European unity was a legacy of the Romans. Around 800 CE, a powerful king called Charlemagne united much of Europe in a huge empire that he tried to base on the Roman model. This empire fell apart soon after his death, but in the twentieth century Europe was again unified through the European Union.

SOURCE 3 When the Pantheon was given to the Christians in 608, it was preserved with few changes apart from additions like this Christian altar.



DID YOU KNOW?

In the Roman calendar, the year was divided into 12 months, named after gods, emperors and numbers. The names we use for the months are based on theirs. For example, August is named after the emperor Augustus.

18.12 ACTIVITY

Using the sources and information in this subtopic, create a mind map to show what big changes took place with the fall of Rome and what Roman influences continued.

HASS skills: Communicating and reflecting
History concept: Continuity and change

18.12 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 7	Questions 3, 5, 8	Questions 2, 6, 9, 10

Check your understanding

1. As the Western Roman Empire collapsed, Europe was entering what have been called the_____ Ages.
2. How did the Eastern Roman Empire maintain Roman civilisation after the fall of the Western Roman Empire?
3. How was the power of the Roman Christian Church maintained?
4. Describe the roles in preserving Rome's cultural heritage played by:
   a. Christian monks and scholars in the Middle Ages
   b. the fifteenth century Renaissance.
5. After the death of the powerful king Charlemagne, Europe was able to remain unified. True or false?

Apply your understanding

6. Describe ways in which **SOURCES 1** and **2** provide evidence of the continuation of Roman culture after the fall of Rome.
7. Look closely at **SOURCE 3** and explain how it provides an example of ways in which Rome's heritage has been preserved.
8. Explain why the Latin language was such an important factor in maintaining the unity of Rome.
9. The Emperor Justinian used religion to create political unity. Look at **SOURCE 2**, describe the scene and explain the message the early Christians were given by the source.
10. The European Union (EU) of the twenty-first century has removed economic barriers, promoting free trade between member nations, and encouraged the free movement of people across borders. Suggest how this modern European unity could be seen as a legacy of the ancient Romans.

For sample responses to every question, go to www.jacplus.com.au.

18.13 SkillBuilder: Analysing and corroborating sources

LEARNING INTENTION

This SkillBuilder shows you how to analyse and corroborate sources. Analysing and corroborating sources is part of the Analysing HASS skill.

18.13.1 Tell me

What are the main ancient Roman sources?

Ancient Roman sources include temples, amphitheatres, houses, fortifications, roads, aqueducts, weapons, tools, coins and many written records. They also include artworks such as mosaics, paintings, statues and other sculptures in terracotta, stone and bronze.

Why is it important to analyse and corroborate ancient Roman sources?

Almost all our knowledge of ancient Rome comes from such sources. Works of art and writings tell us much about ancient Roman culture. Buildings and sculptures tell us about entertainment, technology, skills, religious ideas and values. Written records tell us about Roman ideas about politics, history, law and a vast range of other subjects. Not all ancient Roman sources are really primary sources as some were written long after the events they describe.

18.13.2 Show me

How do we analyse and corroborate ancient Roman sources?

When you study an ancient source, you need to think carefully about the clues it provides and ask questions about its accuracy, usefulness and reliability. You need to ask questions such as:

- What is it?
- Who created it and when was it created?
- Who or what was it created for?
- For what aspect of ancient Roman history does it provide useful evidence?
- Is the evidence it provides accurate and reliable and how can we tell this?
- What conclusions can we draw from the source about ancient Roman society?

As you know, cruel public entertainments, including fights between gladiators, played a very big role in Roman life. **SOURCES 1** and **2** are both relevant to this issue.

SOURCE 1 Written by the Roman Emperor Augustus (Octavian), who ruled from 27 BCE to 14 CE

Three times I gave shows of gladiators under my name... Twenty-six times, under my name or that of my sons and grandsons, I gave the people hunts of African wild beasts in the circus, in the open, or in the amphitheatre; in them about 3500 beasts were killed.

These six questions have been applied to **SOURCE 1**.

1. *What is it?* It is a written account of the number of gladiatorial combats and staged animal hunts paid for by Augustus.
2. *Who created it and when was it created?* The writer was Augustus, who became emperor of Rome in 27 BCE.
3. *Who or what was it created for?* As Augustus founded a dynasty, he was probably boasting to win popularity with other influential Romans.

SOURCE 2 A terracotta figurine of two gladiators. The figurine is from the first or second century CE. By this time there were several different categories of gladiators, including the *hoplomoch* (with a circular shield) and the *thraex* (with a small rectangular shield). Several gladiator figurines have been found.



4. *For what aspect of ancient Roman history does it provide useful evidence?* It provides evidence about public entertainment in Roman society, ways in which Roman politicians and rulers won favour and Rome's treatment of animals and slaves.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* Other sources would be required to verify such details as the number of combats paid for by Augustus. Many other sources confirm that such entertainments were frequent.
6. *What conclusions can we draw from the source about ancient Roman society?* Cruel public entertainments were frequent and popular in ancient Rome, and they were often provided by political leaders to win popular support.

In the next example, the questions have been applied to **SOURCE 2**.

1. *What is it?* It is a terracotta figurine of two gladiators.
2. *Who created it and when was it created?* We do not know who created this figurine. We only know that it was made in the first or second century CE.
3. *Who or what was it created for?* As quite a few gladiator figurines have been found they must have been made to meet a popular demand for decorative souvenirs of the games.
4. *For what aspect of ancient Roman history does it provide useful evidence?* It provides evidence about issues of public entertainment in Roman society and Roman attitudes towards gladiators. It also provides evidence of the different types of gladiators who took part in combats and of their popularity.
5. *Is the evidence it provides accurate and reliable and how can we tell this?* The accuracy and reliability of the source can be verified using similar sources (such as **SOURCES 3** and **4**).
6. *What conclusions can we draw from the source about ancient Roman society?* Cruel public entertainments were frequent and popular in ancient Rome but, in a strange way, gladiators also appear to have been admired in much the same way as modern football stars.

18.13.3 Let me do it

Complete the following activities to practise this skill.

18.13 ACTIVITIES

1. Use the following six questions to analyse **SOURCES 3** and **4**.
- **a.** What is it?
- **b.** Who created it and when was it created?
- **c.** Who or what was it created for?
- **d.** For what aspect of ancient Roman history does it provide useful evidence?
- **e.** Is the evidence it provides accurate and reliable and how can we tell this?
- **f.** What conclusions can we draw from the source about ancient Roman society?

SOURCE 3 A relief sculpture from Turkey, first century CE, depicting three gladiators fighting



SOURCE 4 A marble relief sculpture of two female gladiators named Amazon and Achilia. It was found in the ancient Roman city of Halikarnassos (in modern-day Turkey).



2. Apply your skills to answer the following questions.
   a. Explain how you would differentiate between ancient Roman primary sources and secondary sources.
   b. Why is it sometimes difficult to judge the reliability of ancient Roman primary sources?
   c. Why would **SOURCE 1**, the extract from the Roman Emperor Augustus (Octavian), need to be questioned very thoroughly to assess its reliability?
   d. In this SkillBuilder you have worked with a written account by a Roman emperor, a figurine and two relief sculptures. Identify four other types of primary sources that a historian could use for a study of ancient Rome.

18.14 Thinking Big research project: Campaign manager for a Roman magistrate

Scenario



It is the first century BCE and you are a living under the rule of mighty Rome and a system of government called a republic. In theory, all Roman citizens have a say in their government, but in reality political power lies in the hands of a privileged and wealthy elite. Roman citizens are males over 25 years of age who were not born as slaves. Women and slaves have no political rights.

Every year the citizens of Rome elect approximately 50 men, known as magistrates, to run the city. The most senior magistracy is the position of consul; two are elected every year. It is election time and the candidates for the magistracies are running campaigns to gather as much support as possible for the upcoming elections. You have been appointed the task of campaign manager for a very important man in Rome, such as Sextus Julius. Sextus Julius is a member of one of the most ancient patrician families in Rome and the future uncle of the greatest Roman of them all — Gaius Julius Caesar.

Task

Your task will be to promote your candidate for the position of consul by writing speeches for him to deliver, designing placards and election banners, and constructing catchy slogans that will be painted as graffiti on the city walls. Politicians running for office in republican Rome need to please people by hosting lavish games in the amphitheatre. You will also need to advertise the generosity of your candidate by writing an advertisement to publicise the public entertainment he is sponsoring.



Begin by forming small groups to plan and share research, and discuss concepts to develop your own clear understanding of the Roman system of government and the position of consul. Each group should select a personality from the first century BCE as their candidate for political promotion.

Follow the steps detailed in the **Process** section to complete this task.



Process

- Open the projectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Your group can have any number of members, but each student can be a member of only one group.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered. This is where the creation of your election campaign begins.
- Start your research by reading through subtopic 18.6 to familiarise yourself with the key features of Roman government and social structure. Locate at least three other sources of information to add depth to your knowledge of the Roman republic elections, the responsibilities of the magistracies and key personalities from the period. One source should be located offline.
- Decide on the headings you are going to use to organise your research findings; for example, the role of the senate; the role of the consul; and key personality biographical details. Enter your research findings under each heading in your Research forum. You can view, share and comment on other group members' research findings. Be sure to enter the source for any information you find online.
- Collect images to add to your election campaign resources to assist you in creating placards or banners.
- Present your election campaign to other groups in your class, delivering your candidate's campaign speech as an oral presentation.
- Email a transcript of the speech to your teacher for assessment and feedback.

on Resources

ProjectsPLUS Campaign manager for a Roman magistrate (pro-0230)

18.15 Review

18.15.1 Key knowledge summary

18.2 Examining the evidence

- Ancient Romans left vast amounts of written evidence.
- Rome is also rich in archaeological evidence, ranging from artworks to entire cities.

18.3 The rise of the Romans

- According to legend, Rome was founded in 753 BCE.
- In 509 BCE, the Romans rebelled against their Etruscan kings and founded a republic.
- Over the next two centuries, Rome expanded its power through alliances, wars, exploiting those it defeated and colonising strategically important places.

18.4 The spreading empire

- Through the Punic Wars, between 264 and 146 BCE, Rome eliminated a major rival and became the strongest power in the Mediterranean region.
- By 96 CE, Rome had extended its empire into northern Europe and to the Black Sea.

18.5 The Roman army

- From 396 BCE, the Roman army became a professional fighting force.
- Roman army discipline was harsh.
- Rewards given to legionaries helped to win support for military leaders who sought political power.

18.6 Citizens and rulers

- Roman citizens were divided into patricians and plebeians.
- Julius Caesar used his loyal troops to seize power in 49 BCE, but he was assassinated by a group of Roman senators.
- Caesar's great-nephew, Octavian, took control of Rome, ending the republic in 27 BCE.

18.7 Spartacus and Nero: two significant individuals

- Spartacus, a gladiator, led a slave revolt in 73 BCE. The rebels defeated several Roman legions before they were defeated in a huge battle.
- Nero became Roman Emperor in 54 CE. His brutal rule ended with his suicide in 68 CE.

18.8 Living in the Roman Empire

- Widespread use of slave labour changed Roman society.
- There were vast differences between the lives of rich and poor Romans.
- Greek culture influenced the lives of the more privileged Romans.
- Roman technology created many impressive structures that are still standing today.

18.9 Death and the Romans

- Customs associated with funerals provide a huge amount of evidence for ancient Roman beliefs and values.
- Care for dead ancestors was considered a duty and the dead were honoured in many ways.

18.10 Roman law and religion

- Roman law dealt mainly with the rights of men as citizens.
- Women, children and slaves were considered to be under the authority of the male head of a family.
- After the republic ended, laws were increasingly made through decrees of emperors.
- Romans worshipped hundreds of gods and goddesses.
- Christianity went from being a persecuted religion to become the state religion of the empire in 391 CE.

18.11 Decline and fall

- From around 180 CE, the empire began to weaken.
- Civil wars and barbarian invasions eventually led to the collapse of the Western Roman Empire.
- Historians have suggested many different reasons for Rome's fall.

18.12 Heritage of Rome

- The Eastern Roman Empire lived on for almost another thousand years.
- The Roman Christian Church helped to preserve Roman culture.
- The idea of European unity is one of many legacies of ancient Rome.

18.15.2 Key terms

aqueduct structure built to carry water long distances
astrology interpreting the influence of the stars on human affairs
auxiliaries soldiers in the Roman army drawn from areas conquered by Rome and made part of its empire
barbarians the Roman term for all peoples who lived beyond the borders of the empire
civil war war between rival factions within one state or country
crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony
divination the skill of reading omens
Etruscans advanced, civilised people who dominated early Rome from about 575 BCE to about 396 BCE
forum open meeting place of a town or city
heresy an opinion or belief that contradicts orthodox beliefs, especially in religion
hypocaust underfloor and water heating system used in Roman villas and public baths
loot goods or property taken from a defeated enemy after a battle
magistrates men elected by the citizens to run Rome for a year
medieval of the Middle Ages
Middle Ages between ancient and modern historical periods (generally between the fifth and fifteenth centuries)
pagan name used to refer to people who believed in non-Christian gods
patricians members of the aristocratic families that founded the Roman Republic
patronage supporting and encouraging authors and artists
plebeians all non-patrician citizens of Rome
public bath public building complexes containing baths of varying temperatures, and sports and beauty facilities; a popular meeting place for Roman citizens
pumice lava ejected from a volcano that solidifies into a light, porous rock
republic system of government in which the head of state is not a monarch
rhetoric the art of public speaking
Samnites a mountain tribe of central Italy
Senate governing body in ancient Rome, (in theory) an advisory body of ex-magistrates
tenant farmers poor farmers who rented small plots of land
Thracian a native of the Roman province of Thracia
virtue moral standard or value

18.15.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

From republic to great empire. How did Rome use war to expand its power and control most of the world?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views.

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-4294) Reflection (ewbk-4427) Ancient Rome crossword 1 (ewbk-4424) Ancient Rome crossword 2 (ewbk-4426) Ancient Rome revision quiz (ewbk-4425) Student learning matrix (ewbk-4417)
Interactivity	Ancient Rome crossword (int-7695)

18.15 Review exercises

Multiple choice

1. Who were Rome's enemies in the Punic Wars?
   - **A.** Etruscans
   - **B.** Gauls
   - **C.** Visigoths
   - **D.** Carthaginians

2. How was Pompeii destroyed in 79 CE?
   - **A.** Invasion
   - **B.** Volcanic eruption
   - **C.** Tsunami
   - **D.** Disease



3. Tactics employed by the Romans to control their empire included:
   - **A.** allowing conquered peoples to run the empire.
   - **B.** giving gifts to those they conquered.
   - **C.** using conquered peoples against one another.
   - **D.** killing everyone they defeated.

4. In Roman society, patricians were:
   - **A.** rich people.
   - **B.** the poor.
   - **C.** slaves.
   - **D.** aristocrats.

5. What was the period from 509 BCE to 27 BCE known as?
   - **A.** Roman Republic
   - **B.** Roman Kingdom
   - **C.** Roman Empire
   - **D.** People's Republic of Rome

6. The Roman invasion of Britain took place in which of these years?
   - **A.** 390 BCE
   - **B.** 146 BCE
   - **C.** 43 CE
   - **D.** 378 CE

7. People in Roman towns were supplied with which of these?
   - **A.** Water, public toilets and public baths
   - **B.** Free housing
   - **C.** Banquets
   - **D.** Transport

8. Spartacus was which of the following?
   - **A.** A former Roman general
   - **B.** A gladiator
   - **C.** A Christian
   - **D.** A Visigoth

9. The main reason why the Romans persecuted Christians was:
   - **a.** Christians refused to worship the Roman emperors.
   - **b.** Romans were intolerant of other religions.
   - **c.** Romans already had too many gods.
   - **d.** Christians stirred up rebellions.

10. Christianity was made legal under which of these Roman emperors?
    - **A.** Augustus
    - **B.** Nero
    - **C.** Diocletian
    - **D.** Constantine

11. Roman funeral ceremonies often included:
    - **A.** eating and heavy drinking.
    - **B.** prayers and hymns.
    - **C.** chanting and a eulogy.
    - **D.** a singalong.



12. 'Barbarian' groups that invaded Roman Britain included which of these?
    - **A.** Huns
    - **B.** Saxons
    - **C.** Goths
    - **D.** Franks

Short answer

13. Describe the features of the building in **SOURCE 1.**
14. Why would such public facilities have been very important to the poor citizens of Rome?
15. What would have motivated Roman politicians and rulers to build such facilities?
16. Explain how this building is a useful source of evidence for Roman society.
17. Form a hypothesis about Roman building skills based on the fact that this building is still standing in Rome.
18. Working in small groups, use the internet and your library to research and write an illustrated guidebook for someone travelling from the outer reaches of the Roman Empire to Rome in the second century CE. You will also find information in modern travel guides for Rome, because Roman history is one of the main reasons that people visit the city. Your guidebook should include the following:
    - *A map* of the city centre as it was in ancient times
    - *History*: a one-page outline of Rome's history up to the second century CE
    - *What to see*: a short guide to interesting sights — for example the Forum, the baths and the Colosseum
    - *Entertainment:* where a visitor might go for an afternoon's spectacle
    - *Religion:* what a visitor would need to know to avoid causing offence
    - *Currency, language and accommodation*. Remember that your guidebook is for ancient, not modern, visitors to Rome.

SOURCE 1 The Baths of Diocletian, in Rome



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 18 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

18.1 Overview

eWorkbook
- Ancient Rome Timeline exercise (ewbk-4575)

Video eLesson
- Ancient Rome (eles-1837)

Interactivity
- Interactive timeline (int-4295)

18.2 Examining the evidence

eWorkbook
- Reliable sources? (ewbk-4418)

Interactivity
- Pompeii and Herculaneum were totally destroyed by the eruption of Vesuvius (int-5982)

18.3 The rise of the Romans

eWorkbook
- Competing interests (ewbk-4419)

My World History Atlas
- The Mediterranean world > Republican Rome

18.4 The spreading empire

My World History Atlas
- The Mediterranean world > Punic Wars

18.5 The Roman army

eWorkbook
- Big and tough (ewbk-4420)

Interactivity
- Roman soldiers were well trained and well equipped (int-5989)

18.6 Citizens and rulers

eWorkbook
- The Roman Republic (ewbk-4421)

My World History Atlas
- The Mediterranean world > Roman Civil Wars
- The Mediterranean world > Roman Empire

18.8 Living in the Roman Empire

eWorkbook
- Masters of technology (ewbk-4422)

Interactivity
- A typical villa of the type occupied by wealthy Romans (int-5991)
- The general layout of cities throughout the Roman Empire followed the pattern set for the city of Rome (int-5992)

18.12 Heritage of Rome

eWorkbook
- Legacy of Ancient Rome (ewbk-4423)

18.14 Thinking Big research project: Campaign manager for a Roman magistrate

ProjectsPLUS
- Campaign manager for a Roman magistrate (pro-0230)

18.15 Review

eWorkbook
- Reflection (ewbk-4427)
- Ancient Rome crossword 1 (ewbk-4424)
- Ancient Rome crossword 2 (ewbk-4426)
- Ancient Rome revision quiz (ewbk-4425)
- Student learning matrix (ewbk-4417)

Interactivity
- Ancient Rome crossword (int-7695)

To access these online resources, log on to **www.jacplus.com.au**.

19 Ancient India

online only

19.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

Lost cities, life-giving rivers and the rise and fall of an empire. How did ancient India's civilisations emerge?

19.1.1 Links with our times

With more than a billion people, India has the world's second largest population. India's economy is growing rapidly and will soon become the world's third largest. Yet, while some Indians have become wealthy, there is still terrible poverty. Around half of all Indian children do not have enough to eat.

India has also become an important trading partner for Australia. Large numbers of Indians have migrated to Australia, and many Indian students study at Australian colleges and universities.

When we speak of ancient India, we refer to the Indian subcontinent. Along with modern India, the subcontinent includes Pakistan, Bangladesh, Sri Lanka, Nepal and Bhutan. In ancient times these modern states did not exist. Great civilisations emerged on the Indian subcontinent, and some of their customs have survived to the present day.

on Resources

eWorkbook	Customisable worksheets for this topic (ewbk-4295)
Video eLesson	Ancient India Timeline exercise (ewbk-4577) Ancient India (eles-1839)

SOURCE 1 A Men on camels in traditional dress, taken at the Desert Festival 2013 at Jaisalmer, India



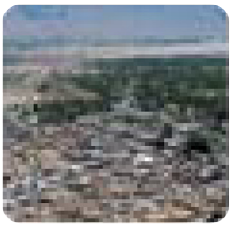
int-4297

SOURCE 2 A timeline of ancient India

BCE

3000

c. 3000 BCE
The Indus Valley Civilisation is established.



2500

c. 2500 BCE
The cities of Harappa and Mohenjo-daro are built.



2000

c. 1600 BCE
The Aryans invade India.

1500



c. 750 BCE
Indo-Aryans rule 16 great states in northern India.

1000

c. 1100 BCE
Iron is first used in India.



c. 527 BCE
Prince Siddhartha Gautama becomes the Buddha.

500



c. 327 BCE
Alexander the Great of Macedon invades India.

304 BCE
The Mauryan Empire is founded.

259 BCE
The Mauryan emperor Ashoka converts to Buddhism.

BCE
CE

220 BCE
The *Mahabharata*, a famous Hindu epic, is composed.

200 CE
Hindus are divided into four main castes under the Manu code.



320 CE
The Gupta Empire is launched.

500

528 CE
The Gupta Empire collapses.

1000

CE

19.2 Examining the evidence

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the types of historical sources that inform us about ancient India.

19.2.1 How do we know about ancient India?

Ancient India has a rich history spread over more than 3500 years. Over this time, many different civilisations have cast their influence over the subcontinent. The oldest of these, the Indus Valley Civilisation, originated in what is now known as Pakistan. Archaeologists know far more about later ancient Indian civilisations than they do about the Indus Valley. This is largely because the first Indus Valley ruins were only discovered by archaeologists in 1921. Until this time, the remnants of this incredible culture lay hidden for thousands of years.

It is extremely difficult to find artefacts, records and information about many ancient civilisations. The main forms of information about ancient civilisations come from pottery, engraved stone artefacts and the walls of ancient structures. Some civilisations such as those from Rome, Greece, Egypt and China have left behind a considerable legacy of large-scale artefacts. The records we have from other civilisations, such as the Indus Valley, have been more difficult to find. We first became aware of the Indus Valley when archaeologists began to unearth two of its cities in 1921. Before this time, no-one knew that these were the ruins of a very ancient civilisation. Most of what we now know about the Indus Valley Civilisation has come from the excavation of three important sites: Harappa, Mohenjo-daro and Lothal. These ancient cities will be examined later in this topic.

SOURCE 1 A version of the Greek mathematician Ptolemy's map of the world, which he drew about 150 CE



Evidence from other civilisations

We also have evidence of connections between ancient India and other civilisations. King Darius I of Persia is believed to have sent Greek explorer Scylax of Caryanda on a voyage to the East. On this voyage, Scylax travelled down the Ganges until it emptied into the Indian Ocean. Later, Alexander the Great conquered the Persian Empire in 334 BCE and then set his sights on India. Although his conquests were short-lived, they were significant enough to influence Buddhist art in northern India. Before Greek exploration, the Buddha was never depicted in human form. It is thought that the Greek focus on natural and realistic art influenced Indian artists to create **anthropomorphic** depictions of Buddha (see **SOURCE 3**).

anthropomorphic describing or representing something as having human traits, despite its original lack of these characteristics

SOURCE 2 From *The Histories* by the Greek historian Herodotus, written about 440 BCE

[The Indians of the north-west] go out to fetch gold — for in this region there is a sandy desert . . . the sand has a rich content of gold . . . There is found in this desert a kind of ant of great size — bigger than a fox, but not so big as a dog . . . [These] Indians plan their timetable so as to actually get their hands on the gold during the hottest part of the day, when the heat will have driven the ants underground . . . When the Indians [on their camels] reach the place where the gold is, they fill the bags they have brought with them with sand, and start for home again as fast as they can go; for the ants (if we may believe the Persians' story) smell them and at once give chase; nothing in the world can touch these ants for speed, so not one of the Indians would get home alive if they did not make sure of a good start while the ants were mustering their forces.

SOURCE 3 Humanesque depiction of Buddha from Gandhara



19.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6, 7	Questions 4, 5, 8, 9	Questions 2, 10, 11, 12

Check your understanding

1. The Indus Valley Civilisation originated in which modern-day country?
2. When did archaeologists first discover the Indus Valley ruins?
3. Where do the main forms of information about ancient civilisations come from?
4. Give one reason why there are not a lot of records of the Indus Valley Civilisation.
5. What influenced the creation of anthropomorphic depictions of Buddha?

Apply your understanding

6. Engravings from religious buildings provide much of the archaeological evidence we have from ancient India. List three strengths and three weaknesses of this form of evidence.
7. Read **SOURCE 2**.
   a. List the observations Herodotus makes about India and its culture.
   b. Evaluate the accuracy of these observations.
8. Describe the depiction of the Buddha as shown in **SOURCE 3**. Explain how this depiction differs from those seen in India before contact with the Greeks.
9. a. Compare **SOURCE 1** to a modern map of India. Identify and describe the key differences.
   b. Identify one reason for the differences between Ptolemy's map and a modern map.
10. Name three key cities of the Indus Valley Civilisation. Suggest reasons why these cities are no longer as important to India as they once were.
11. It is easier for archaeologists to learn more about ancient Egypt than ancient India. Do you agree or disagree with this statement? Justify your response.

For sample responses to every question, go to www.jacplus.com.au.

19.3 The geography of India

LEARNING INTENTION

By the end of this subtopic, you will be able to describe India's unique geographic characteristics and explain the impact they had on early Indian civilisations.

19.3.1 Region and climate

The modern nation of India is the seventh largest country in the world. This in itself is impressive. However, if you add the other modern nations that were once a part of greater India — Pakistan, Bangladesh and the island state of Sri Lanka — then the Indian land mass is bigger still. It is so big that the region is often called the Indian subcontinent. A subcontinent is a large land mass attached to a **continent**. In the case of the Indian subcontinent, the land mass is attached to Asia.

The Indian subcontinent is made up of three geographical regions: the Indian Himalayan Region, the Indo-Gangetic Plain and the Deccan Plateau.

The Indian Himalayan Region is part of the Himalayan mountain range. These mountains are the highest in the world and provide the snow that feeds into three of the subcontinent's major rivers — the Ganges, the Brahmaputra and the Indus. As it reaches the Bay of Bengal, the Ganges forms a delta that is 350 kilometres wide.

The Indo-Gangetic Plain is a flat, well-watered area. It is the most fertile and densely populated region of the subcontinent. Its western section is drier, merging into the Thar Desert.

The Deccan Plateau in the south is rocky and barren. Farmers here use the rivers to water their crops. Unlike the rivers of northern India, these southern rivers depend on **monsoon** rains to fill their banks.

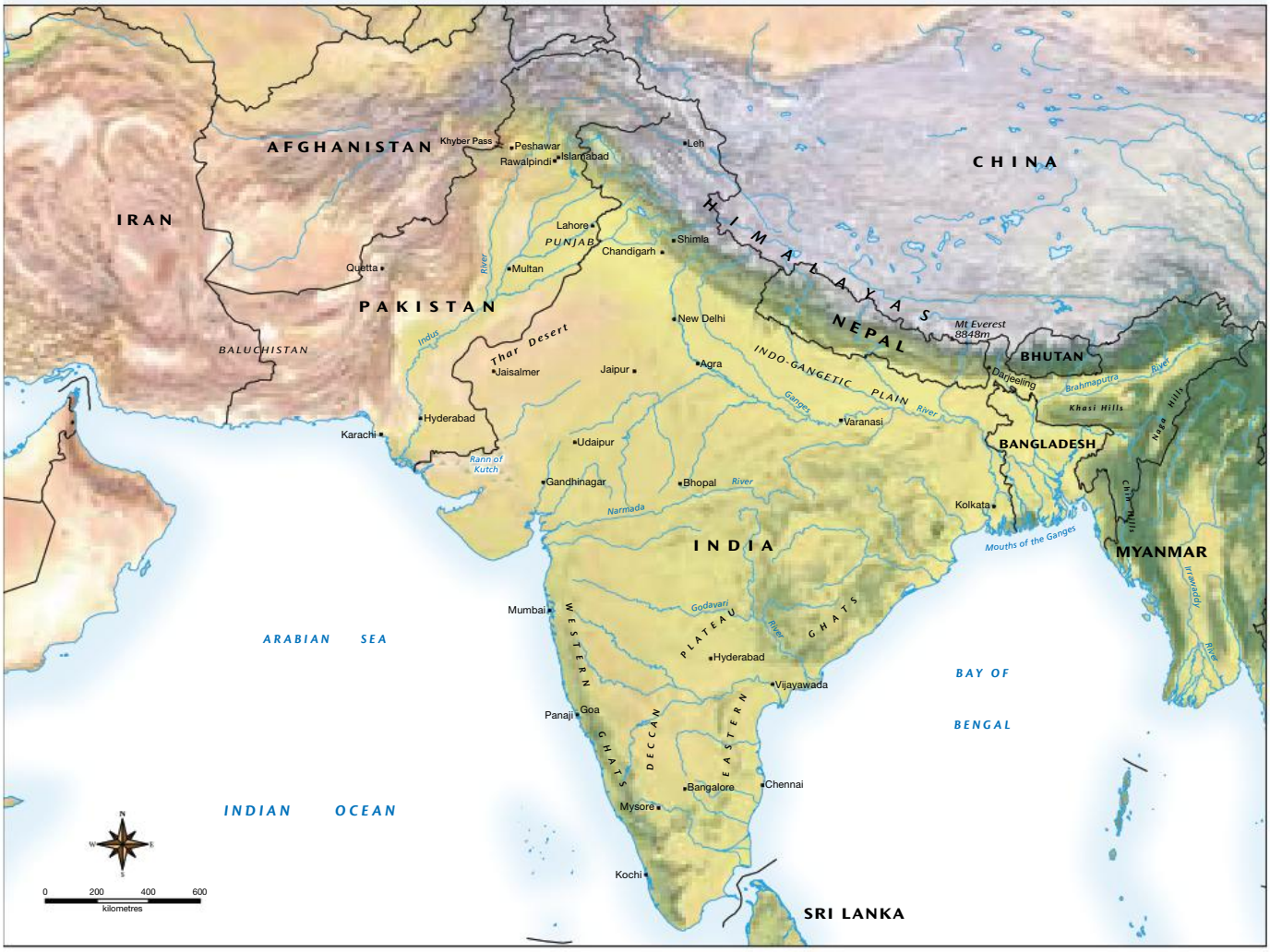
Given its vast size and varied terrain, the Indian subcontinent has a wide range of weather patterns. The seasonal monsoons also influence its climate. There are six seasons each year: summer, autumn, winter, spring, summer monsoon and winter monsoon. In the Himalayan north, winters may be freezing and, in some areas, summers are cool. In the central and southern

continent one of seven very large, continuous bodies of land; they are Europe, Asia, Africa, Antarctica, Australia, North America and South America.

monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia

areas of the subcontinent, the tropical climate produces temperatures ranging from warm to hot, with some inland areas reaching as much as 50 °C in summer.

SOURCE 1 A map of the Indian subcontinent



Source: Spatial Vision

India's geographical features had a strong influence on the location of its ancient civilisations. They developed mainly along river valleys that provided reliable water supplies, fertile soils for growing crops and access to the sea for trading. Such conditions were also seen in some of the world's great early civilisations, including ancient Iraq and Egypt.

19.3 ACTIVITY

Add the following features to a blank map of India (you may need to do some additional research to locate the areas mentioned):

a. major geographical features (rivers, mountain ranges, plateaus, deserts)
b. main areas of food production
c. major cities
d. two areas of high population density and two areas of low population density.

History concept: Continuity and change

19.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 2, 4, 7	Questions 5, 8, 9, 10

Check your understanding

1. What is a subcontinent?
2. List the nations that make up the Indian subcontinent.
3. Name the three regions of the Indian subcontinent.
4. Name the three main rivers of the Indian subcontinent.
5. Which region tends to be cool to cold, and which regions tend to be warm to hot?

Apply your understanding

6. Look closely at **SOURCE 1**. Calculate the distance of the Indian subcontinent from east to west and from north to south.
7. Given the size of the Indian subcontinent and the variety in terrain and climate, do you think it possible that its population could share the same language and culture? Explain.
8. Describe the role that rivers played in India's early history.
9. What other geographic features influenced the development of ancient Indian civilisations?
10. Explain how the rivers of the Indian subcontinent might have helped to develop a civilisation based on farming.

For sample responses to every question, go to www.jacplus.com.au.

19.4 Lost cities of the Indus Valley

LEARNING INTENTION

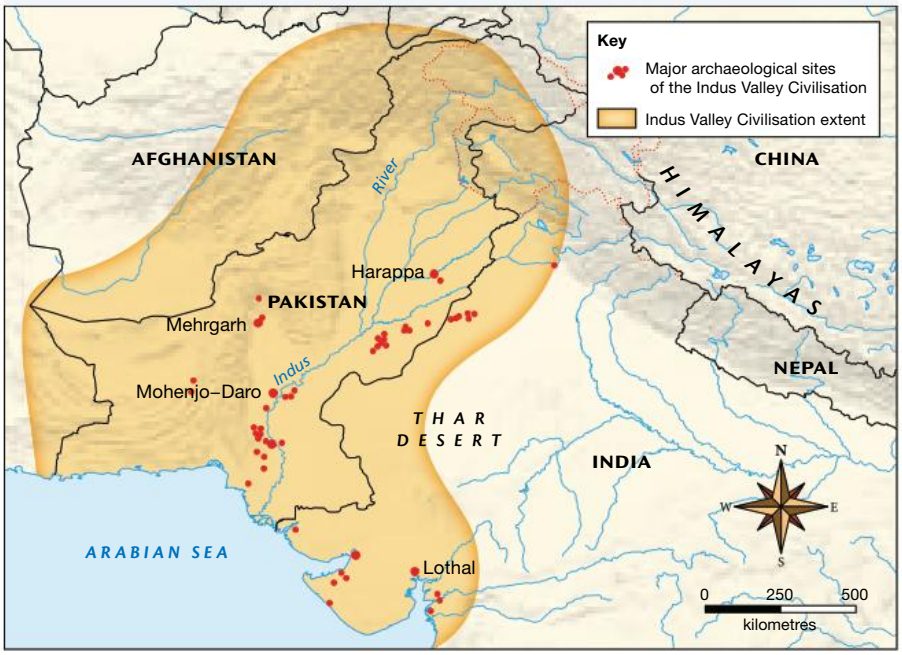
By the end of this subtopic, you will be able to describe the cities of Harappa and Mohenjo-daro and the people who lived there and explain how the Indus Valley Civilisation ended.

19.4.1 The Indus Valley Civilisation

People have lived in the Indian subcontinent since the Old Stone Age. Some rock paintings found there date as far back as 50 000 BCE. The Neolithic Revolution, when people began to settle in farming communities, began about 7000 BCE. The first towns and cities in the subcontinent arose around 3000 BCE. They flourished for around 1400 years before their mysterious decline. For thousands of years all that was known was that people had once lived in the cities, but only the brick ruins remained. What sort of buildings they had been, who built them and what became of them — all of this was unknown.

As in Egypt and Mesopotamia, the first Indian cities were built in a fertile river valley, with good soils and a reliable water supply for growing crops. This was the valley of the Indus River and its tributaries. So this first civilisation, arising at much the same time as those in Egypt and Sumer (in Mesopotamia), has become known as the Indus Valley Civilisation. It is also sometimes called the Harappan Civilisation because Harappa was the first of its cities to be excavated.

SOURCE 1 The main archaeological sites of the Indus Valley Civilisation



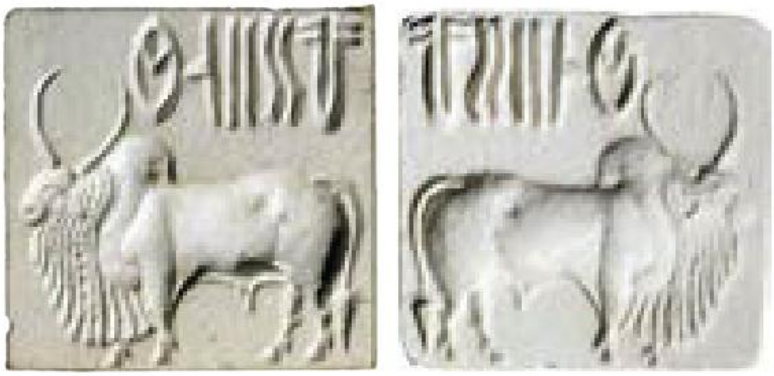
Source: Spatial Vision

The cities of the Indus Valley thrived. Farmers worked the fields surrounding the cities and officials organised the sale and distribution of agricultural produce. They had governments and used writing. Artisans created ornaments and tools, while traders plied their goods in boats up and down the river and its tributaries, and even across the sea to Mesopotamia. Artefacts from Mesopotamia have been found in the Indus Valley. This means there were probably trade links between these civilisations.

SOURCE 2 An Indus Valley stamp-seal, excavated at Mohenjo-daro.



SOURCE 3 An Indus Valley seal and its impression. Such seals have been found at the Mesopotamian city of Ur and other sites in that region. Similarly, seals from Mesopotamian cities have been found at Indus Valley locations such as the port city of Lothal. Animals on the seals include rhinoceros, elephants, unicorns and bulls.



DID YOU KNOW?

Stamp-seals were designed to leave an impression when pressed into wet clay. The imprint would be fixed to bundles of merchandise as merchants' marks.

SOURCE 4 The Indus Valley Civilisation and Mesopotamia



Source: Spatial Vision

19.4.2 Living in the lost cities

Our knowledge of the structure and function of cities during the Indus Valley Civilisation comes from several important archaeological sites. These cities have been well preserved and contain the remains of buildings and other pieces of important infrastructure. The largest Indus Valley sites that have been excavated are the cities of Harappa and Mohenjo-daro. Four hundred kilometres apart, both cities were based on a **grid system**, much like many modern cities. Each city was divided into 12 main blocks and had strong outer walls.

Many buildings were made of kiln-fired bricks similar, even in size, to the kinds of bricks used in many modern houses. Historians assume they used kiln-fired bricks because the Indus Valley had a wetter climate in those times. Such bricks were harder to make than mud bricks, dried only by the sun, but they were more durable in a wet environment. There is evidence that mud bricks were also used, but only the kiln-fired bricks have survived.

Most of the people of the Indus Valley would have been farmers. Cities could grow only where agriculture could produce a surplus to feed people who were not engaged in farming. So we know the farmers must have produced such a surplus. Excavations have given us some ideas about other kinds of work. Finds include seals, gold jewellery, combs, bronze statues and pottery. Such items would have been made by artisans in the cities and transported and traded by merchants.

Features of Mohenjo-daro

The grid system is clearly visible in the modern artist's impression of Mohenjo-daro shown in **SOURCE 5**. There are two levels to the city. The first level is called the Higher Town or the 'citadel'. Although it looks like a citadel, or fortress, the Higher Town is actually a mound topped by a huge **granary** and communal baths.

The granary was positioned high above the floodplain and was immense. The inhabitants of Mohenjo-daro depended on this building and its vast stores of grain, such as wheat and barley. The granary needed to be on high ground, beyond the reach of floodwaters. Ox-carts laden with produce would have been stationed in the recesses as workers raised produce to the platforms above.

grid system a street network that creates square and rectangular blocks
granary place for storing grain

SOURCE 5 A modern artist's impression of Mohenjo-daro. In the centre is the Great Bath and granary in the Higher Town.



SOURCE 6 The Great Bath of Mohenjo-daro



The surviving walls reveal a row of ventilation ducts. These allowed air to circulate inside to prevent the produce from going mouldy. The roof of the granary was probably constructed of timber and has long since rotted away.

A brick-lined, sunken structure is thought to have been an enormous bath. Traces of bitumen have been found in the bath, suggesting that it was sealed to prevent leakage. While we cannot know the purpose of the bath for certain, we can use contemporary knowledge of Indian customs to make an informed assumption. Ritual bathing is a common aspect of several Indian religions. We can also infer that, as the bath has stairs and ledges, the Great Bath was used for similar purposes.

The second level of Mohenjo-daro is the Lower Town. Here were the houses of the citizens. Like the buildings of the Higher Town, they are made of kiln-fired bricks. Larger houses often had courtyards. The windows faced inward and were high above ground level, ensuring privacy. A broad street, up to 10 metres wide, runs through the Lower Town, with narrower streets running off it.

There were many wells in Mohenjo-daro. These provided the population with fresh water for drinking and washing. They were constructed of special wedge-shaped bricks. Some bricks had a groove in them to make it easier to send down a bucket on a rope: the groove prevented the rope from slipping sideways and spilling the water. Mud brick often covered the walls of the wells. Most wells were built inside dwellings. However, wells have also been found adjoining the city streets.

For one of the world's first cities, Mohenjo-daro was remarkably **hygienic**. Many of the houses unearthed in the city had baths. Structures resembling toilets have also been unearthed. Many houses had drainage outlets onto the street, where gutters carried away waste water. Sometimes terracotta pipes were used. Chute systems were also used to expel water. Often a notched brick was placed at the end of the chute so solid waste could be trapped, preventing rubbish from accumulating in the street. Drains below the city streets were enclosed channels big enough for a person to walk through. This made it possible for workers to unblock the drainage system if the need arose.

Harappa had similar features to Mohenjo-daro. Their populations were also similar: Harappa's is estimated at 35 000 people and Mohenjo-daro's at 30 000. There is no evidence that a central government ruled the whole valley and used one of the cities as its capital.

19.4.3 The end of a civilisation

The end of the Indus Valley Civilisation is another mystery. However, historians and archaeologists have at least formed some solid hypotheses about the last days of Harappa and Mohenjo-daro.

Originally it was thought that the Aryan invasion (see subtopic 19.5) led to the fall of the Indus Valley Civilisation. Few scholars now accept this theory. Firstly, the Indus cities had already been abandoned by the time of the Aryan invasion. Secondly, there is no evidence of warfare in or around the cities. There are none of the weapons, chariots, armour or remains of men and horses

SOURCE 7 Structure believed to be a toilet at Mohenjo-daro



SOURCE 8 Large covered drain at Mohenjo-daro — tall enough for a person to walk through



hygienic healthy, sanitary

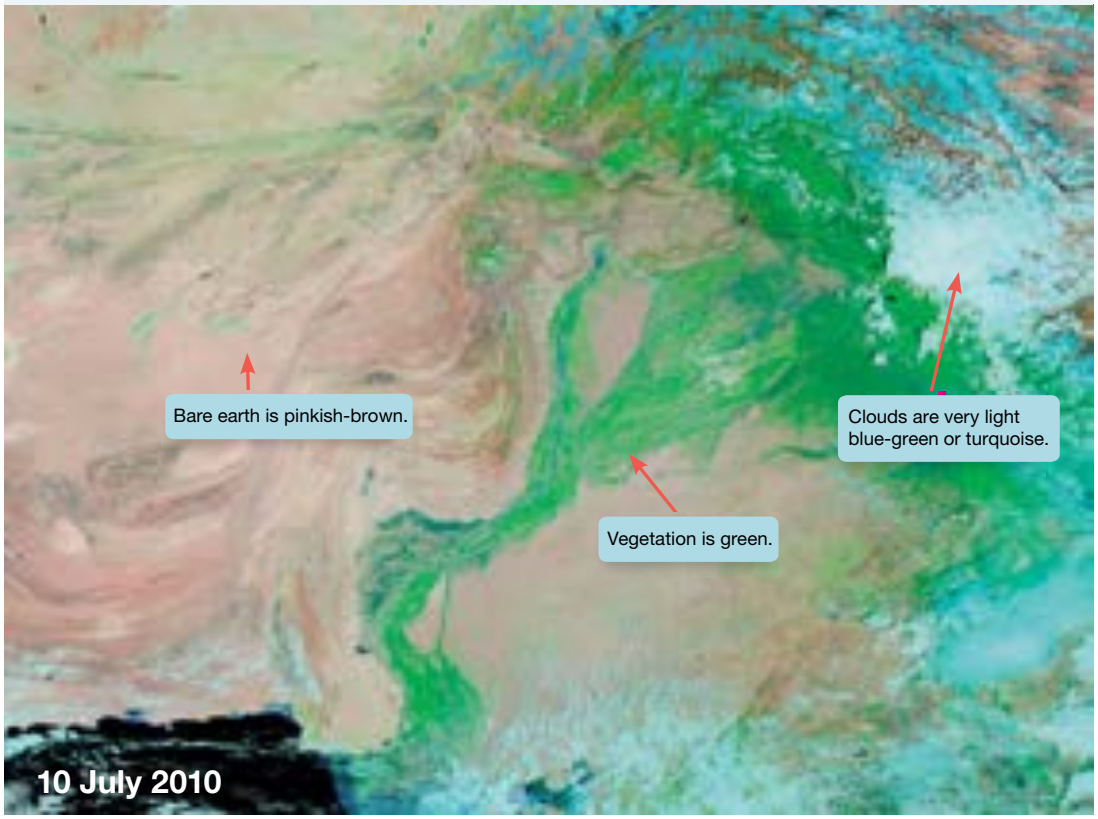
that would have been scattered across battlefields. Some skeletons found in Harappa that show signs of violent death were once thought to be the victims of Aryan invaders. The problem with this theory is that these victims do not occupy strata levels that coincide with the last days of the city itself.

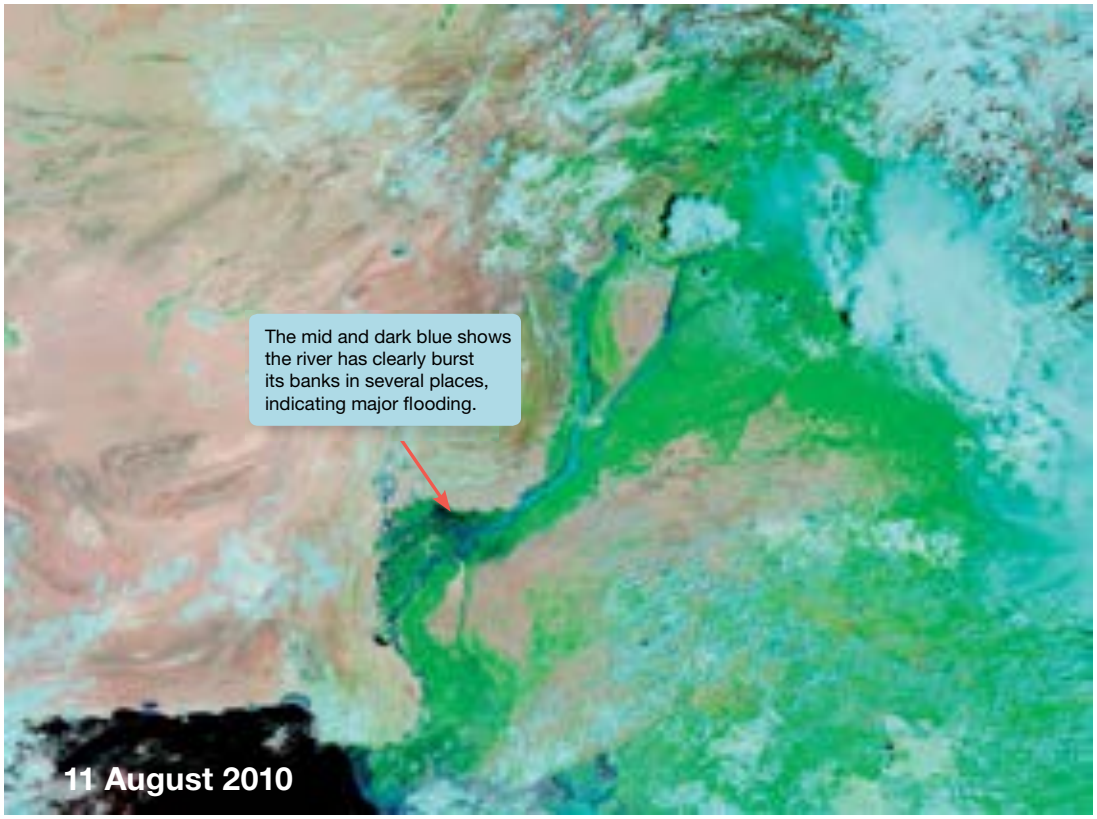
SOURCE 9 A well at Mohenjo-daro



The Indus River flows through an earthquake-prone region and has changed its course many times. Excavations reveal that in the last years of Mohenjo-daro there was a series of floods and that repairs were carried out in their wake. One earthquake blocked the Indus River downstream from Mohenjo-daro, resulting in the creation of a huge lake. This increased the flooding problems for the city. There is evidence that Mohenjo-daro was rebuilt at least seven times as a result of heavy flooding in the Indus River basin. Most recently, the disastrous floods of 2010 (see **SOURCE 10**) threatened the site, although fortunately the floodwaters did not reach it. (These floods affected 20 million people; at one point as much as one-fifth of the modern country of Pakistan was underwater.)

SOURCE 10 NASA images from space showing the flooding of the Indus River in 2010. The top image shows the Indus River Valley on 10 July, just before the floods. The bottom image shows the valley on 11 August, at the height of the floods. These images combine infra-red and visible light to give us a clearer picture of the difference between water and dry land.





A gradual end?

Most historians now believe that the cities *were* gradually abandoned when it ceased to be practical to live in them, but that their culture lived on. Even today there are pottery styles in the Indus Valley similar to those of the ancient Indus Valley Civilisation. The ox-carts are still in use, and the mud brick platforms around houses would have been familiar to anyone from those ancient communities. So the Indus Valley Civilisation may not have come to an end after all. Perhaps its culture simply blended into, and became a part of, the rich array of cultures that now span the Indian subcontinent.

demise death
utopia a perfect social and political system
legacy something handed down from the past

SOURCE 11 From Robert R. Raikes, 'The End of the Ancient Cities of the Indus', *American Anthropologist*, 1964

Uplift, almost certainly accompanied by more or less violent earthquake shocks, would not only have caused destruction of cities and settlements but would have disrupted the system of river and coastwise communications on which the commercial life of the culture must have largely depended. Damage to the cities and settlements in the Indus Valley would have been due rather to flooding than to the shocks … a point would have been reached when it would no longer have been considered worth the trouble and expense of rebuilding …

SOURCE 12 From Chris J. D. Kostman, 'The **Demise** of **Utopia**', *Journal of the Association of Graduates in Near Eastern Studies*, 1995

A careful review of the literature suggests that although the Harappans did experience great natural disasters and a dramatic [shift] in their urban process, they never declined or fell at all: the Harappan **legacy** continues to this day.

19.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 7, 9, 10, 15, 20, 21	Questions 1, 5, 8, 11, 14, 16, 19, 22	Questions 3, 6, 12, 13, 17, 18, 23, 24

Check your understanding

1. About how long ago did cities first emerge in the Indus Valley?
2. What two structures dominate the Higher Town at Mohenjo-daro?
3. What sort of buildings were in the Lower Town of Mohenjo-daro?
4. Explain why the drains under the city streets were so big.
5. What was the purpose of wells at Mohenjo-daro?
6. List two reasons why it is unlikely that the Aryans destroyed the Indus Valley Civilisation.
7. What two natural disasters affected the cities of the Indus Valley Civilisation?
8. What may have finally led to the cities being abandoned?
9. Where might the people have gone after abandoning their cities?
10. Outline the evidence that suggests the Indus Valley Civilisation was not warlike.

Apply your understanding

11. Look at **SOURCE 1**.
    a. Why do you think the cities and other settlements (shown by dots) are mostly located along the Indus River and its tributaries?
    b. Why would Lothal be a suitable place for a port to serve these cities?
12. Consider **SOURCES 2** and **3**.
    a. Describe the similarities and differences between these two seals.
    b. Give two reasons for including both animals and writing on the seals.
    c. What conclusions can you draw about contacts between the civilisations of Mesopotamia and the Indus Valley?
13. Using the scale in **SOURCE 4**, calculate how far people would have had to travel by sea and river to trade goods between the Indus Valley and Sumer.
14. Look at **SOURCE 5**.
    a. In a short paragraph, describe the layout of Mohenjo-daro as seen in this source.
    b. Why do you think the people of Mohenjo-daro would have needed such a huge granary for their produce?
    c. What does such a large single granary tell us about the way society would have been organised at Mohenjo-daro?
    d. From where would they have brought the produce to store in the granary?
15. Why do some historians suggest that the Great Bath shown in **SOURCE 6** was intended for bathing as part of some religious ritual?
16. Describe the features of the structures shown in **SOURCES 7**, **8** and **9** that could have led archaeologists to conclude that these are toilets, drains and wells.
17. How does the evidence in **SOURCE 10** support the idea that the Indus River can cause problems when it floods?
18. Why does the author of **SOURCE 11** say 'it would no longer have been considered worth the trouble and expense of rebuilding'?
19. a. The author in **SOURCE 12** mentions 'Harappans'. Who were the Harappans? (You will find out by revisiting earlier parts of the subtopic.)
    b. According to **SOURCE 12**, what became of the Harappans?
20. Compare the photo of the excavated Great Bath at Mohenjo-daro in **SOURCE 6** with the artist's impression of the same location in **SOURCE 5**. Compile a list of the similarities and differences.
21. Compare the satellite images in **SOURCE 10** with the map in **SOURCE 1**.
    a. Which ancient Indian city was flooded in August 2010?
    b. What could modern Indian governments do to protect this and other important archaeological sites from the dangers of flooding?
22. Explain how the cities of Harappa, Mohenjo-daro and Lothal were so well preserved.
23. Compile a table that summarises the factors that contributed to the end of the Indus Valley Civilisation.
24. Rank the factors identified in question 16 in terms of their importance. Which factor was the most significant contribution to the decline of the Indus Valley Civilisation?

For sample responses to every question, go to www.jacplus.com.au.

19.5 Contacts and conflicts: India and the ancient world

LEARNING INTENTION

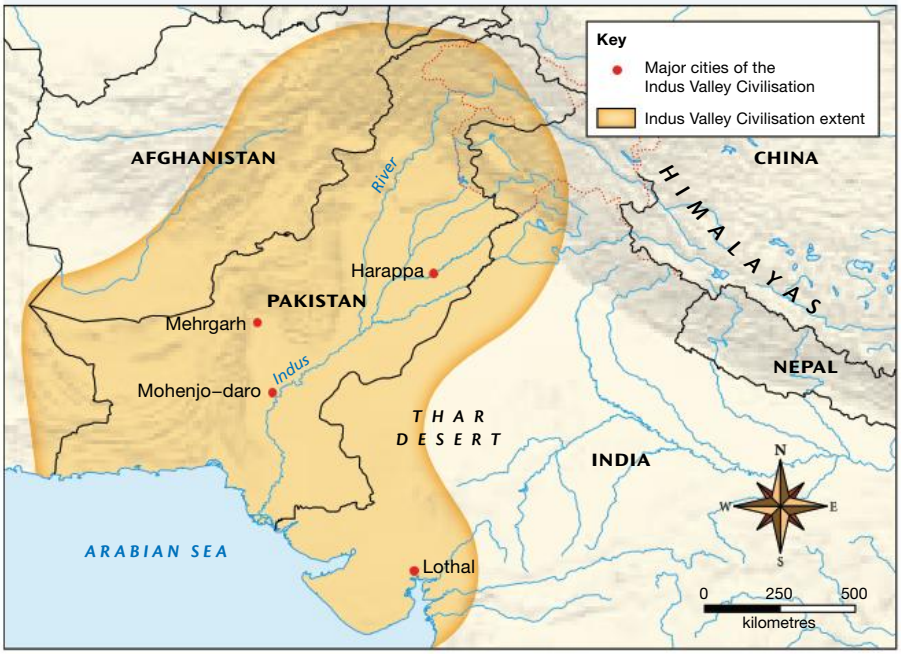
By the end of this subtopic, you will be able to:
- identify ancient India as an active participant in local and international trade
- identify who the Aryans were and the impact they had on ancient India
- explain the impacts of the Mauryan Empire on ancient India.

19.5.1 Trade during the Indus Valley Civilisation

From as early as 3000 BCE, members of the Indus Valley Civilisation had begun trading with the outside world. Home to unique and exotic items, such as precious stones, hardwoods and spices, international trade developed quickly in the Indus Valley. Once word of India's riches had spread, the region soon attracted explorers and traders from around the ancient world. However, India's abundant resources also caught the attention of individuals with less peaceful intentions, such as Alexander the Great. Evidence of this contact and conflict has been uncovered in several locations around Europe and Asia. In ancient Mesopotamia, **Indus seals** have been discovered; the city of Lothal was one of the world's earliest ports; and India features prominently in early Roman maps. In this subtopic, we will learn about ancient Indian civilisations and their contact and conflict with the outside world.

The lost cities of Harappa and Mohenjo-daro have provided us with incredible insight into the Indus Valley Civilisation. As we have seen previously, the archaeological remains of these sites reveal much about the social, religious and political features of the Indus Valley. Countless examples of Indus Valley Civilisation jewellery, pottery, everyday items and seals have been discovered at Harappa and Mohenjo-daro. These highly sought-after goods would have been traded with other civilisations across Asia and Europe. This raises the question of how this trade actually occurred. The answer can be found in the ancient port city of Lothal (see **SOURCES 1** and **2**).

SOURCE 1 A map showing the location of important cities of the Indus Valley Civilisation



Source: Spatial Vision

Excavated from 1955 to 1960, Lothal is one of the oldest docks in the world. Goods from Harappa and other Indus cities were transported to the port at Lothal. Small compared to modern examples, the port was large enough to house boats capable of international journeys. Exiting the port via the ancient Sabarmati River, these boats then made their way down the Gulf of Khambhat and across the Arabian Sea. The Indus Valley traders may have then met with their Mesopotamian counterparts in what we now call Iran. The strongest evidence of this activity comes in the form of seals. A small block engraved with pictures and writing, seals were used to stamp pottery and other items. The fact that Harappan seals (see **SOURCE 3**) have been found in places previously occupied by the Mesopotamians strongly suggests that trade occurred between these two civilisations. It is also interesting to note that activity at Lothal continued many years after the decline of Harappa and Mohenjo-daro.

Indus seals imprints of stamps found on pottery made during the Indus Valley Civilisation

SOURCE 2 A photograph of the ancient dock at Lothal



SOURCE 3 Harappan pottery stamp-seal (left) and modern impression (right): unicorn and incense burner



19.5.2 The Vedic Civilisation

The next civilisation to develop in India was named after a collection of sacred writings — mostly hymns, prayers and poems. These writings, called the *Vedas*, form the oldest books of the Hindu religion. They were written in **Sanskrit**, the language of this civilisation. The most important of these books, the *Rig-Veda*, was composed around 1000 BCE. The Vedic (sometimes called Aryan) culture came from western Asia. Some groups of Aryans moved westward into Europe. Others entered the Indian subcontinent around 1600 BCE.

The Aryans were warlike **nomads**. With horses and chariots they stormed across the Indus River Valley and the floodplain of the Ganges River. They had

Sanskrit ancient Indian language used in classical Hindu literature

nomads tribal groups who wander from place to place, generally in search of food or pasture

no interest in building cities, such as those of the Indus Valley Civilisation. They were not united as a nation, but rather were made up of numerous tribes, each ruled by a chief or *raja*. Often, they fought among themselves.

With civil conflict common, the Aryans eventually divided their territory into 16 *mahajanapadas* or 'city-states'. Soon after this, a series of Persian leaders, including Cyrus the Great and Darius I, invaded Northern India and the Indus Valley. With its strong and well-organised armies, the Persian occupation of India continued until that empire was defeated by the famed Macedonian ruler, Alexander the Great. Believing the Greek theory that the known world ended in India, Alexander invaded northern India and then swept through the subcontinent towards the Middle East. Although Alexander's Indian campaign was swift and ultimately successful, it also included one of his most costly battles: the Battle of Hydaspes.

SOURCE 4 Alexander's Macedonian and Greek army encountering an Indian army under the Hindu king Porus at the Battle of Hydaspes



19.5.3 The Mauryan Empire

The Mauryan Empire is believed to have created the first unified Indian state. In 321 BCE, a leader called Chandragupta Maurya set out to create an empire across the subcontinent. It is believed that he was inspired by the exploits of the **Macedonian** conqueror Alexander the Great. Alexander had tried to conquer India only a few years before. When he withdrew from western India, Alexander left a **power vacuum** in the region. Chandragupta took advantage of it.

Ashoka and Buddhism

The Mauryan Empire offered India stable government and a regulated economy. It was also during the time of the Mauryans that a system of writing was reintroduced. However, the texts that were popular in Mauryan times were not the traditional Hindu religious writings normally associated with this group. Instead, they were Buddhist. It was the ambitious and highly successful ruler Ashoka who was responsible for this change.

Ashoka was the grandson of the founder of the Mauryan Empire, Chandragupta Maurya, and he ruled when the empire was at its peak. With a reputation as a fierce warrior, Ashoka expanded his family's empire until it covered most of the Indian subcontinent, including modern-day Afghanistan and Bangladesh. However, the years of bloodshed took their toll on Ashoka and as a result he began to see the world differently. In 259 BCE, Ashoka converted to Buddhism, which was a relatively unknown religion at the time. He gave up his violent and warlike ways, embracing peace in accord with his new-found beliefs. He even sent Buddhist missionaries to other regions and assisted the spread of Buddhism in Asia. Therefore, the first known writings since the fall of the Indus Valley Civilisation were Buddhist religious texts.

Macedonian native of Macedon, an ancient kingdom north of Greece
power vacuum a situation in which there is a lack of political leadership

The Mauryan Empire declined after Ashoka, and finally fell apart when its last ruler was assassinated. A turbulent period directly followed the fall of the Mauryan Empire. The ancient Greek and then Roman empires attempted to assert their control over the subcontinent.

First, it was the Indo-Greek rulers who invaded India. In nearly two hundred years of rule, over thirty kings struggled to keep control over the region. Despite the tumultuous political events, Greek culture had significant effects on Indian life. In fact, as previously mentioned, it was Greek art that influenced the first representation of Buddha in human form.

SOURCE 5 Seventeenth century representation of the Periplus of the Erythraean Sea



The Roman Empire also had a strong connection to ancient India, particularly in the last stages of its rule. Trade between Rome and India was frequent, and strong evidence of this relationship exists today. The Greco-Roman document the *Periplus of the Erythraean Sea* is a record of trade routes and partnerships that existed between Rome, North Africa and the Indian subcontinent (see **SOURCE 5**). Archaeological evidence also exists at the southern Indian site of Arikamedu. Excavations at this site have revealed many Roman artefacts, including unique Roman pottery, coinage, wine jugs, glass and stone beads, and other pieces of jewellery. Evidence suggests these important relationships continued well into the reign of the Guptas — the so-called 'Golden Age' of India.

SOURCE 6 An Indian silver coin (c. first century BCE) depicting the local ruler wearing a Roman-type helmet with bristles



SOURCE 7 Buddhist bas-relief in the Ajanta Caves, created during the Gupta dynasty



19.5 ACTIVITIES

1. Create a timeline of the Mauryan Empire using the dates and events mentioned in this subtopic.
   HASS skills: Communicating and reflecting
   History concept: Continuity and change
2. Using your library and the internet, explore the battle shown in **SOURCE 4** and its outcome. This was the first time the Macedonian and Greek army had encountered elephants in battle. Find out how useful elephants were in situations like this. Also find out whether Alexander's army was impressed enough by the Indians' use of elephants to include them in their own armed forces. **History concepts: Sources, Evidence**
3. Using the library and the internet, research the Ajanta Caves (see **SOURCE 7**). Explain what you have learned about them in your research. **History concepts: Sources, Evidence**

19.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 5, 7, 10, 11	Questions 2, 6, 8, 12, 13	Questions 3, 4, 9, 14, 15

Check your understanding

1. Describe the route taken by traders leaving Lothal.
2. Explain what types of goods were traded from India.
3. Seals can be found on artefacts from many different civilisations across the ancient world. Explain the purpose of this practice.
4. List ways in which the Vedic Civilisation was different from the Indus Valley Civilisation.
5. Who was the first ruler of the Mauryan Empire?
6. Explain why Ashoka adopted the Buddhist faith.
7. Identify the foreign forces that attempted to control India after the fall of the Mauryan Empire.

Apply your understanding

8. What evidence is there to suggest that trade occurred between the Indus Valley Civilisation and Mesopotamia?
9. Describe the seal shown in **SOURCE 3**. Explain what you think is represented on the seal.
10. Look closely at the location of Lothal on the map in **SOURCE 1**.
    a. Considering that it was a port town, what is strange about its location?
    b. Given the nature of the location of Lothal, suggest why this may not have been a problem during the time the port was in operation.
11. Look closely at **SOURCE 4**.
    a. Describe some of the weapons and the means of battle engagement.
    b. Why may the Battle of Hydaspes have been so costly for Alexander the Great?
12. What do **SOURCES 5** and **6** suggested about Indian contact with the Roman Empire?
13. a. Create a table that summarises the accomplishments of the Vedic Civilisation and the Mauryan Empire.
    b. Using the table, evaluate the accomplishments of the Vedic Civilisation and the Mauryan Empire. Which of the two do you believe had the most significant impact on the development of Indian culture and beliefs? Provide historical evidence to support your arguments.
14. Explain the relationship (cause and effect) between the following events, people and/or beliefs.
    a. The writing of the *Vedas*
    b. The defeat of Alexander the Great
    c. Ashoka's brutal experiences of war
    d. The assassination of the last Mauryan ruler

15. Evaluate the impact of foreign countries on ancient Indian society. Which other empire(s) had the greatest influence on the development of Indian culture, beliefs and traditions? Provide historical evidence to support your arguments.

For sample responses to every question, go to www.jacplus.com.au.

19.6 The Mauryan Empire: India's first unified state

LEARNING INTENTION

By the end of this subtopic, you will be able to describe how Chandragupta Maurya introduced the first system of government to ancient India.

19.6.1 Chandragupta Maurya and Kautilya

The Mauryan Empire, sometimes called the Mauryan dynasty, ruled the Indian subcontinent from about 323 BCE to 185 BCE. The Mauryan emperors conquered a region reaching from Bangladesh in the east to Afghanistan in the west. This was the first state to stretch over most of the Indian subcontinent.

The dynasty was founded by Chandragupta Maurya. Little is known of his early life. However, we do know that he overthrew the last ruler of the preceding dynasty, the Nanda, with the aid of a former Nanda minister, Kautilya. It appears Kautilya helped Chandragupta raise an army against his former leader.

Kautilya is also credited with compiling a set of rules on running a government, called *The Arthashastra*. Some of these rules appear ruthless and cruel. For example, the punishment for murder was not just death but torture too. If you injured someone in a drunken brawl you would have your hand cut off. However, *The Arthashastra* also laid the basis for responsible administration. For example, Kautilya advised the ruler to meet every petitioner who entered his court and not leave them to talk only to his officials. This, Kautilya said, would avoid confusion and discontent that might lead to rebellion, and would ensure satisfaction with the ruler's government.

SOURCE 1 Mauryan silver **medallion** from the second century BCE. It shows riders on an elephant under a decorative umbrella who are likely part of a royal procession.



medallion a coin-shaped, usually metal, decorative disk

DID YOU KNOW?

Elephants have been used in India for both transport and heavy labour for thousands of years up to the present day. However, Mauryan emperors employed elephants in their armed forces as well. Ashoka is reputed to have had several thousand war elephants. They were used to destroy enemy fortifications and villages, as well as to trample infantry.

Kautilya's rules laid the basis for a powerful unified government across the subcontinent. The Mauryan Empire was divided into districts run by administrators whose duty it was to report to the emperor. It was their job to ensure law and order, provide troops for the army and collect taxes. The central government kept a network of spies to ensure that these district officers followed directions properly. In this way India became a single

state under central rule. The state regulated the economy and introduced a standardised system of weights and measures.

The observations of Megasthenes

The efficiency of the Mauryan Empire under Chandragupta is described in the only written primary source apart from *The Arthashastra*. This is an account by a Greek ambassador, Megasthenes, from the Seleucid Empire. We know that Megasthenes visited the court of Chandragupta as a representative of the first Seleucid emperor, Seleucus Nikator, one of Alexander the Great's generals. The empire founded by Seleucus ruled over much of the old Persian Empire from 313 to 65 BCE. In **SOURCE 3**, Megasthenes describes the wonders of Chandragupta's capital city, Pataliputra. According to Megasthenes, it was a vast and splendid city ringed with a high wooden wall and 570 towers.

The account Megasthenes wrote about India, called *Indika*, has been lost. What have survived are small infrequent references to it in the works of other Greek writers. Added together, these have helped us to build up a picture of India under Chandragupta Maurya.

Chandragupta extended the Mauryan Empire across the northern half of the subcontinent, expanding westwards into lands held by the Seleucid Empire. In 324 BCE, he pushed Seleucid garrisons out of the Indus Valley. Seleucus Nikator tried to regain this region but was defeated in battle in 305 BCE. After Chandragupta's death, his son Bindusara continued to extend Mauryan power. He conquered 16 kingdoms. But the ruler under whom the empire would grow to its furthest extent was the next emperor, Ashoka.

SOURCE 2 Bas-relief from the Great Stupa of Sanchi. It shows what appears to be a festive scene from a Mauryan city.



stadia the plural form of stadium, which is a measure of about 200 metres

cubit an ancient measure of length, based on an adult's forearm

SOURCE 3 From an ancient Greek account of a report by a Greek ambassador, Megasthenes, who had visited the Mauryan capital, Pataliputra, on a mission from the Seleucid Empire

Megasthenes informs us that this city [Pataliputra] stretched in the inhabited quarters to an extreme length on each side of eighty **stadia**, and that its breadth was fifteen stadia, and that a ditch encompassed it all round, which was six hundred feet in breadth and thirty **cubits** in depth, and that the wall was crowned with 570 towers and had four-and-sixty gates. The same writer tells us further this remarkable fact about India, that all the Indians are free, and not one of them is a slave.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Asian world > **Mauryan Empire**

19.6 ACTIVITY

Create a timeline and insert on it the events discussed in this subtopic.

HASS skills: Analysing
History concept: Continuity and change

19.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 5, 6	Questions 4, 7, 8, 10	Questions 2, 9, 11

Check your understanding

1. Describe the region conquered by the Mauryan emperors.
2. Arrange the following events in chronological order: beginning of the Mauryan dynasty; beginning of the Seleucid Empire; end of the Mauryan dynasty; Chandragupta defeats the Seleucids and drives them out of the region.
3. Who was the leader credited with creating the first unified Indian state?
4. How many written primary sources are there from the time of the Mauryan Empire?

Apply your understanding

5. Describe what you believe is happening in **SOURCE 2**. How does this source help us understand what life was like in the Mauryan Empire?
6. To what extent does **SOURCE 2** support Megasthenes' description of a Mauryan city in **SOURCE 3**?
7. How do we know from **SOURCES 1** and **2** that during the Mauryan Empire Indians relied heavily on the elephant? How was the elephant helpful to them?
8. Which empire did Chandragupta drive out of the Indus Valley, thus expanding the Mauryan Empire?
9. Identify and explain the administrative changes Kautilya undertook.
10. How do you believe the changes identified in question 8 allowed the Mauryans to control India?
11. 'It was Kautilya not Chandragupta who was responsible for the success of the early Mauryan Empire.' Do you agree or disagree with this statement? Justify your response.

For sample responses to every question, go to www.jacplus.com.au.

19.7 Ashoka the Great

LEARNING INTENTION

By the end of this subtopic, you will be able to describe Ashoka and explain the impact his leadership had on Indian culture.

19.7.1 The warrior repents

Chandragupta's grandson Ashoka was remarkable not only by the standards of ancient India. The famous, respected English writer H. G. Wells, in his book *A Short History of the World*, claimed that Ashoka was 'the greatest ruler in world history'! Often referred to as 'Ashoka the Great', in this subtopic we will see exactly why this ruler was so 'great' and why he was seen as such an important individual.

Like his predecessors Chandragupta and Bindusara, Ashoka was a warrior king. He was already a successful general under his father, putting down several rebellions. After his father's death, Ashoka vied with his brothers for the throne, a struggle that Ashoka eventually won. Legend claims that Ashoka may have even killed his brothers during this conflict.

Over the next eight years, Ashoka conducted wars of conquest that extended the Mauryan Empire to its furthest limits. His final military campaign was in Kalinga, a kingdom on the north-east coast of India. During this bitter campaign, tens of thousands were slaughtered and the cities of Kalinga sacked.

Then something truly amazing and profound happened to Ashoka. It is said that when Ashoka visited the battlefields and ruined homes of the Kalingans, the sight of so much death and suffering sickened him, and he vowed never to wage war again. Although he probably already regarded himself as a Buddhist, he underwent a complete transformation and devoted his life to Buddhist principles. Ashoka vowed to look after his people in the same way that a father looks after his children. To this end, he promised he would extend his empire no further through war. Instead, Ashoka sent missionaries to persuade people to live according to the moral principles of the Buddhist faith.

The edicts of Ashoka

Much of what we know about Ashoka's rule we have learned from **edicts** inscribed on pillars and rocks that were erected throughout the empire. According to the edicts, Ashoka provided medical care for people and animals alike, and planted shade and fruit trees to be enjoyed by all. Sacrifices were banned, as was hunting, a sport that Ashoka himself had loved in his youth. The burning of forests for agriculture was banned, because this could harm animals that sheltered there. Ashoka also promoted a vegetarian diet to reflect his care and regard for the animal world. Many of the harsh punishments decreed by Chandragupta's chief minister, Kautilya, such as torture and the death penalty, were abolished. Parents, teachers, priests, servants and those practising religions other than Buddhism — all were to be equally respected.

The edicts of Ashoka can be seen as demonstrations of *dharma* (or *dhamma*) — the moral teachings upon which Buddhism is based. Essentially, dharma recognised the individual's duties and obligations both to other people and animals, and to nature.

Following Ashoka's death in 232 BCE, his son succeeded in bringing Buddhism to Sri Lanka, but such achievements failed to halt the rapid decline of the Mauryan Empire. Nonetheless, the Mauryan Empire had provided India with a model for a unified state and represented a high point in its history.

SOURCE 1 A stamp issued on 15 August 1949, the second anniversary of modern India's independence. It shows lions on top of a pillar erected by Ashoka at Sarnath in northern India.



edict order issued by a sovereign to his or her subjects

DISCUSS

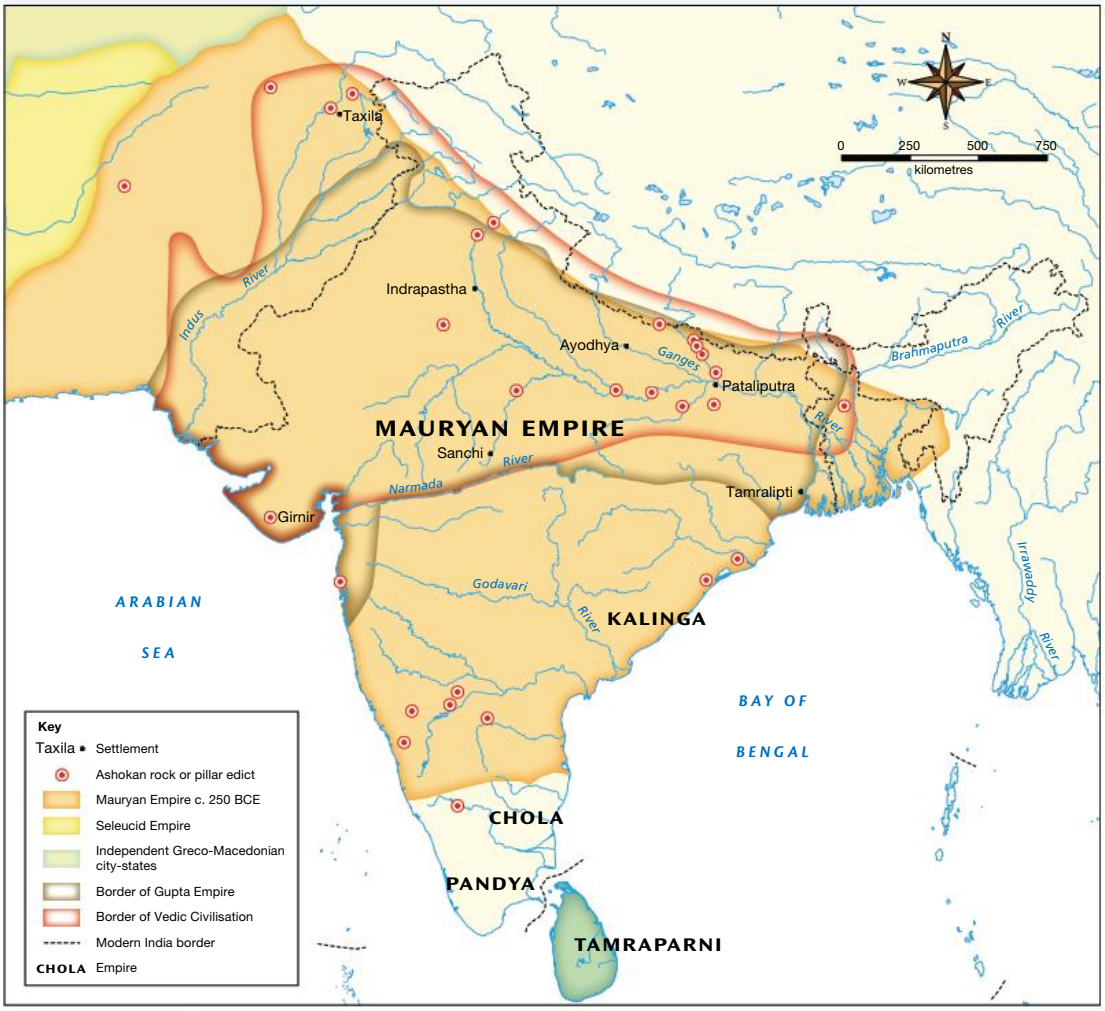
Discuss how Ashoka's edicts, as shown in **SOURCE 4**, differ from the ideas of Chandragupta's chief minister, Kautilya, described in subtopic 19.6. How do you think Ashoka's subjects would have felt about these changes?

General capability: Critical and creative thinking

SOURCE 2 Another of Ashoka's pillars, this one with a single lion on top, at Kolhua. Behind it is a Buddhist stupa.



SOURCE 3 Map of India showing the furthest extent of the Mauryan Empire, as achieved by Ashoka. Also shown are the sites where Ashoka erected his rock or pillar edicts.



Source: Spatial Vision

SOURCE 4 From the pillar edicts of Ashoka

Dhamma is good, but what constitutes Dhamma? [It includes] little evil, much good, kindness, generosity, truthfulness and purity. I have given the gift of sight in various ways. To two-footed and four-footed beings, to birds and aquatic animals, I have given various things including the gift of life. And many other good deeds have been done by me. People see only their good deeds saying, 'I have done this good deed.' But they do not see their evil deeds saying, 'I have done this evil deed' or 'This is called evil.' But this [tendency] is difficult to see. One should think like this: 'It is these things that lead to evil, to violence, to cruelty, anger, pride and jealousy. Let me not ruin myself with these things.' And further, one should think: 'This leads to happiness in this world and the next.'

19.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 6	Questions 4, 7, 8, 10	Questions 2, 5, 9, 11

Check your understanding

1. What was Ashoka's relationship to Chandragupta?
2. How did Ashoka change after witnessing the appalling suffering brought about by war with Kalinga?
3. Where were the edicts of Ashoka inscribed?
4. What is dhamma?
5. Describe how the Mauryan Empire grew under Ashoka's rule.

Apply your understanding

6. Examine **SOURCE 1**. Why do you think modern India's government, on the second anniversary after independence, issued a stamp with one of Ashoka's pillars on it?
7. Why do you think Ashoka inscribed his edicts on monuments, as seen in **SOURCES 1** and **2**?
8. Explain how **SOURCE 3** supports the idea that Ashoka was trying to get his message across to all Indians through his edicts?
9. Describe the effects a life of battle had on Ashoka.
10. How did Ashoka's reign influence religious observance in ancient India?
11. Now you have read about Ashoka, what do you think inspired H. G. Wells to describe him as 'the greatest ruler in world history'?

For sample responses to every question, go to www.jacplus.com.au.

19.8 The religions of ancient India

LEARNING INTENTION

By the end of this subtopic, you will be able to:

- identify the beliefs and traditions of Indian religions
- explain the structure and cultural implications of the caste system
- describe ceremonies and customs that signify important moments in the lives of Indian people.

19.8.1 Hinduism and the natural world

As we learned earlier, India's unique geographic characteristics enabled the expansion of human civilisations in the area. The plentiful waters of the Ganges, Brahmaputra and Indus rivers became the life-blood of the Indian people. Enriching the surrounding lands, these rivers allowed people to farm and cities to grow. The importance of the natural world can be seen in the evolution of Indian religions, with environmental themes particularly apparent in Hinduism, Buddhism and Jainism. In the following sections, we will investigate some of India's oldest religions and discover the ways in which they represent, symbolise and seek to protect the natural world.

The oldest of the world's major religions, Hinduism is followed by almost 80 per cent of modern Indians. Hinduism is full of symbols, references and customs that relate to the natural world. In fact, the very name India is derived from the word Hindu, which comes from the Sanskrit word *sindh*, meaning 'river'. Ancient Hindu texts, including the *Vedas* and the *Mahabharata*, frequently mention the divine presence in nature. They describe how Hindu gods such as Krishna often took the form of features in the natural world. As such, animals and the environments in which they lived had to be worshipped and protected. These texts also taught that humans had a duty to live in harmony with the natural world. This duty is often referred to as dharma. A word used across many different Indian religions, dharma can be described as a person's responsibility to follow religious and cultural teachings and laws.

SOURCE 1 An excerpt from the Sanskit verse *Srimad Bhagavata Mahapurna (2.2.41)*

Ether, air, fire, water, earth, planets, all creatures, directions, trees and plants, rivers and seas — they all are organs of God's body. Remembering this, a devotee respects all species.

Hinduism explained

Hinduism is both a pantheistic and polytheistic religion. The first term describes religions that see the entire universe as being divine. Pantheists do not believe in a single god-like being, but rather see god in all aspects of the natural world. This means that Hindus are also polytheists as they worship the natural world through a variety of divine beings.

SOURCE 2 Hindus bathing in the Ganges River during a major religious festival in northern India. They believe that the water of the Ganges purifies the soul and washes away sin.



SOURCE 3 A sadhu, or Hindu holy man, at the Ardh Kumbh Mela, the world's largest religious festival. Millions of Hindus attend this festival, held twice a year at the meeting place of the Ganges and two other rivers.



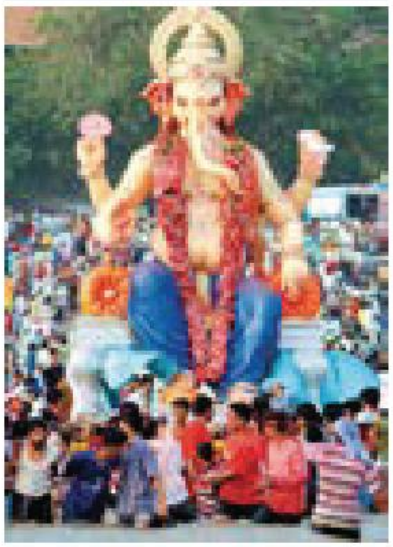
DID YOU KNOW?

During the Ganesha Festival in August, Hindus place statues of the elephant god, Ganesh, in their homes and in decorated tents to receive his blessing. On the eleventh day, the statues are taken to a river or the sea and immersed in water.

Another key Hindu belief is reincarnation, through which a person's spirit or soul is reborn in another body after death. Hindus believe that after many cycles of death and rebirth the individual may achieve joy and freedom through eventual unity with a universal spirit, called Brahman.

Hindus also believe that a person's current life will determine what form the next life will take. If you perform religious duties and live a moral life, you may be born to a higher class in the next life. But a sinful life would mean being born into some lower life, perhaps as a poor person, a slave or an animal. Hinduism holds that every living thing contains a part of the universal spirit and is therefore sacred. For this reason, vegetarianism is widely practised. Cows are particularly honoured and protected.

SOURCE 4 The Ganesha Festival, held in August

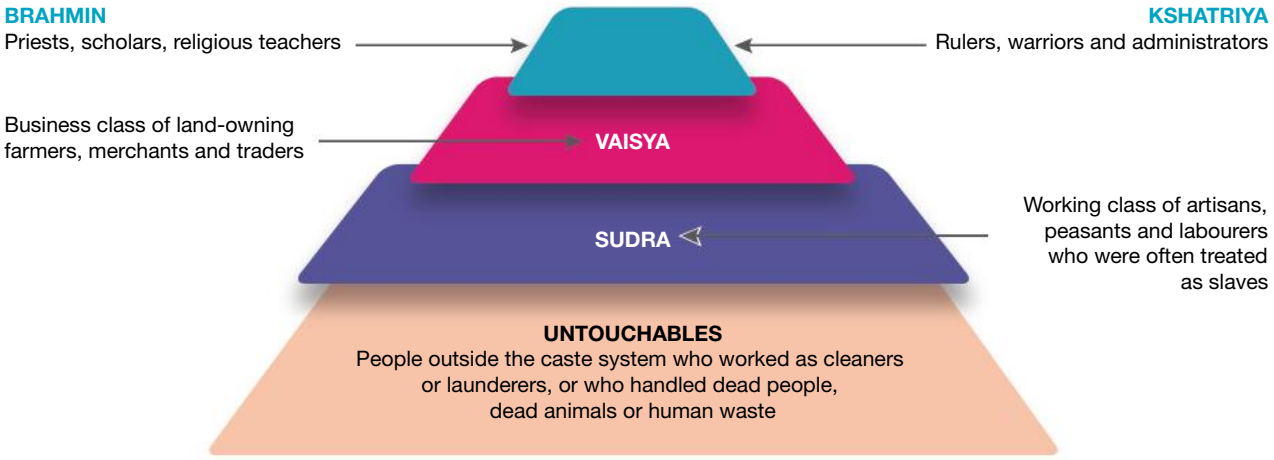


19.8.2 The caste system

As in all ancient societies, civilisation brought increased inequality, with privileged classes oppressing less privileged classes. In India, class differences were reinforced by religious ideas as the Indo-Aryan conquerors set about creating oppressed classes out of the peoples they conquered.

From Vedic times, Hinduism divided society into classes called castes. The caste system (see **SOURCE 5**) was a means of social control — of keeping people in the social classes into which they were born. From around 200 CE, four main castes were described under the Manu code. These castes were the Brahman or priestly class, warriors and landowners, farmers and craftsmen, and Untouchables or outcasts. These main castes developed further into a complex system of hundreds of castes, each with its own rules, occupations and restrictions. A contested verse of the *Purusha Sukta* states that the castes originated from different parts of giant deity, Purusha. It claims that the Brahmin came from its mouth, the kshatriya from its arms, the vaisya from its thighs and sudra from its feet. The dalit or Untouchables were not mentioned in the verse. However, in recent years, historians and commentators have doubted whether the verse was actually written during the Vedic period. In modern times there have been attempts to change this social system.

SOURCE 5 This social pyramid represents the main castes and social classes of ancient India by about the time of the Mauryan Empire. Children were born into a caste. It was almost impossible to move between castes, especially as Sudra and Untouchable children were denied any formal education. Buddhism rejected the caste system.



DISCUSS

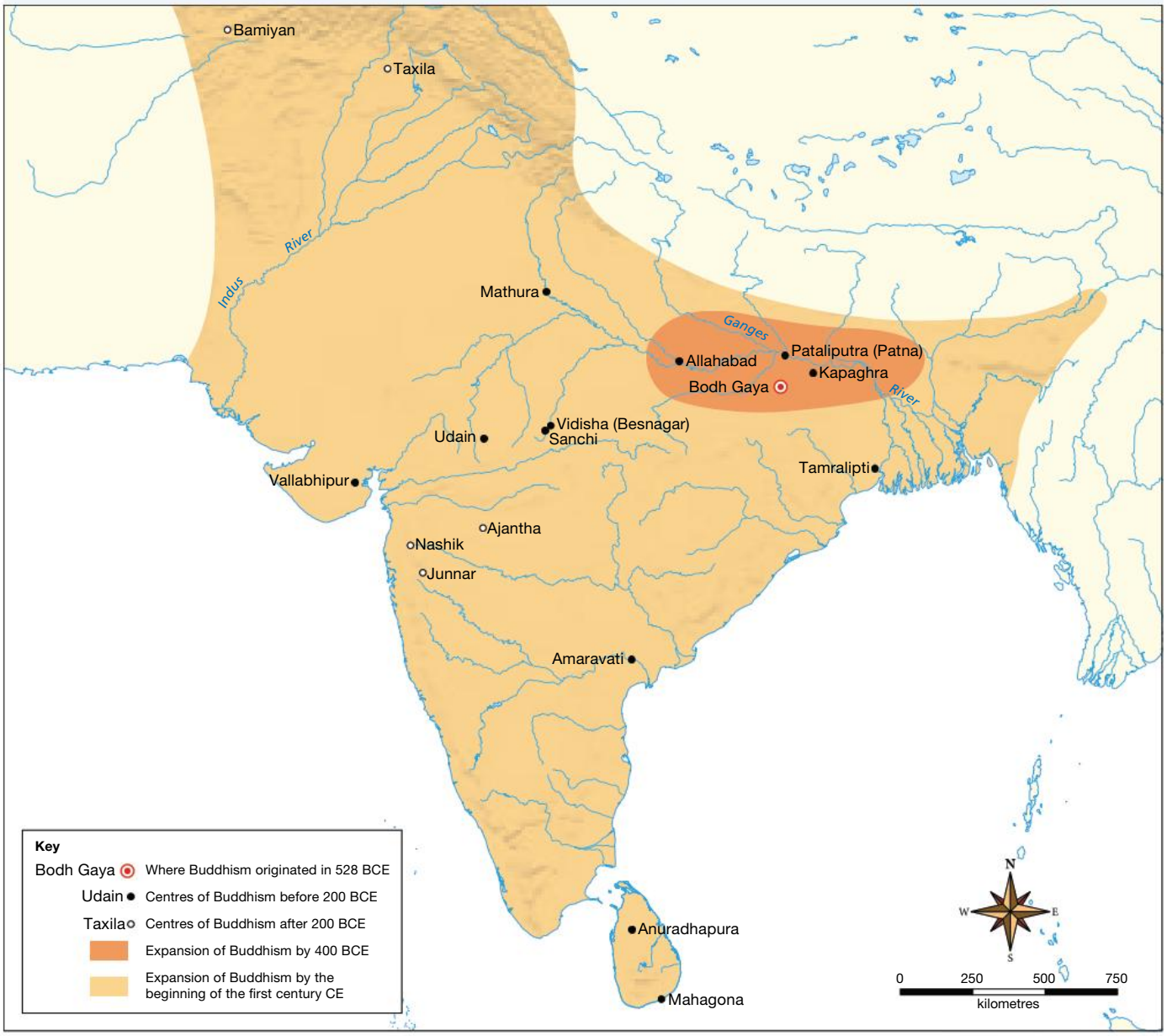
Most people in the modern world regard the caste system as cruel and unjust.

General capability: Ethical understanding

19.8.3 Buddhism and the natural world

A deeply spiritual religion, Buddhism originated in India and then spread throughout Asia and beyond (see **SOURCE 6**). Buddhism also sees humankind as part of a sacred natural world. Buddhism advocates contentment. The Buddha taught that humans must understand nature in order to satisfy their needs without harming the natural world. Whenever humans became corrupted by unrestricted greed, both humanity and the natural world suffered. Buddhists see the natural world as being filled with interconnections. Buddhism also teaches that humans must achieve a balance between themselves and the environments in which they live. An important element of Buddhism has always been the belief that people can be reincarnated as animals. In Buddhist thought, this provided another reason for a gentle relationship with nature, and sympathy and respect for all living creatures.

SOURCE 6 Map showing the spread of Buddhism within India up to the first century CE



Source: Spatial Vision

Buddhism explained

Buddhism was founded by a Hindu prince named Siddhartha Gautama in the sixth century BCE. After observing the suffering of people in his kingdom, Siddhartha decided to give up his worldly riches and seek deeper truths about life. It is said he lived as a hermit for seven years, and then set out to teach people what he called the Four Noble Truths. It is at this time that people began calling him the Buddha, which means 'the Enlightened One'.

The Four Noble truths are:

- All people, regardless of wealth, suffer pain.
- People suffer pain so long as they remain locked in the cycle of the soul's reincarnation — through birth, death and rebirth.
- Pain is caused by the desire, or craving, for things.
- To overcome desire, a person must follow the Eightfold Path.

SOURCE 7 Statue of the Buddha from the Gandhara region in northern Pakistan, first century CE



The Eightfold Path is concerned with the seeking of wisdom, resisting and freeing the mind from wrongdoing, serving one's neighbours, and 'right concentration' or meditation. The goal is to rid oneself of desire. By following this path, the Buddha taught, one could achieve *nirvana*, a state of spiritual peace and joy, free from worldly desires and attachments, suffering and individual consciousness. The soul ceases to exist as it comes into harmony with the universe.

Buddhism spread throughout ancient India, but by the twelfth century CE it had lost much of its influence. Today there are about five million Buddhists in India. But Buddhism also spread throughout much of Asia, including China, Japan, Tibet, Korea and South-East Asia. Today its influence is more marked in these countries than in India.

19.8.4 Jainism and the natural world

Another of ancient India's three religions, Jainism is often mistakenly seen as a branch of Hinduism and Buddhism. Although the three religions do share common values and ideas, Jainism should be viewed as a separate belief system. One of the most important principles in Jainism is *ahimsa*, or non-violence. Jains believe that violence against any living thing is wrong and must be avoided at all costs. They believe that living a non-violent life will bring you closer to holiness. For this reason, Jains commonly practice vegetarianism and adopt lifestyles that reduce their environmental impact. Strict Jains will even sweep the ground in front of them to avoid killing insects. This custom demonstrates just how important the natural world is in Jainism.

Jainism explained

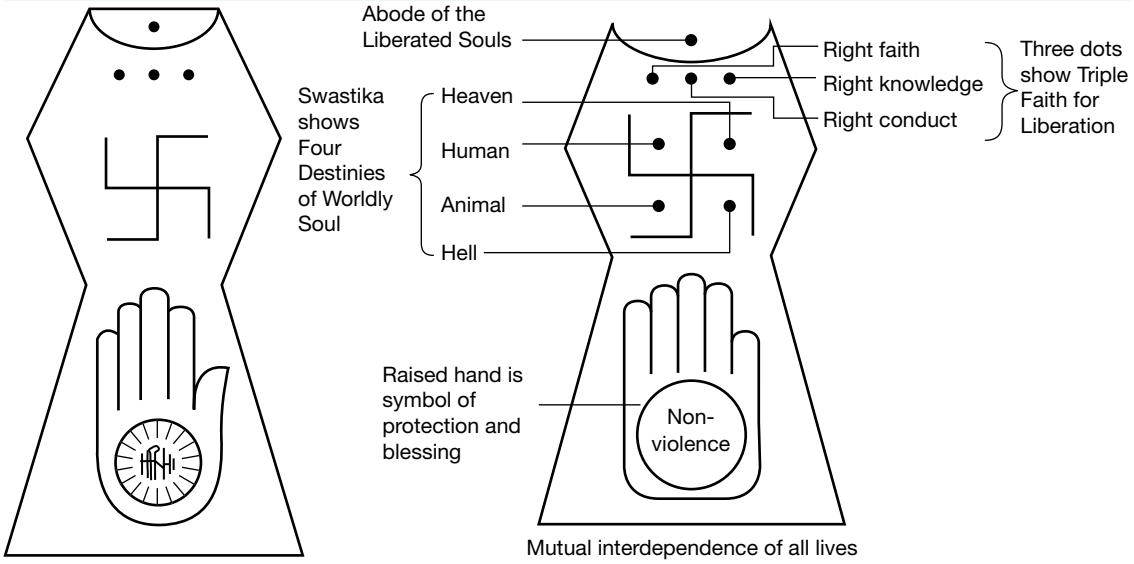
Ahimsa is not the only important aspect of Jainism. In fact, it is only one of the five major vows that all Jains must take. By fulfilling these vows, Jains believe that all people have the opportunity to become gods.

The Five Vows of Jainism are:

- *ahimsa* — non-violence
- *satya* — truthfulness
- *asteya* — non-stealing
- *brahmacharya* — celibacy/chastity
- *aparigraha* — non-attachment.

By living their lives according to these vows, Jains attempt to seek liberation from the cycle of reincarnation in which they also believe. Once a person attains liberation, their soul becomes immortal and stays in an ever-lasting state of bliss. In modern times, Jainism remains a relatively minor religion in India. It was popularised in the western world by the famous Indian political leader, Mahatma Gandhi. Though not a Jain by birth, Gandhi's non-violent methods of protest closely follow the teachings of Jainism.

SOURCE 8 An explanation of Jainism symbols



19.8.5 Rites of passage in ancient India

Life-cycle events are a large part of many religions. In Catholicism, a newborn baby's baptism is a significant religious event, as is a *bar* or *bat-mitzvah* to a young Jewish boy or girl. In ancient India, life-cycle events were known as *samskara*. A term with different meanings, in this instance samskara refers to the moment in the lives of Hindus, Buddhists and Jains. **SOURCE 9** outlines the most important samskara in Hinduism.

SOURCE 9 The most important samskara in Hinduism

Samskara	Description
Garbhadhana	A ritual that signified the intent to conceive a child
Pumsavana	A ritual to increase the chances of conception
Simanatonayana	'Parting of the hair' ceremony; completed to ensure the safe delivery of a baby
Jatakarman	A ritual to celebrate the birth of a baby
Namakarana	A baby-naming ceremony usually performed on the tenth to twelfth day after its birth
Nishkramana	A ritual during which a baby is formally introduced to the world for the first time; the timing usually corresponds to sunrise or sunset
Annaprashana	A ritual during which a baby will eat solid food for the first time
Chudakarana	The ritual of a child's first haircut (usually involves shaving the head, especially for boys)
Karnavedha	An ear-piercing ceremony that in modern times is more common for girls than boys
Vidyarambha	A ritual to celebrate the beginning of a child's education
Upanayana	A rite of passage during which a child receives a sacred thread, usually from a teacher
Praishartha	A ritual that marks the beginning of the study of sacred texts including the Hindu Vedas
Keshanta and Ritusuddhi	Rituals that mark a young man's first shave (the former) and a young woman's first menstruation cycle (the latter)
Samavartana	A ritual to celebrate graduation from the education system
Vivaha	The range of rituals in a marriage ceremony
Antyeshti	Funeral rites often including cremation

There are many reasons why ancient Indians took part in these rituals, and continue to do so today. The most simple of these reasons is that the various samskara allowed people to demonstrate their commitment to what they believe. Take the ritual of *upanayana*, for example. Conducted between a *guru* (teacher) and a student, this ritual is conducted by only the upper three castes of Indian society. The ceremony marks the beginning of a student's educational journey. Yet, more importantly, it also signifies a young person's acceptance as a full member of their community. During the ceremony, a sacred thread is tied across the student's chest. While it may need to be replaced over the years, this thread is worn for the remainder of the bearer's life — a constant reminder of their connection to their beliefs.

SOURCE 10 A modern example of the upanayana ritual



DISCUSS

'The customs of ancient India share nothing in common with modern Indian society.' Discuss this statement in groups, using examples to support your arguments. **General capability: Critical and creative thinking**

Death and funerary customs

The concept of death in ancient Indian belief systems is extremely interesting. With the belief in incarnation strong in many Indian religions, death is seen as a transition from one life into another. For Hindus, the funerary ceremony, or *antyesti*, signifies the separation of the soul from the body. For this reason, adults are usually cremated with their ashes scattered either in a sacred river such as the Ganges or a place of importance to the deceased. The funeral occurs in the days that follow the death and is usually presided over by the oldest son of the grieving family. An interesting, but rare, custom in Indian funerals is the use of professional mourners. People referred to as *rudaali* are employed by the grieving family to attend the funeral. Rudaali are only employed by members of the upper castes who, because of their status, are not allowed to publicly show their emotions. Due to this social restriction, the role of the rudaali is to mourn on their behalf.

SOURCE 11 The Great Stupa at Sanchi and a small personal stupa





Cremation was also practised by Buddhists in ancient India. Buddhist monks would chant with the grieving family while the body was set alight. Their prayers were thought to help the soul of the deceased leave the body and transition into its next incarnation. Another Buddhist funerary custom was the construction of *stupas*. Found at monasteries and religious centres, stupas usually took the form of a hemispherical structure. The shape of the stupa represents the original burial mounds of the Buddha. While the central mound was usually left plain and undecorated, the surrounding walls and arches were covered with elaborate engravings. On early Indian stupas, the Buddha himself was never depicted in human form. Instead, the Buddha was represented through symbols such as the footprints shown in **SOURCE 12**. The relics of great Buddhist scholars and monks were stored within the structure. Small ceramic, stone or metal stupas were also used to house the ashes of the deceased. It was (and still is) common for these smaller stupas to become the focus of family shrines.

SOURCE 12 Engraved stupa walls at the Great Stupa of Sanchi, showing footprints of the Buddha with a wheel — the Ashoka Chakra — embedded in them



19.8 ACTIVITIES

1. Create a visual representation of the caste system (as shown in **SOURCE 5**). You can either copy the format shown in this source or create a new image.
   HASS skills: Communicating and reflecting
   History concept: Sources
2. Examine **SOURCE 12**. What object is located within the Buddha's footprints? Conduct research to find out the significance of this object.
   HASS skills: Questioning and researching
   History concept: Evidence
3. Conduct research to find out to what extent is the caste system still functioning in India today.
   HASS skills: Questioning and researching
   History concept: Continuity and change

19.8 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 6, 8	Questions 3, 5, 7	Questions 1, 9, 10, 11

Check your understanding

1. Explain *dharma* and how it relates to the natural world.
2. Explain the concept of reincarnation.
3. a. During which period of ancient Indian history was the caste system introduced?
   b. Identify and explain the key reason for the introduction of the caste system.
   c. Which two groups occupied the top caste of the system?
   d. Why was the lowest ranked group known as the Untouchables?
4. Who was Siddhartha Gautama?
5. Why do people participate in the various rituals explained in this subtopic?

Apply your understanding

6. Consider the sources included in this subtopic. From what you have learned in this topic, why do you think water plays a key role in these Hindu festivals?
7. Why would someone have written the *Purusha Sukta* after the Vedic period? What purpose might the author have had?
8. According to **SOURCE 6**, in which part of India were most centres of Buddhism by about 200 BCE?
9. What do you notice about the representation of the Buddha shown in **SOURCE 7**?
10. The major religions of India are closely linked through shared beliefs and customs. Evaluate the accuracy of this statement with examples.
11. Discuss the ways in which connections to the natural world are present within Indian religions.

For sample responses to every question, go to www.jacplus.com.au.

19.9 SkillBuilder: Analysing different perspectives

LEARNING INTENTION

This SkillBuilder shows you how to analyse different perspectives. Analysing different perspectives is part of the Analysing HASS skill.

19.9.1 Tell me

What are different perspectives and why do they occur?

A perspective is a point of view, which is formed from someone's values, beliefs, attitudes and experiences. When studying a period of history, perspectives on the period or an event can be gathered from primary sources, especially eyewitness accounts, such as those found in a diary, as well as official sources, such as records produced by those in power. Sources give different perspectives because not everyone sees an event or problem from the same point of view. Some sources are biased (one-sided or prejudiced) or are based on insufficient understanding or information to be reliable. Each source will reflect the perspective of its creator and their target audience and purpose.

To uncover the truth on any issue we have to be aware that what someone says or writes about it may be one-sided or incorrect. It may even be an attempt to deceive. This is as important when trying to make up our mind on current issues as it is when trying to understand the past. For example, when buying a product, you don't necessarily believe what advertisements say about it. An advertiser will wish to show a product in its best light; that is, present only positive aspects of it so that a consumer will buy it. In the same way, a ruler may only want positive records of their rule to be made or displayed to ensure there is no dissent from those they rule or that their legacy is protected.

Sometimes, the perspectives of those not part of the ruling group may be silenced — their absence from the public record also tells a historian something about that period. Historians must often research extensively to find perspectives of a range of people about events from the past in order to build up a balanced picture of the event or time period. Since secondary sources rely on interpretations of primary sources, these are based on the perspectives or bias of the creator of the secondary source. This may add another layer of perspective on top of the perspective of the creator of the primary source.

19.9.2 Show me

How to analyse different perspectives in primary and secondary sources

When you read an interpretation of a historical event or development, you need to ask:

- What is the subject or main idea of the source?
- When was the source created?
- Who created the source?
- Why was it written?
- Is the source based on reliable information?
- Is the source supported or contradicted by the evidence of other sources?

The six questions have been applied to **SOURCE 1**, an ancient Greek account of the Indus Valley Civilisation.

SOURCE 1 From *Geography*, a book by the Greek historian and geographer Strabo (c. 63 BCE–24 CE). Strabo's book was an encyclopaedia of geographical knowledge of his time. Here he was recounting observations made by an earlier historian, Aristobulus, who accompanied Alexander the Great to India around 327 BCE. Aristobulus's book has been lost.

[Aristobulus] says that when he was sent upon a certain mission he saw a country of more than a thousand cities, together with villages, that had been deserted because the Indus had abandoned its proper bed, and had turned aside into the other bed on the left that was much deeper, and flowed with precipitous descent like a **cataract**, so that the Indus no longer watered by its overflows the abandoned country on the right, since that country was now above the level, not only of the new stream, but also of its overflows.

- *What is the subject or main idea of the source?* The subject is the abandoned cities of the Indus River Valley. According to the writer, the cities were abandoned because the river changed its course so that it no longer provided water at a level suitable for use by the people of those cities.
- *When was the source created?* The source was created between c. 63 BCE and 24 BCE.
- *Who created the source?* Strabo is using information he obtained by reading Aristobulus, who was in India around 327 BC.
- *Why was the source written?* Aristobulus wrote an account of what he observed during his journey to India. Strabo used Aristobulus as a source for his own book.
- *Is the source based on reliable information?* We know that Aristobulus could not have seen 'more than a thousand cities' because there is archaeological evidence of only a few cities. If he exaggerated this, he may be wrong about other things.
- *Is the source supported or contradicted by the evidence of other sources?* Aristobulus's statements about the river changing course are supported by archaeological evidence (see 19.4.3 The end of a civilisation). This change had a different effect in Mohenjo-daro from that described by Aristobulus, but his description could be accurate for other Indus Valley towns and cities.

cataract series of waterfalls
monastery residence of a community of monks

19.9.3 Let me do it

Complete the following exercise to practise this skill.

19.9 ACTIVITIES

1. **SOURCES 2** and **3** will help you understand some of the difficulties people faced in interpreting the ruins of Indus Valley cities. Now use the six questions to see if you can recognise and analyse the different perspectives in **SOURCES 4**, and **5**.

SOURCE 2 A Buddhist stupa on top of the Higher Town of the city of Mohenjo-daro. The stupa and the nearby **monastery** were constructed around 200 CE from bricks taken from the surrounding abandoned buildings. The stupa is itself now a ruin. Anyone who was untrained in archaeology might have had difficulty in recognising that the stupa belonged to a different age from the earlier ruins.



SOURCE 3 The first locomotive on the East India Railway. In the 1850s the British began to use crushed bricks taken from the ruins of Harappa as ballast under the tracks and sleepers for the rail line.



SOURCE 4 From the account of Charles Masson, a British army deserter who in 1826 stumbled on the ruins of what later would be called the Indus River Valley city of Harappa

I found . . . in front of the village [of Harappa] a ruinous brick castle. Behind us was a large circular mound . . . and to the west was an irregular rocky height, crowned with the remains of buildings, in fragments of walls, with **niches**, after the eastern manner . . . The walls and towers of the castle are remarkably high, though, from having been long deserted, they exhibit in some parts the ravages of time and decay. Between it and our camp extended a deep trench . . . overgrown with grasses and plants . . . Tradition affirms the existence here of a city . . . [It] was destroyed by a particular visitation of **Providence**, brought down by the **lust** and crimes of the **sovereign**.

SOURCE 5 Archaeologist John Marshall, recollecting his colleague R. D. Banerji's discovery of Mohenjo-daro in 1922, from John Marshall, *Mohenjo-daro and the Indus River Civilization*, [1931] 2004

. . . [I]t was not until 1922, when Mr R. D. Banerji started to dig there [in Mohenjo-daro], that the prehistoric character of its remains was revealed. This was not greatly to be wondered at; for the only structures then visible were the Buddhist Stupa and Monastery . . . and these were built exclusively of brick taken from the older ruins, so that it was not unnatural to infer that the rest of the site was referable to approximately the same age as the Buddhist monuments [around 200 CE]. Indeed . . . Mr Banerji himself . . . had no idea of finding anything prehistoric. His primary object was to lay bare the Buddhist remains, and it was while engaged on this task that he came by chance on several seals which he recognized at once as belonging to the same class as the remarkable seals inscribed with legends in an undecipherable script which had long been known to us from the ruin of Harappa . . . The few structural remains of that civilization which he had unearthed were built of bricks identical with those used in the Buddhist Stupa and Monastery, and bore so close a resemblance to the latter that even now it is not always easy to discriminate between them. Nevertheless, Mr Banerji **divined**, and rightly divined, that these earlier remains must have **antedated** the Buddhist structures, which were only a foot or two [30–60 cm] above them, by some two or three thousand years. That was no small achievement!

2. Apply your skills to answer the following questions.
   a. Explain why primary source evidence from ancient India often provides different perspectives.
   b. Why would **SOURCE 4**, the extract from the account of Charles Masson, need to be questioned very thoroughly?
   c. Explain how multiple primary sources can be used to increase the accuracy of a historical investigation.
   d. How do historians decide which is the most reliable source of evidence when choosing between two very different perspectives?
   e. Suggest which kind of primary sources from the Indus Valley Civilisation provide the most information about ancient culture and traditions.

niche a shallow recess, especially in a wall, to display a statue or other ornament
providence act of God
lust sexual desire, strong appetites
sovereign a king, queen or emperor
divine to guess or predict
antedate to come before, to be earlier in time

19.10 Thinking Big research project: Hindu god fact cards

Scenario

Hinduism is a polytheistic religion and, as such, allows for the existence of multiple gods and deities. In fact, some scholars believe there are over 33 million gods worshipped by followers of Hinduism! Others believe this number simply represents the almost infinite number of incarnations of Hindu gods. Hinduism is not a homogenous religion, which means there are several different versions of Hinduism. This number of 33 million also includes the different incarnations that gods have taken at various times throughout history. As with other polytheistic religions, each god has its own mythology, responsibilities and physical forms.



Task

With so many different Hindu gods and deities, it is a challenge to remember each one. To make this task of recalling the Hindu gods easier, you are going to make a series of trading cards. Each card should have an image of the god on the front. On the back write a summary of the god's mythology, responsibilities, incarnations and any other information you think is relevant. Relax, you don't need to make 33 million cards! Each student should make a pack of five cards of Hindu gods that you choose.



Follow the steps detailed in the **Process** section to complete this task.

Process

- Open the ProjectsPLUS application for this topic. Click the **Start new project** button to set up your project. Save your settings and the project will be launched.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Choose the five Hindu gods you want to focus on.
- Once you have your list of five gods, you need to research them in more detail, including their mythology, responsibilities and various incarnations.
- Find suitable images for each of your chosen gods. You can search for images on the internet or draw them yourself.
- Now that you have all the information you need, you can begin making your trading cards.
- Submit your cards to your teacher for assessment and feedback.

on Resources

ProjectsPLUS Hindu god fact cards (pro-0232)

19.11 Review

19.11.1 Key knowledge summary

19.2 Examining the evidence

- To discover information about ancient India, archaeologists and historians must use a range of techniques and methods.
- Primary sources provide historians with information directly from a period of history. As such, they remain the most valued of historical sources.
- Secondary sources or interpretations of direct evidence can also be used to provide a more complete understanding of past events, beliefs and individuals.

19.3 The geography of India

- The unique physical factors found within the Indus Valley were crucial to the development of early Indian civilisations.
- The great Himalayan rivers of the Ganges, Brahmaputra and Indus provided the area with a reliable supply of fresh water.
- The rivers also left the surrounding soil rich with sediment eroded from the mountain ranges that lay to India's north.
- The supply of fresh water from the rivers and the rich sediment allowed early Indian farmers to establish permanent settlements in the Indus Valley. From these settlements, the Indus Valley civilisation arose.

19.4 Lost cities of the Indus Valley

- Archaeological excavations and important sites have revealed much about India's past. In particular, the sites of Harappa, Mohenjo-daro and Lothal have yielded pottery, jewellery, engraved walls and religious structures, ports and even entire street plans.
- Given the importance of early Indian archaeological sites, it is crucial that the relevant authorities strive to conserve and protect them.
- Increased urban development, increased numbers of tourist visitors and climate change are all real threats to the survival of Harappa, Mohenjo-daro, Lothal and other key archaeological sites.

19.5 Contacts and conflicts: India and the ancient world

- Early Indian society was significantly influenced by its frequent battles against invaders from a range of other peoples.
- Trade between Europe and the East became more common, and knowledge of the unique goods and resources India had been blessed with became more widely known.
- Increased knowledge of India's unique resources made the area a target for the powerful armies of Greece, Persia and Macedonia.
- Contact and conflicts with Greece, Persia and Macedonia left cultural and religious impacts on ancient Indian society.

19.6 The Mauryan Empire: India's first unified state

- Before the Mauryan Empire, Ancient India was ruled by separate tribal families and civil conflict was common and fierce.
- The Mauryan Empire was the first dynastic power in India and brought relative peace to the area through its unified government.
- This period of history witnessed significant developments in law-making and other government regulations.

19.7 Ashoka the Great

- Several key individuals influenced ancient Indian society. One of those individuals was Ashoka the Great, a ruler from the Mauryan Empire.

- Ashoka was a famed warrior who led his forces fiercely, extending the boundaries of his empire. However, years of bloody battles took a spiritual toll on Ashoka and he began to see the error of his previous strategies.
- Ashoka's inner turmoil eventually led him to convert to Buddhism; this change significantly increased the practice of Buddhism in India.

19.8 The religions of ancient India

- Indian society became highly controlled and regulated with the introduction of the caste system.
- A rigid social hierarchy, the caste system made it virtually impossible for people to move between castes.
- Introduced by Hindus, the caste system was rejected by followers of Buddhism.
- The caste system is still in place in modern India to some extent.
- Indian society was and still is steeped in religion and tradition.
- Several key belief systems developed in ancient India.
- Each of these belief systems participated in similar, yet varied, daily customs and rituals. In particular, funerary customs were of importance to all Indian religions. With belief in reincarnation and an afterlife common in Indian religions, it was crucial that death be handled in the right way.
- Elements of these funerary practices can still be seen in Indian society today.

19.11.2 Key terms

antedate to come before, to be earlier in time
anthropomorphic describing or representing something as having human traits, despite its original lack of these characteristics
cataract series of waterfalls
continent one of seven very large, continuous bodies of land; they are Europe, Asia, Africa, Antarctica, Australia, North America and South America.
cubit an ancient measure of length, based on an adult's forearm
demise death
divine to guess or predict
edict order issued by a sovereign to his or her subjects
granary place for storing grain
grid system a street network that creates square and rectangular blocks
hygienic healthy, sanitary
Indus seals imprints of stamps found on pottery made during the Indus Valley Civilisation
legacy something handed down from the past
lust sexual desire, strong appetites
Macedonian native of Macedon, an ancient kingdom north of Greece
medallion a coin-shaped, usually metal, decorative disk
monastery residence of a community of monks
monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia
niche a shallow recess, especially in a wall, to display a statue or other ornament
nomads tribal groups who wander from place to place, generally in search of food or pasture
power vacuum a situation in which there is a lack of political leadership
providence act of God
Sanskrit ancient Indian language used in classical Hindu literature
sovereign a king, queen or emperor
stadia the plural form of stadium, which is a measure of about 200 metres
utopia a perfect social and political system

19.11.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

Lost cities, life-giving rivers and the rise and fall of an empire. How did ancient India's civilisations emerge?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views.

on Resources

eWorkbook
- Customisable worksheets for this topic (ewbk-4295)
- Reflection (ewbk-4437)
- Ancient India crossword 1 (ewbk-4436)
- Ancient India crossword 2 (ewbk-4434)
- Ancient India revision quiz (ewbk-4435)
- Student learning matrix (ewbk-4428)

Interactivity
- Ancient India crossword (int-7697)

19.11 Review exercises

Multiple choice

1. When did the first permanent settlements of the Indus Valley Civilisation arise?
   - A. About 4000 BCE
   - B. About 3000 BCE
   - C. About 2000 BCE
   - D. About 1000 BCE
2. What natural resource was crucial to the development of the Indus Valley Civilisation?
   - A. Gold
   - B. Silver
   - C. Water
   - D. Trees
3. Why don't we know the names of any of the Indus Valley rulers?
   - A. Because written language was not used at the time.
   - B. Because there were too many different leaders.
   - C. Because there were no leaders of the Indus Valley Civilisation.
   - D. Because we do not have enough archaeological evidence of these leaders.
4. Which ancient Indian city housed a port that enabled international trade?
   - A. Harappa
   - B. Mohenjo-daro
   - C. Lothal
   - D. Sanchi
5. What is the greatest threat to the archaeological sites from ancient India?
   - A. Rapid urbanisation
   - B. Increased tourist numbers
   - C. Increased flooding events
   - D. All of the above

6. What was unique about the rule of Ashoka the Great?
   - **A.** He abandoned his reign at the peak of its powers.
   - **B.** He converted India from Hinduism to Buddhism.
   - **C.** He united the warring states of India.
   - **D.** He was assassinated by his own brother.

7. What were the Vedas?
   - **A.** A group of religious texts
   - **B.** A group of foreign invaders
   - **C.** A group of Hindu rituals
   - **D.** A group of young Buddhist scholars

8. Which group is at the bottom of the caste system?
   - **A.** Brahmin
   - **B.** Vaishya
   - **C.** Sudra
   - **D.** Dalit (Untouchables)

9. One method Jains take to achieve liberation is which of the following?
   - **A.** The Eightfold Path
   - **B.** Enlightenment
   - **C.** Nirvana
   - **D.** The Five Vows

10. The ancient Indian language used in classical Hindu literature is called:
    - **A.** Suscrit
    - **B.** Sanskrit
    - **C.** Sanswrit
    - **D.** Suskrit

Short answer

11. Identify the symbol shown in the middle of the modern Indian flag (see **SOURCE 1**). What does it represent and from which religion did it originate?

SOURCE 1 Indian flag



12. Using the sources shown throughout this topic, create a map that shows the establishment and expansion of ancient Indian civilisations. Include the invasion launched by other countries.
13. Explain the ways in which religion influenced early Indian civilisations.
14. How did trade with the outside world affect the development of early Indian civilisations?
15. Why is it difficult to make conclusive statements about much of ancient Indian history?
16. Throughout ancient Indian history, civilisations were rigid and resisted outside influences. Evaluate this statement, using specific examples to support your view.

RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 19 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

19.1 Overview

eWorkbook
- Ancient India Timeline exercise (ewbk-4577)

Video eLesson
- Ancient India (eles-1839)

Interactivity
- Interactive timeline (int-4297)

19.2 Examining the evidence

eWorkbook
- Alexander in India (ewbk-4429)

19.4 Lost cities of the Indus Valley

eWorkbook
- You be the archaeologist (ewbk-4430)

19.5 Contacts and conflicts: India and the ancient world

eWorkbook
- Indian battle giants (ewbk-4431)

19.6 The Mauryan Empire: India's first unified state

My World History Atlas
- The Asian world > Mauryan Empire

19.7 Ashoka the great

eWorkbook
- Who's who in ancient India (ewbk-4432)

19.8 The religions of ancient India

eWorkbook
- Legacy of ancient India (ewbk-4433)

19.10 Thinking Big research project: Hindu god fact cards

ProjectsPLUS
- Hindu god fact cards (pro-0232)

19.11 Review

eWorkbook
- Reflection (ewbk-4437)
- Ancient India crossword 1 (ewbk-4436)
- Ancient India crossword 2 (ewbk-4434)
- Ancient India revision quiz (ewbk-4435)
- Student learning matrix (ewbk-4428)

Interactivity
- Ancient India crossword (int-7697)

To access these online resources, log on to **www.jacplus.com.au**.

20 Ancient China

20.1 Overview

Numerous **videos** and **interactivities** are embedded just where you need them, at the point of learning, in your learnON title at www.jacplus.com.au. They will help you to learn the content and concepts covered in this topic.

How did ancient China begin, grow and change to become the world's oldest continuous civilisation?

20.1.1 Links with our times

China is the world's oldest continuous civilisation. For thousands of years it remained isolated from the western world. During the nineteenth and early twentieth centuries China suffered invasions, revolutions and civil wars in which many millions of people died. Now, in the early twenty-first century, China is emerging as the world's next great superpower.

China has the biggest population and the fastest growing economy in the world. In recent years, it has experienced a massive building boom, with skyscrapers pushing ever upwards into the already polluted skies over vast cities like Shanghai. Its amazing industrial growth has increased the world's awareness of environmental issues, especially global warming. We know that if each person in China were to cause as much pollution as the average Australian, our planet would become uninhabitable.

on Resources

eWorkbook Customisable worksheets for this topic (ewbk-4296)
Ancient China Timeline exercise (ewbk-4579)

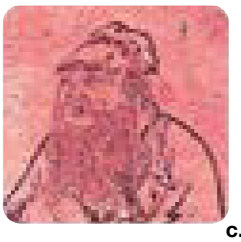
Video eLesson Ancient China (eles-1838)

SOURCE 1 A fragment of red Chinese silk featuring dragons, a symbol of wisdom, strength and goodness.



int-4296

SOURCE 2 A timeline of ancient China



c. 1600 BCE
The Shang dynasty begins (lasts until 1046 BCE).

1045 BCE
The Western Zhou dynasty begins (to 770 BCE).

770 BCE
The Eastern Zhou dynasty begins (to 256 BCE).



551–479 BCE
Confucius lives.

475–221 BCE
The Warring States period

206 BCE
The Han dynasty is established.

9–25 CE
The Hsin dynasty (Wang Mang)

65 CE
Buddhism arrives in China from India.



184 CE
Revolt of the Yellow Turbans

BCE
3000
2000
1000
800
700
600
500
400
300
200
100
BCE/CE
100
200
300
CE

c. 2100 BCE
The legendary Xia dynasty is established.

c. 1200 BCE
Silk is first made in China.



c. 500 BCE
Iron working begins in China.



221–206 BCE
The Qin dynasty creates the Chinese Empire.



25 CE
The Han dynasty is restored (Eastern Han).

105 CE
The Chinese invent a method of making paper from silk.

220 CE
The Han dynasty falls. The Three Kingdoms period begins.

20.2 Examining the evidence

LEARNING INTENTION

By the end of this subtopic, you will be able to explain how we know about ancient China and begin to develop the skills of identifying, analysing and using source material.

20.2.1 How do we know about ancient China?

From huge structures, such as the Great Wall of China, to the writings of ancient Chinese poets and historians, there are many primary sources that provide evidence of ancient China.

We know that at least 6000 years ago people settled in farming villages along China's Huang River (Yellow River). Shang dynasty inscriptions refer to harvests, rainfall, crops, silk and domesticated animals. Through inscriptions on bronze weapons, armour and vessels, and on tortoiseshell and bones, we know that by Shang times the Chinese had developed writing (see **SOURCE 1**). Inscriptions show that they believed that China was a place of civilisation surrounded by barbarians. Discoveries of cast-iron implements from Eastern Zhou times show that iron was then being used to make tools and weapons for the expanding armies. Iron gave those armies a great advantage over enemies who still used softer, bronze weapons.

Archaeological finds, including artworks and jade burial suits, tell us about the rich cultures that existed during the Qin (pronounced *chin*) and Han dynasties. The most exciting find of all was the discovery in 1974 by

SOURCE 1 Shang dynasty inscriptions on bone. In 1928, nearly 100 000 engraved bones and turtle shells from the Shang dynasty were found near the modern city of Anyang. They were covered in early Chinese writing.



SOURCE 2 Some of the thousands of terracotta warriors that were buried around the tomb of China's first emperor



local peasants of a huge buried army of life-size terracotta warriors (see **SOURCE 2**). They stood guard over the tomb of China's first emperor, Qin Shihuang. Archaeologists estimate that the complex surrounding the tomb contains at least 7000 clay warriors, 600 clay horses and many weapons. Two bronze chariots, each made up of more than 3000 pieces, were also found.

SOURCE 3 From Sima Qian's book *Shiji*. Sima Qian was a Chinese historian who lived from about 145 to 86 BCE (during the Han dynasty).

In the ninth moon the First Emperor was buried in Mount Li . . . he employed his soldiery, to the number of 700 000, to bore down . . . and there a foundation of bronze was laid and the sarcophagus placed thereon. Rare objects and costly jewels were collected . . . in vast quantities. **Artificers** were ordered to construct mechanical crossbows, which, if anyone were to enter, would immediately discharge their arrows . . . On the roof were delineated the **constellations** of the sky, on the floor the geographical divisions of the earth . . .

The Second Emperor said, 'It is not fitting that the **concubines** of my late father who are without children should leave him now'; and accordingly he ordered them to accompany the dead monarch to the next world . . . someone suggested that the workmen who had made the machinery and concealed the treasure knew the great value of the latter . . . Therefore, so soon as the ceremony was over . . . the **mausoleum** was closed, so that not one of the workmen escaped.

artificer craftsperson or inventor
constellations groups of stars
concubines women who lived with the emperor in a sexual relationship but were not married to him
mausoleum large tomb structure

20.2 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 3, 7	Questions 2, 5, 8	Questions 4, 6, 9, 10

Check your understanding

1. How long ago did farming begin in China?
2. Examine **SOURCE 1**. What clues about ancient China's civilisation have been provided by inscriptions and implements?
3. By what time period had the Chinese developed writing?
4. What advantage did armies using iron weapons have over enemies using bronze weapons?
5. What was found in the complex surrounding the tomb of Emperor Qin Shihuang?

Apply your understanding

6. Explain how **SOURCE 1** provides evidence of a writing system during the Shang dynasty.
7. Study **SOURCE 2**.
   a. Describe the terracotta warriors.
   b. How can you tell they were not mass-produced?
   c. What do they tell you about the emperor's army, his wealth and his power?
8. Read **SOURCE 3**. Discuss the following questions in groups and report your findings to the class.
   a. Why were crossbows installed in the tomb?
   b. Why might the constellations of the sky have been represented on the roof of the tomb?
   c. Why were the concubines and workers buried with the emperor?

d. What does the sacrifice of women and workers suggest about the rights of these two groups in ancient China?
e. What do you think the Chinese thought about life after death?

9. Using **SOURCES 2** and **3** as your evidence, write a one-paragraph explanation of the position of emperor in ancient Chinese society and the burial practices that were carried out after his death.
10. It is said that Qin Shihuang ruled as an autocrat (an absolute ruler who insists on complete obedience from his people). Refer to **SOURCES 2** and **3** to identify the evidence provided by the sources to either support or refute this statement.

For sample responses to every question, go to www.jacplus.com.au.

20.3 China's civilisation begins

LEARNING INTENTION

By the end of this subtopic, you will be able to describe China's physical features and explain how they shaped China's emerging civilisation.

20.3.1 China's physical features and the beginning of civilisation

The ancient Chinese saw their country as the centre of the world. Until about 126 BCE they were unaware of the existence of other civilisations. According to legends in the ancient books of China, there was once a 'golden age' in which the arts of civilisation, morals and good government were established. The legends tell of a dynasty called the Xia (pronounced *shar*). It is possible that this dynasty ruled a state in China from about the twenty-first century BCE to the seventeenth century BCE, when its last king was overthrown. However, we have no primary evidence of its existence.

What we do know with certainty is that civilisation could not have developed where it did in China without its river valleys. They provided fertile land for farming. But farming along such river valleys could also be hazardous as the same floods that provided rich soil for crops could also devastate farms and villages. People looked to gods and rulers to protect them.

From earliest times, Chinese rulers based their authority on the **mandate of heaven**. This meant they had been chosen by the gods to rule. However, a ruler who failed to protect the people from floods, famine, wars or other disasters was considered to have lost the mandate of heaven and could be overthrown.

DID YOU KNOW?

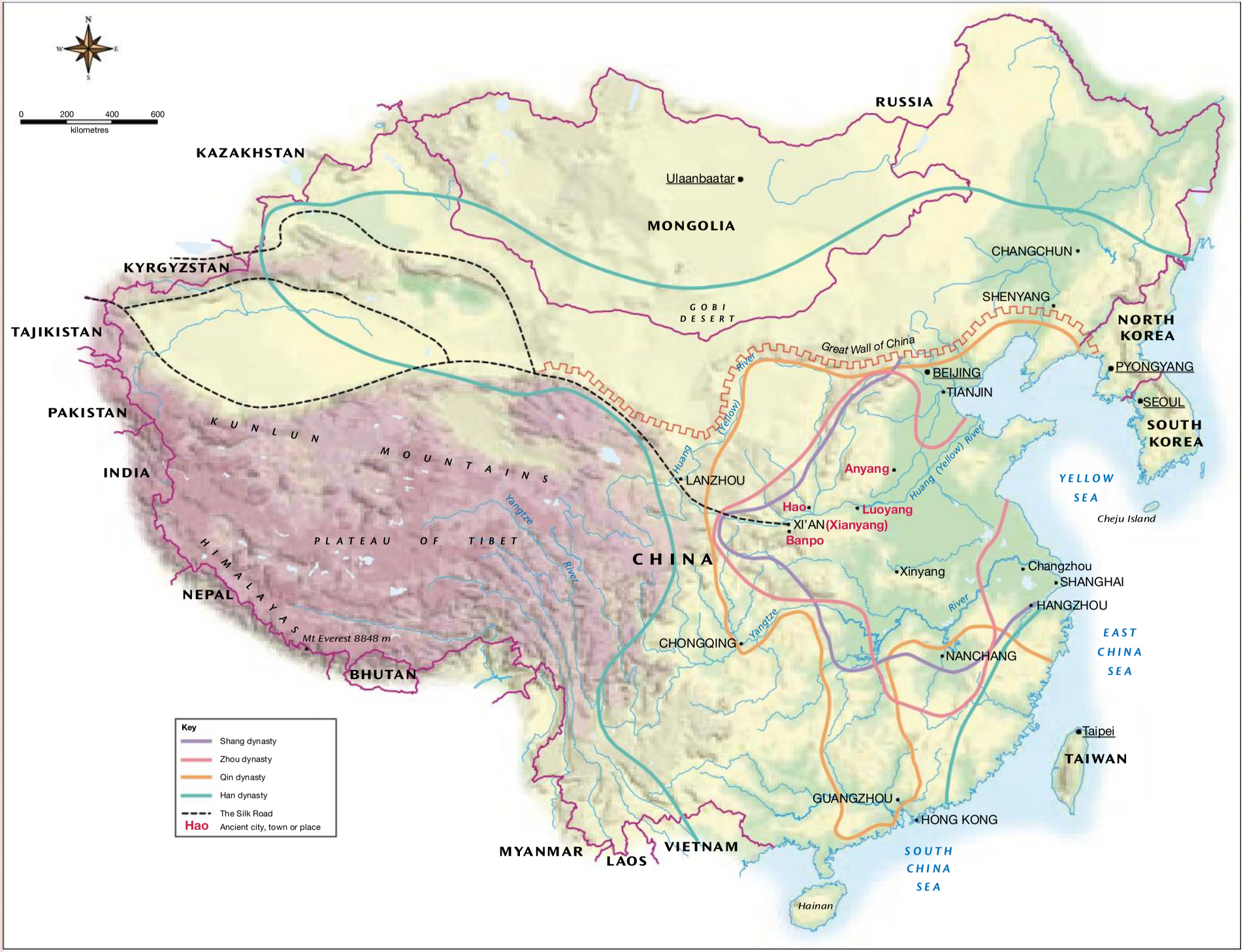
The name 'China' comes from the name of the Chinese state Qin. People in India and Central Asia must have known of Qin's existence by about 300 BCE because by that time the word 'China' appeared in their languages. Modern Chinese call their country *Zhongguo*. In Eastern Zhou times, *Zhongguo* meant the central states of China.

China's earliest dynasties

The first dynasty for which we have evidence is the Shang dynasty (c. 1600–1046 BCE). The Shang rulers were often at war with neighbouring groups. Their dynasty fell when the Zhou (pronounced *jo*) defeated them and set up a new dynasty. Historians divide the Zhou dynasty into two periods: the Western Zhou dynasty (1045–771 BCE) and the Eastern Zhou dynasty (770–256 BCE), under which the capital was moved to the east.

mandate of heaven Chinese expression meaning that a ruler had been chosen by the gods

SOURCE 1 A map of ancient China

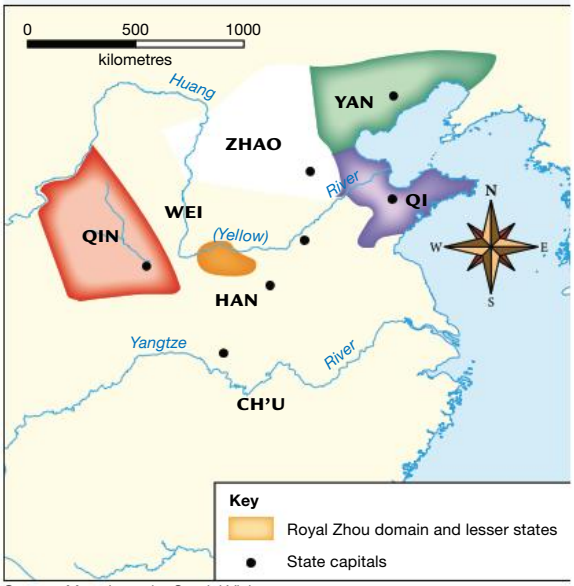


Source: Map drawn by Spatial Vision.

The Warring States period (475–221 BCE)

Royal authority was weak under the Eastern Zhou rulers. There were many wars between local lords, who controlled their own states within the Zhou kingdom. The stronger states defeated and took over the weaker states. Finally, seven states — Qin, Han, Zhao, Wei, Ch'u, Yan and Qi — remained to fight for control of northern China.

SOURCE 2 Zhou dynasty China during the Warring States period, about 300 BCE



Source: Map drawn by Spatial Vision.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Asian world > **Early Chinese kingdoms**

20.3 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 6	Questions 1, 3, 7	Questions 5, 8, 9, 10

Check your understanding

1. Explain the idea of the mandate of heaven.
2. How could a ruler lose the mandate of heaven?
3. Why do you think the Xia dynasty is often referred to as the 'legendary' Xia dynasty?
4. Why do we know more about the Shang and Zhou dynasties than other dynasties of ancient China?
5. What was the Warring States period?

Apply your understanding

6. Look closely at **SOURCE 1**.
   a. How big was China in Shang and Zhou times compared with modern China?
   b. How many major rivers can you find in the area that was part of China under the Shang and Zhou dynasties?
7. Study **SOURCE 2**.
   a. During the Warring States period, which states occupied land surrounding river valleys?
   b. Which states would appear to have had the most advantages in these wars?
8. Using the sources and information in this subtopic, make a list of ways in which the adoption of farming must have changed ancient Chinese society.
9. Suggest how China's rivers would have contributed to the development of its civilisation.
10. Suggest how the natural features of China's varied geography would have protected it against invasion.

For sample responses to every question, go to www.jacplus.com.au.

20.4 The people of ancient China

LEARNING INTENTION

By the end of this subtopic, you will be able to describe ancient China's social structure and explain the connections between class and power.

20.4.1 The ruling classes

Chinese society was headed by rulers who were supported by lords, the landowning gentry (whose position was based on inherited status, wealth and education) and **bureaucrats**. These classes had authority over large populations of peasants, landless labourers, artisans and some slaves.

- Ancient Chinese rulers had great power. This is shown by Shang dynasty tombs containing war chariots and the bodies of thousands of followers. These people must have been sacrificed to serve their rulers in the afterlife.
- Below the supreme ruler were the powerful lords. They governed the states, such as Zhao, Qin and Wei, within the kingdom.
- Next came the landowning gentry. The warrior gentry headed the lords' armies. Bureaucrats were also recruited from the gentry, but they had to be scholars to become government officials.

The lords of ancient China were often at war with neighbouring nomadic tribes to China's north and west. They also made war with each other. Warriors fought at first in chariots and later on horseback. The lords and warrior gentry regarded war almost as a sporting contest. When not fighting they spent much of their time hunting, feasting or attending ceremonies and entertainments at court.
Upper-class women had servants and luxuries. However, as girls they were considered inferior to boys. When they married they were treated as the property of their wealthy husbands, who were allowed to have several wives.

bureaucrat government official

SOURCE 1 A late Zhou dynasty bronze musical bell



SOURCE 2 An ox-shaped bronze zun (wine vessel) from the late Zhou dynasty



DID YOU KNOW?

In ancient China, women and men wore ornaments and jewellery as a badge of their social rank. This made it easy to tell at a glance their position in society.

20.4.2 The common people

The struggling peasants

Most of the people were powerless peasants whose lives changed little over thousands of years. They reared sheep, pigs, poultry, buffalo and oxen, and grew grains such as wheat, millet and barley. Most peasants were tenants who worked fields owned by the lords or gentry. They had to give their landlords about half of everything they produced, as well as paying taxes to the government. Times could be so hard that they were forced to sell their children into slavery.

Peasants had to cope with natural disasters, such as floods and famine, and with the constant threat of war. Most of the **infantry** in the armies were **conscripted** peasants. In hand-to-hand fighting their main weapons were at first **halberds** with bronze blades. Later they used swords made from bronze or iron. Many foot soldiers died in battle. Those who were captured could expect to be executed or condemned to slavery.

The lowest classes

Below the peasants came artisans, merchants and slaves. Artisans were skilled craftsmen such as armourers, metalworkers and carpenters. They were a small class because their products were mostly for the ruling classes. Merchants, who conducted businesses and trade, were an even smaller and lower class. Although some merchants were wealthy, they were not considered to play a useful role and were ranked just above slaves. There were fewer slaves in China than in many other ancient societies. Many slaves had been taken as prisoners of war. Others suffered slavery as punishment for crimes (sometimes committed by their relatives rather than themselves). Still others were peasants who were sold as slaves to pay debts.

SOURCE 3 A bronze *mao* (spearhead) from the late Shang dynasty



SOURCE 4 A *yue* (battle-axe head) with a dragon design, from the late Shang dynasty



20.4 ACTIVITY

In groups, write and perform a role-play of an imaginary discussion between peasants and members of the ruling classes on the topic of war. Suggest the feelings each would have about war and why their feelings would differ greatly.

HASS skills: Communicating and reflecting
History concept: Continuity and change

infantry foot soldiers
conscripted forced to become a soldier
halberds daggers mounted on axe handles

20.4 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 6, 7	Questions 1, 5, 8	Questions 3, 9, 10, 11

Check your understanding

1. What were the functions of the lords and landowning gentry in ancient China?
2. What was the role of the bureaucrats?
3. How do we know that ancient Chinese rulers had great power?
4. Why did peasants suffer in wars no matter which side won?
5. How could people become slaves in ancient China?
6. Why were merchants regarded as belonging to one of the lowest social classes, even though they might be wealthy?

Apply your understanding

7. Look closely at **SOURCES 1** and **2**. Describe each of these objects and explain why they would almost certainly have belonged to members of the ruling classes.
8. Identify the objects in **SOURCES 3** and **4** and explain how they could provide evidence of the hardships faced by conscripted peasants.
9. Draw and label a social pyramid showing the position of the different social classes in ancient China and explain why it would have been very difficult for Chinese society to change.
10. Write one paragraph explaining how it could be argued that agriculture shaped China's traditional daily life and culture.
11. With reference to **SOURCES 1**, **2**, **3** and **4**, suggest why the production of bronze objects became so important to the development of the Zhou and Shang Dynasties.

For sample responses to every question, go to www.jacplus.com.au.

20.5 Everyday life and death

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the everyday lives of people from different social classes in ancient China, and identify the traditions and rituals accompanying the deaths of wealthy people.

20.5.1 Everyday life

How different were the everyday lives of people from different social classes in ancient China and how differently were they treated in death? Life and death were marked by extreme inequality between rulers, lords, gentry and bureaucrats on the one hand and peasants, artisans and slaves on the other. In addition, within all classes there was extreme inequality between men and women.

The vast majority of the Chinese people were peasant farmers for whom life was a constant struggle to survive. Most spent their entire lives in villages of around a hundred families, toiling on small family farms. They worked long hours every day and most of their work was done by hand. The threat of floods and droughts

meant that groups of families often worked together on such tasks as maintaining irrigation canals. In towns and cities, crafts were usually hereditary; a son would learn the craft from his father and take over when his father died. The lives of craftsmen and merchants were also tough but often better than the lives of peasants. At least craftsmen and merchants got to travel about for work and trade.

Women's hard lives

Regardless of social class, women were considered inferior to men. Fathers ruled in ancient Chinese families. Women were expected to look after the household and children, and in peasant families they often worked in the fields as well. Their fathers arranged their marriages and, once married, a woman had to live with her husband's family in a dwelling that might house three generations. Married women had to obey their husband's family members but they could gain some respect by producing sons. Baby girls were not valued and were sometimes put out to die or sold to be servants. If a woman failed to give birth to boys her husband might take other wives. In a society where people venerated their elders, another way for a woman to gain respect was to outlive her husband.

Entertainment

The unending work of men and women in common families left almost no time or money for any kind of entertainment, apart from occasional festivals. In contrast, for the ruling classes, and some wealthy merchants, several forms of entertainment were available. During the Zhou dynasty acting, music and dance were combined into Chinese opera, in which famous legends were performed. There is evidence of a variety of board games from around 500 BCE. From the time of the Qin dynasty, acrobatics became another popular form of entertainment.

SOURCE 1 From Michael Lowe, *Everyday Life in Early Imperial China*

. . . evidence in the form of reliefs [sculptures] that decorated a tomb illustrates the type of entertainment that rich families could afford to stage, right at the end of the Han period. There was dancing and sword-play, juggling and acrobatic feats, accompanied by skilled players with their drums and bells, their wind and stringed instruments; and we know of other forms of amusements . . . such as cock-fighting, dog or horse racing and bird hunting.

20.5.2 Death and burials

We know little about death among the poor but a lot about the funeral customs of rulers and the ruling classes because they could afford elaborate tombs. Chinese ideas about death preceded the organised religions so most people did not restrict funeral rituals to any one religion. A rich family might employ Daoist and Buddhist priests and Confucian scholars to play official roles at a funeral (see subtopic 20.7).

It was believed that when someone died their soul left the body to dwell in a spirit world. It was also believed that an elaborate funeral would inform the spirit world of the deceased's high rank in society. Another belief was that the living had to help the deceased into the spirit world so that the dead would not become evil spirits that would return to worry them. From about 5000 BCE to the seventeenth century CE, it was the custom of the ruling classes to bury goods, including food and drink, with the dead so that they would have them in the afterlife. Until Han dynasty times it was also common for rulers to have people buried with them to serve them in the spirit world.

The rich indulged in grand funeral feasts and ceremonies, and there is evidence of them being buried with puppets clothed in fine silk worth more than a peasant might earn in a year. Their tombs were painted with scenes of joyful banquets and dances. The poor had no such finery. Most were probably buried in simple pits. In famines, floods and wars, most of the poor may have received no burial at all.

SOURCE 2 Life-sized terracotta warriors were buried to guard China's first emperor, Qin Shihuang



SOURCE 3 Jade burial suit of Princess Dou Wan, who lived before 100 BCE. The pieces of jade (2150 of them) are held together with gold wire.



DID YOU KNOW?

Burial suits were often made of jade as it was believed that jade would stop the body from decaying and ensure immortality.

20.5 ACTIVITY

Using the sources and other information in this subtopic, make a mind map to represent inequality in ancient China in life and death.

HASS skills: Communicating and reflecting
History concept: Source

20.5 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 7	Questions 1, 3, 9	Questions 5, 6, 8, 10

Check your understanding

1. Describe ways in which women were disadvantaged in Chinese society.
2. Why did peasants have little entertainment?
3. In ancient China, what beliefs were held about life after death?
4. What took place at the funeral of a member of the ruling classes?
5. How did this compare with the death and burial of a poor person?

Apply your understanding

6. Read **SOURCE 1**.
   a. How do we know about the entertainments enjoyed by the ruling classes?
   b. What types of entertainments did the ruling classes engage in?
   c. Why would it be more difficult to find evidence for the entertainments of the common people?
7. Study **SOURCES 2** and **3**.
   a. Describe each source.
   b. Identify its purpose.
   c. Suggest what it can tell us about beliefs associated with death.
8. Explain why the power and wealth of the ruling classes could be described as a cause of the poverty and hardships suffered by the common people of ancient China.
9. The ancient Chinese considered jade the most beautiful stone and believed that it provided a link between heaven and Earth. **SOURCE 3** is regarded as one of the most important archaeological finds of the twentieth century. Suggest what evidence it could provide about features of ancient Chinese life, such as social structure, technology, resources and crafts.
10. 'The ancient Chinese created an empire of inequality.' Write a half-page response to this statement with reference to the text and **SOURCES 1**, **2** and **3**.

For sample responses to every question, go to www.jacplus.com.au.

20.6 Ancient China and the natural environment

LEARNING INTENTION

By the end of this subtopic, you will be able to identify the environmental issues that China has faced over many centuries and describe the impact this has had on the Chinese people.

20.6.1 China's natural environments

In our time, China faces enormous environmental problems. Since the late twentieth century, China's rapid economic growth has produced thousands of new factories making goods that are exported around the world. This industrial growth has depended on vast numbers of new power stations. Air pollution in many Chinese cities is so bad that when the 2008 Olympic Games were held in Beijing, many factories had to stop

production and thousands of cars had to be taken off the roads. These problems are now huge, but even in ancient times China's population had a serious impact on its environment.

China is a vast country with a wide range of climates and landscapes. It has plateaus and mountains in the west, deserts and grasslands in the north, forests in the north-east, hills and low mountains in the south and plains along the coast. China's climate also varies greatly. Beijing has freezing winters while coastal southern China is subtropical.

In ancient times, China at first consisted mainly of the area around the fertile valleys of the Huang and Yangtze rivers. It was not until Han dynasty times that the outer areas were brought under Chinese control (see subtopic 20.3). Then, as now, more than 90 per cent of China's people lived in the country's heartland in the east, where the rivers provided water for agriculture. But these rivers often flooded, causing massive damage and loss of life.

SOURCE 1 This section of the Great Wall of China straddles mountains north of Beijing. The wall extends over some 5000 kilometres through many different landscapes.



DID YOU KNOW?

Over many centuries the mud from soil erosion raised the bed of the Huang River so much that the river flowed above the level of the countryside and had to be contained by man-made dykes.

When these dykes broke, floods drowned many people. According to Chinese records more than a million people died in the river's worst flood in 1117 CE.

20.6.2 A big population

One in every four people in the modern world is Chinese. Researchers have found that even in ancient times China's population was huge but that it could rise and fall rapidly. They estimate:

- in Qin dynasty times (221–206 BCE) there were 20 million people in China
- by 1 CE there were about 60 million people
- by 220 CE the population had fallen to about 40 million
- China's population took almost another thousand years to surpass 60 million.

The rapid population growth during the first Han dynasty (206 BCE–9 CE) was made possible by peace, improved farming methods and irrigation. However, these advances involved clearing forests and cultivating grasslands. Farming along the upper reaches of the Huang River caused massive

SOURCE 2 A constant haze of air pollution hangs over modern China's cities. This is a view of Shanghai.



soil erosion, filling the river with the mud that gave it the name 'Yellow River'. The falling population by 220 CE was probably caused by deaths in rebellions, soil erosion and famines.

Native animal populations fell as humans took more and more of their habitat. In modern times, China's pandas have barely been saved from extinction. In ancient times, elephants and rhinoceroses roamed across much of China. The rhinoceros was driven extinct in China, and elephants now survive in only a few protected areas of the south-west.

20.6 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 3, 5, 7	Questions 2, 4, 9	Questions 1, 6, 8, 10

Check your understanding

1. How has China's rapid economic growth and industrialisation affected the environment?
2. Name at least five different types of natural environments that exist in China.
3. Why have more than 90 per cent of Chinese people lived around the river valleys in the country's east?
4. What are the most likely reasons for:
   a. China's population growth between around 221 BCE and 1 CE
   b. China's population decline by around 220 CE?
5. How did rising populations and land clearance for farming affect China's rivers and wildlife?

Apply your understanding

6. Describe the landscape in **SOURCE 1**. Then use your library or the internet to find other images of landscapes along the Great Wall. Explain why few of those regions would have been able to support the levels of population that existed in China's east.
7. What are the signs of pollution in **SOURCE 2**?
8. Explain what has changed and what has remained the same in China from ancient to modern times with regard to:
   a. population levels
   b. environmental problems.
9. Explain how population growth could have been both a cause and an effect of the clearing of forests and cultivation of grasslands in ancient China.
10. Consider the many landscape and environmental differences between the various regions of China. Suggest the difficulties this would have presented the government of China and why the first emperor Qin Shihuang commenced construction of the Great Wall of China.

For sample responses to every question, go to www.jacplus.com.au.

20.7 Confucianism, religion and law

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the influence of Confucianism and the beliefs of Daoism and Buddhism on the laws and government of China.

20.7.1 The ideas and influence of Confucianism

The oldest Chinese religious ideas involved worshipping gods of the sun, rivers and mountains. People worshipped ancestors and believed in good and evil spirits. Ancient China was also influenced by three great and lasting traditions — Daoism, Confucianism and Buddhism. China was tolerant of different beliefs partly because Confucianism, Daoism and Buddhism encouraged tolerance. Confucianism also had a strong and lasting influence on law in ancient China.

Confucius (551–479 BCE)

Amid the ongoing wars of the second half of the Zhou dynasty, **philosophers** taught ideas to solve the problems of their age. Confucius (K'ung Fu-tse) is regarded as the greatest of these thinkers. Born into a minor noble family, his education qualified him to become a high official. Instead he became a philosopher who taught about life and government. Some of his disciples gained high positions during the Warring States period, but Confucius himself never held anything more than a low post.

philosopher one who studies the fundamental principles and causes of things

SOURCE 1 An ancient drawing of Confucius made many centuries after his death



The philosophy of Confucius

What we know of Confucius comes from a book called *Lun-yu* (*The Analects*). It is a collection of his sayings recorded by his followers. Confucius was not concerned with religion, but rather with how personal and governmental good conduct could ensure a just and harmonious society. He taught the ideals of family duty and believed that superior people behaved humanely. He taught that government should exist for the people's welfare and that people would follow a good ruler who led by example. He tried without success to convince the rulers of each of the states to restore good government.

By the time of his death Confucius had many followers. The best known of them was Mencius (372–289 BCE), who did succeed in influencing the rulers of his age. Confucius's ideas survived and influenced Chinese thought right up to modern times, as his ideal of the official as a scholar–gentleman replaced the earlier ideal of the warrior noble.

SOURCE 2 From *The Analects*

The princes of today are greedy in their search after material goods. They indulge themselves in pleasure and neglect their duties and carry themselves with a proud air. They take all they can from the people and invade the territory of good rulers against the will of the people, and they go out to get what they want without regard for what is right. That is the way of the modern rulers . . .

SOURCE 3 From *The Analects*

When the ruler himself does what is right, he will have influence over people without giving commands, and when the ruler does not do what is right, all his commands will be of no avail.

DISCUSS

What might a Confucian scholar have decided to do if he recognised that the Han emperor was not providing for the people's welfare and was failing to provide a good example?

Consider how his decision might be influenced if this scholar:

a. believed that as a civil servant he had an ethical obligation to obey the emperor
b. believed that the emperor's policies were so unjust that he had lost the mandate of heaven
c. believed that as a follower of Confucius he, the scholar, had to stand up for Confucian principles and speak critically to the emperor regardless of the consequences
d. knew that, like Sima Quian before him (see subtopic 20.9), he would probably be castrated and imprisoned for speaking out.

General capability: Ethical understanding

20.7.2 Religions in ancient China

Daoism

According to legend, **Daoist** ideas were first taught by a man call Laozi, who lived around the same time as Confucius. However, there is no evidence that Laozi existed. The main teaching in ancient Daoist texts is the need to retire from worldly concerns and follow the Dao ('the way'). Daoism holds that nature works in harmony and that people should see themselves as parts of nature in order to find happiness and health. Another Daoist belief was that it was possible to become immortal. Daoists developed the martial art of kung fu and the idea of the yin and yang, complementary opposing forces that together produce harmony and balance.

Daoist a follower of Daoism

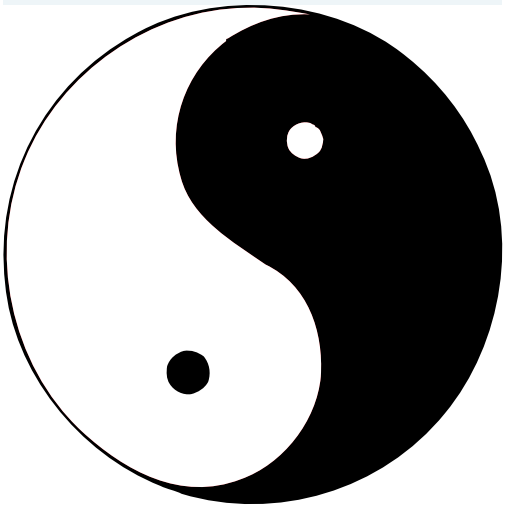
SOURCE 4 Kung fu is a Daoist martial art that has been practised for thousands of years.



Buddhism

Founded in India in the sixth century BCE, Buddhism expresses the teachings of the Buddha (born Siddhartha Gautama in what is now Nepal, in about 563 BCE), who gave up worldly pleasures and devoted his life to the search for enlightenment. Central ideas of Buddhism are that suffering is caused by desire and that people have many lives. In each of these lives, people should try to live better until they reach nirvana. When a person reaches nirvana they do not need to be reborn, as nirvana is a state of bliss free from the cares of the world. Buddhism came into China via the Silk Road (see subtopic 20.9) and became an important influence by the late first century CE.

SOURCE 5 The Daoist symbol for yin and yang



SOURCE 6 Chinese Buddhism spread to neighbouring countries. This Buddhist statue in Korea reflects Chinese influence.



20.7.3 Laws in ancient China

Confucianism has had an ongoing influence on Chinese traditions, and that influence is especially evident in present-day Chinese beliefs about the need to respect elders and to revere ancestors. But Confucius had no real influence on Chinese government and laws during his lifetime. However, his ideas later had an important and ongoing influence. Confucius taught that a golden age of good government and good law had existed in early Zhou times. Long after his death, his teachings continued to have many followers. As mentioned, the best known of them was Mencius, who lived during about 372–298 BCE. Mencius taught that the Confucian 'five relationships' — those between father and son, husband and wife, elder brother and younger brother, friend and friend, and ruler and subject — were the basis of any well-ordered society. He succeeded in presenting Confucian ideas in ways that influenced some rulers during the late Warring States period.

Laws of the first Qin emperor

When the Warring States were united under the rule of China's first emperor, Qin Shihuang, in 221 BCE, the laws of the state of Qin were adopted throughout the newly created Chinese Empire. Confucianism had very little influence on these laws and Confucian scholars were suppressed by Qin Shihuang. Instead, the emperor's laws followed the tradition of Legalism, a school of thought that held that people were bad by nature. So the laws that prevailed throughout China under the Qin dynasty were very harsh, with cruel punishments (see **SOURCE 7**).

Laws change after the fall of the Qin

The Han dynasty, which replaced the Qin in 206 BCE, employed Confucian scholars as its officials. These men used their positions to revise the laws, restoring Confucian ideas. Those ideas continued to influence Chinese thought and Chinese law under a succession of dynasties until the end of the last Chinese Empire in 1911 CE. China's laws in turn influenced the legal systems of countries where China had influence, especially Vietnam and Korea.

SOURCE 7 An extract from the laws of the state of Qin before 221 BCE. Such laws operated throughout China under the Qin emperors.

When five men jointly rob something worth one cash or more, they should have their left foot amputated, be tattooed, and be made convict labourers. If fewer than five men were involved but what they robbed was worth more than 660 cash, they should be tattooed, their noses cut off, and made convict labourers . . .

Suppose the holder of a low rank stole a sheep. Before the case was judged, he falsely accused someone else of stealing a pig . . . He should be left intact and made a convict labourer.

Anyone who kills a child without authorisation is to be made a convict labourer. This does not apply to killing a deformed or abnormal newborn.

Suppose A ran away from her husband and married B . . . After they are caught, what should the sentence be? They should be tattooed and made convict labourers . . . Convict labourers . . . are to be manacled and fettered.

20.7 ACTIVITY

Find images of the Buddha from South-East Asia and compare them with **SOURCE 6**. Explain why it is clear that the Buddha figure in **SOURCE 6** has been influenced by Chinese Buddhism.

HASS skills: Analysing
History concepts: Sources, Evidence

20.7 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 6, 9	Questions 1, 5, 8, 11	Questions 3, 7, 10, 12, 13

Check your understanding

1. When did Confucius live?
2. When did the ideas of Confucius begin to influence Chinese thought?
3. How old is Daoism? Describe the main ideas of Daoism.
4. When did Buddhism become an important influence in China?
5. What are the central ideas of Buddhism?
6. When did Confucian ideas first come to influence Chinese law?
7. What school of thought was the main influence on Chinese law under the Qin dynasty?
8. How was Confucianism restored as an influence on Chinese law under the Han dynasty?

Apply your understanding

9. Look closely at **SOURCE 1**. Identify aspects of this drawing which suggest that Confucius was highly regarded many centuries after his death.
10. Read **SOURCES 2** and **3**.
    a. Why was Confucius critical of the rulers of his time?
    b. What did Confucius regard as qualities of a good ruler?
11. Read **SOURCE 7**.
    a. According to the laws of Qin, a robber should have his left foot cut off and be made a convict labourer. How difficult would such a life be with only one foot?
    b. In this source, 'left intact' means not mutilated. Using this source as your evidence, explain which crimes were considered the most serious and punished the most severely under Qin law.
    c. Explain what conclusions you can draw from this source about the rights of women and children under Qin law.
    d. How do you think the ordinary people would have felt about Qin laws?
12. Using the sources and other information in this subtopic, describe ways in which Confucianism continued to influence Chinese culture over many centuries.
13. Discuss why Confucius deserves to be regarded as one of the most significant individuals in Chinese history.

For sample responses to every question, go to www.jacplus.com.au.

20.8 Qin Shihuang, the first emperor of China

LEARNING INTENTION

By the end of this subtopic, you will be able to explain the beginning of the Qin dynasty and describe the massive changes that came to China during this short but eventful period.

20.8.1 Qin rule

Ying Zheng, the ruler of Qin, ended the Warring States period by completing his conquest of the other states of China. He founded the Qin dynasty (221–206 BCE) and gave himself the title Shihuangdi. In modern Chinese he is called Qin Shihuang (pronounced *chin shir hwang*), which means 'First Emperor of the Qin'.

The Qin dynasty was the shortest in Chinese history, but it was also one of the most important. It was China's first centralised empire and its legacies include the Great Wall.

From 221 BCE, the harsh laws of the Qin state were imposed throughout China. Qin Shihuang sent armies south, conquering much of what is now southern China. To remove threats to his power, the emperor confiscated all weapons held by his people. He banished many nobles of the conquered states and forced others to live in his capital, where they could be watched. In 213 BCE, to stamp out rebellious ideas, he ordered a public burning of books, including those of Confucian scholars (see **SOURCE 1**). Scholars who kept their books were executed by being buried alive.

Previously in China, the nobles had held huge areas of land in return for services to the king. Beneath them, millions of peasants toiled for the nobles in return for the right to use the land. This is what we call a feudal system. Qin Shihuang changed this by dividing the country into local government areas administered by officials. He also allowed farming land to be bought and sold freely.

SOURCE 1 A Chinese painting illustrating Qin Shihuang's burning of the books and the execution of scholars



20.8.2 The Great Wall and other achievements of Qin Shihuang

From as early as the seventh century BCE, the Chinese states had built walls to protect themselves from invasion by the northern nomadic **Xiongnu** tribes. During the Warring States period, states had also built walls between themselves and neighbouring states. To unify China, Qin Shihuang ordered the destruction of the walls between former states. To prevent invasion, he ordered his people to link the walls that defended China from the Xiongnu. About half of the present length of the Great Wall was first linked into one continuous barrier under the Qin (see **SOURCES 2** and **3**).

Qin reforms

To strengthen central rule and make China more efficient, Qin Shihuang introduced many reforms.

- Separate states were replaced with central rule and one set of laws.
- The calendar and people's dress were standardised throughout the empire.
- A single form of writing, a single system of weights and measures and a single currency (money) were to be used throughout the empire. This made trade and taxation more efficient.
- His new capital was Xianyang. Highways were built from it to unite the country, and new trading cities were founded.
- He ordered that all carts were to have the same axle width. This made it possible for carts to move more easily along the dirt roads as the wheels of all carts could travel in the same wheel ruts.

20.8.3 The fall of the Qin

Qin Shihuang wanted to live forever. He sent hundreds of men and women to sea on rafts in search of the secret of everlasting life, but none ever returned. He surrounded himself with fortune-tellers and others who promised him immortality. Despite these efforts he died at the age of 49 in 210 BCE, while on a journey. His chief minister, Li Si (pronounced *lee shir*), and others pretended for a while that the emperor was still alive. This gave them time to forge a decree that would place their choice of successor on the throne. It was summer, however, and the body of the emperor soon began to smell, so Li Si ordered a cart filled with rotting fish to follow the imperial carriage to disguise the smell. Only later did they announce the emperor's death, which was possibly due to poisoning by mercury, commonly used in 'immortality' drugs at that time.

His successor, the Second Emperor, lasted only a few years. Higher taxes and forced labour had made the lives of the peasants unbearable. Hundreds of thousands of peasants had been conscripted to build palaces, roads and the emperor's tomb and to link the Great Wall and serve in the army. A peasant rebellion from 209 to 206 BCE destroyed the Qin dynasty. Liu Bang, a leader of the rebellion, became the new emperor and founded the Han Dynasty. Qin Shihuang thought he had founded a dynasty that would last for thousands of emperors. He failed to achieve this goal. He had, however, turned a group of rival states into an empire and created a central system of government that lasted until the twentieth century.

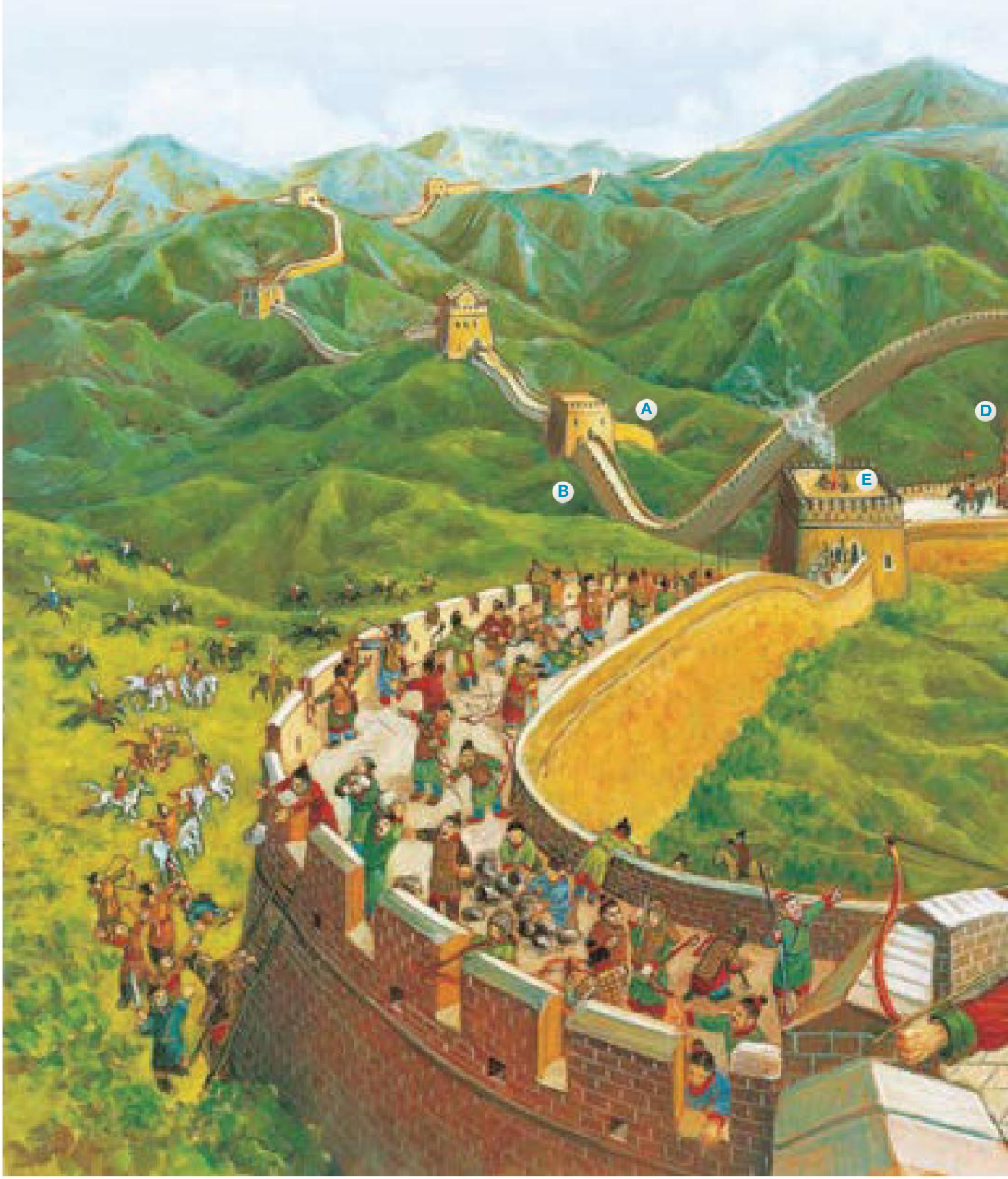
Xiongnu the ancient Chinese name for the nomadic Turkic tribes of Central Asia

DID YOU KNOW?

About 5800 kilometres of roads were built in China by the time the Qin dynasty fell — more than the Romans built almost four centuries later.

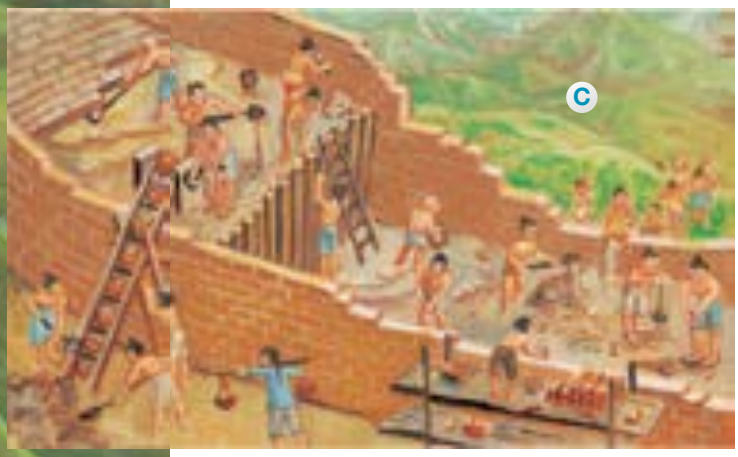
SOURCE 2 The Great Wall of China is the world's biggest single construction project. It is more than 5000 kilometres long and the Qin. It took many more centuries to complete, and over time its construction may have cost a million lives.

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has 20 000 watchtowers and 10 000 beacon towers. The present wall is much longer and stronger than that completed under





A The height and width of the Great Wall vary along its length. On average, the wall is 7 metres high and 5 metres wide.

B Qin Shihuang began linking existing short walls built by earlier rulers into one continuous wall to protect his empire from attacks from the north.

C Throughout successive dynasties, the wall was extended and repaired. Most of the present wall was built between the fourteenth and sixteenth centuries.

D The wall was topped by a road wide enough in parts to accommodate marching soldiers, horsemen and chariots.

E Soldiers on the watchtowers would signal an attack by lighting a fire.

F Watchtowers were protected by battlements. Soldiers would fire arrows down on the enemy as they tried to scale the wall.

DID YOU KNOW?

In ancient China, dragons were sometimes depicted with their mouths open, roaring as if to frighten away evil spirits. The dragon is a symbol of wisdom, strength and goodness. It was under Qin Shihuang that the dragon was first used as a symbol for Chinese emperors.

SOURCE 3 A section of the Great Wall of China



SOURCE 4 An extract from Thomas Bartlett, *Qin Dynasty: China's Ancient Revolution*

The overall image of the Qin state and its imperial phase [the period of the Qin dynasty], as transmitted through history by surviving records, is a grimly harsh one ... These charges [against the Qin rulers] reflect early Han writers' self-interested writing of Qin history ... Overall, the Qin reflects in concentrated form the inhumane aspects of the Warring States period ... But, from the perspective of nation building, some modern Chinese ... emphasise his achievements, typically saying that 'he sacrificed one generation to benefit 10 000 future generations'.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Asian world > **Unification of China**

20.8 ACTIVITIES

1. Working in pairs, role-play a situation in which a Confucian scholar is appealing to Emperor Qin Shihuang to change his mind about burning Confucian books. One of you should represent the perspective of the scholar and the other that of the emperor.
   HASS skills: Communicating and reflecting
   History concept: Perspectives
2. Hold a debate on whether or not Qin Shihuang should be regarded as the most significant ruler of ancient China. In your arguments, consider Qin Shihuang's achievements as well as his methods.
   HASS skills: Communicating and reflecting
   History concepts: Contestability, Significance

20.8 EXERCISE

To answer questions online and to receive **immediate feedback** and sample responses for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 2, 5, 7, 8	Questions 4, 6, 10, 12, 13	Questions 3, 9, 11, 14, 15

Check your understanding

1. How did the king of the Qin become the ruler of China's first centralised empire?
2. What area did Qin Shihuang conquer?
3. How and why did Qin Shihuang weaken the power of the nobles?

4. How did he reduce the influence of Confucian scholars?
5. How would standard calendars, laws, weights and measures, standardised money and a standard system of writing have made trade, taxation and government more efficient?
6. Why would the emperor have wanted to also standardise people's dress and the width of axles on carts?
7. How might Qin Shihuang's attempts to live forever have contributed to his early death?
8. Why was the Second Emperor unable to hold onto power?

Apply your understanding

9. Describe what is happening in **SOURCE 1**.
10. **SOURCE 2** is a secondary source and **SOURCE 3** is a primary source. Compare them to judge the accuracy of **SOURCE 2**.
11. Describe features of the Great Wall that could have made it an effective barrier to invasion.
12. Look at the landscape in **SOURCE 3** and read the **SOURCE 2** caption. Why do you think so many people could have died building the Great Wall?
13. Read **SOURCE 4**.
    a. Why would writers in the early Han dynasty have wanted to portray the Qin dynasty as a harsh one?
    b. Why have some modern Chinese taken a more favourable view of the Qin dynasty?
14. Using the sources and information in this subtopic, answer the following questions.
    a. How was Chinese society changed under the first emperor?
    b. How would groups, such as the nobles, the peasants and Confucian scholars, have regarded these changes?
15. Identify reasons why the Qin dynasty was able to rise and why it fell after such a short time.

For sample responses to every question, go to www.jacplus.com.au.

20.9 The rise and fall of the Han

LEARNING INTENTION

By the end of this subtopic, you will be able to describe the expansion of China that came with the rise of the reforming Han dynasty and identify the developing trade contacts with the world beyond China.

20.9.1 Reforms, expansion and trade

The fall of the Qin dynasty was followed by four years of bloody civil war before Liu Bang defeated his rivals and became the first ruler of the Han dynasty. This dynasty lasted, except for a brief interruption, for four centuries and made important achievements in education, science and trade. The Han dynasty had such influence on later dynasties that modern Chinese people call themselves 'Han' people.

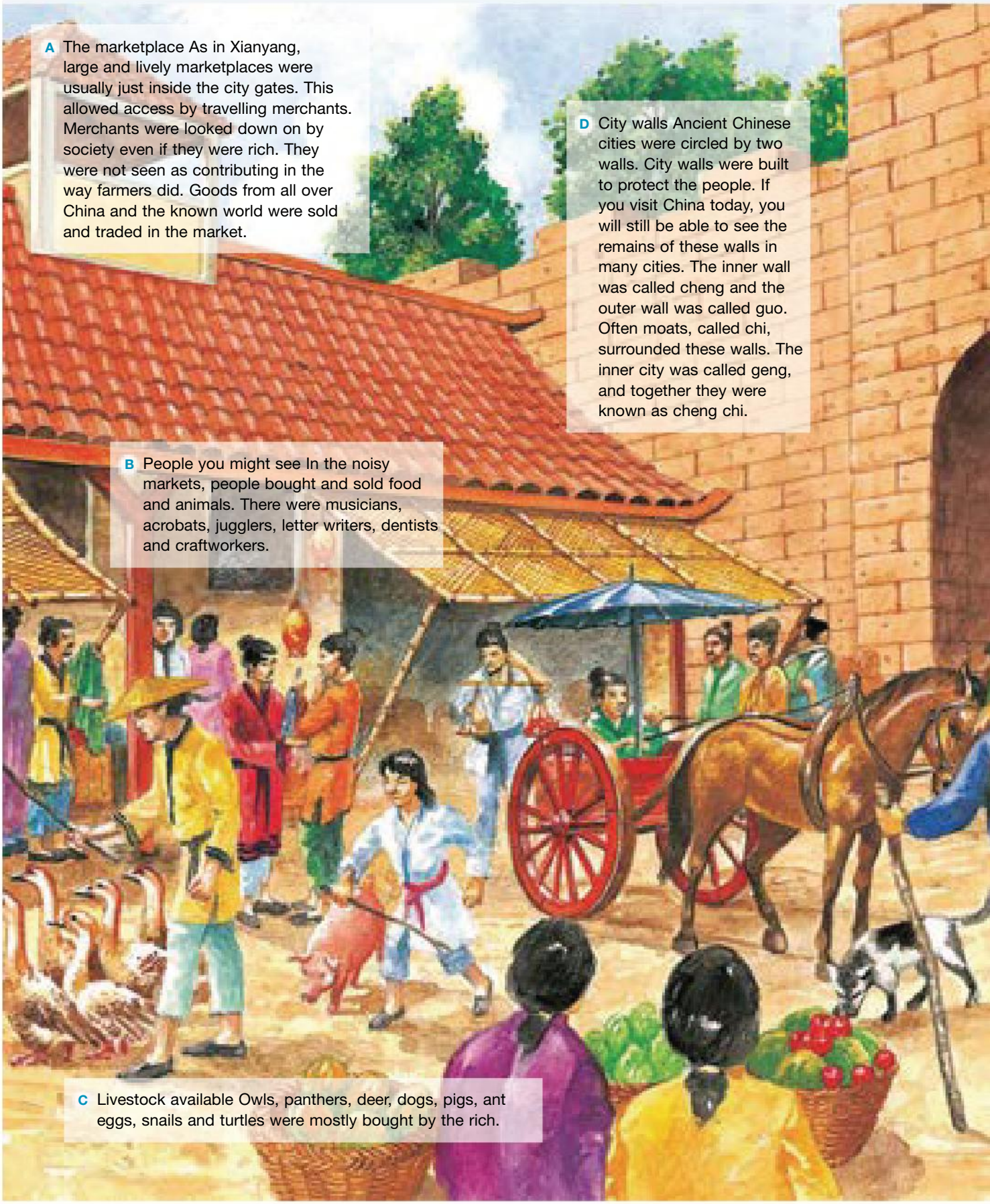
Han reforms

Liu Bang did not want to share the same fate as the Qin dynasty so he took steps to restore prosperity. The size of the army was reduced. He also reduced taxes on the peasants and encouraged farming to ensure plentiful supplies of food. As a result, China's population reached 60 million by the end of the first century BCE. However, landlords continued to exploit the peasants.

A system of state education was founded. It included a Great Academy, in which boys studied the classic books of Confucianism. No girls were enrolled. The boys were expected to memorise what they studied and were not allowed to criticise or challenge ideas. Through examinations they were selected for positions as bureaucrats in the civil service.

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SOURCE 1 Chinese life under the Han

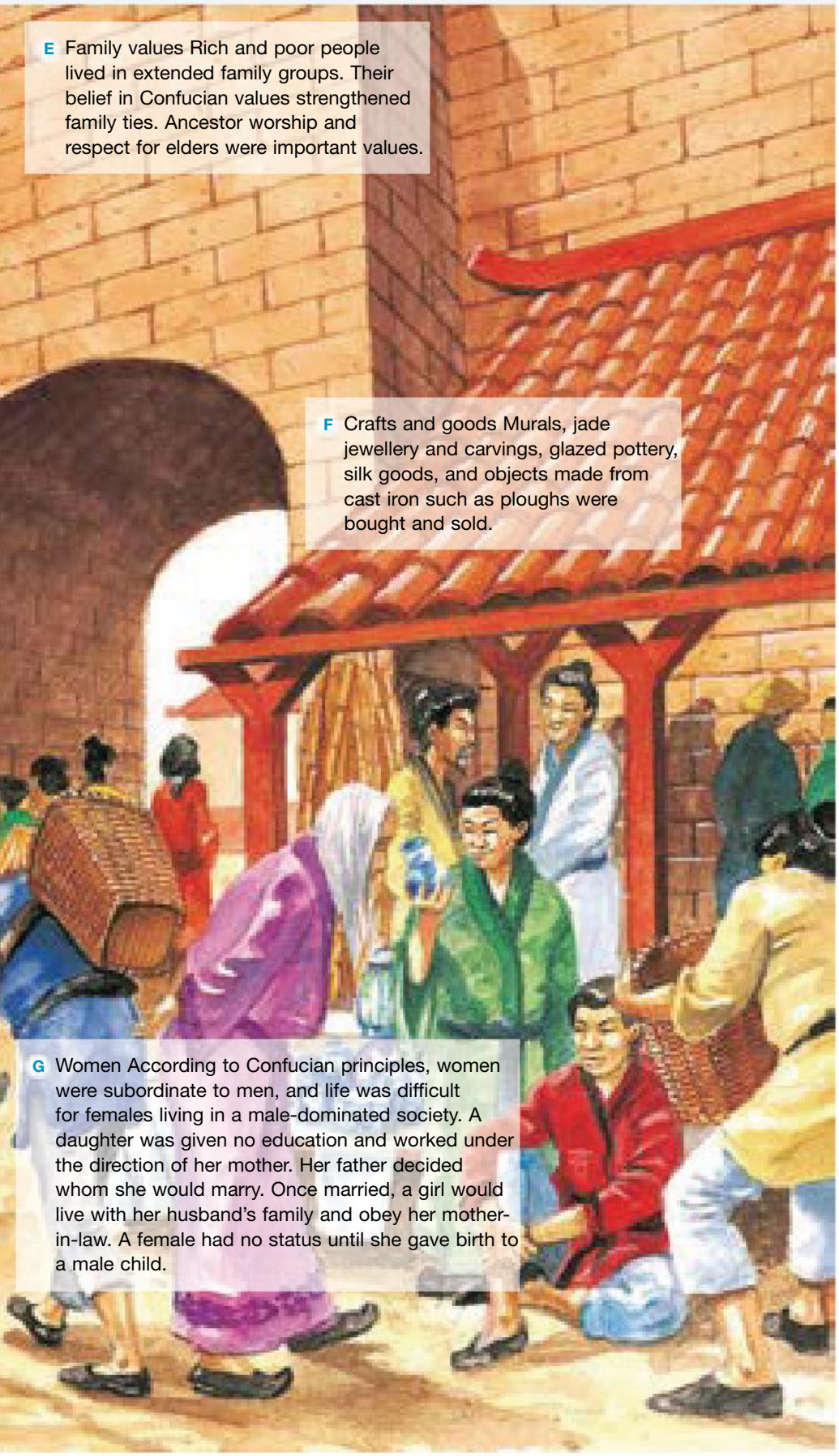


A The marketplace As in Xianyang, large and lively marketplaces were usually just inside the city gates. This allowed access by travelling merchants. Merchants were looked down on by society even if they were rich. They were not seen as contributing in the way farmers did. Goods from all over China and the known world were sold and traded in the market.

B People you might see In the noisy markets, people bought and sold food and animals. There were musicians, acrobats, jugglers, letter writers, dentists and craftworkers.

C Livestock available Owls, panthers, deer, dogs, pigs, ant eggs, snails and turtles were mostly bought by the rich.

D City walls Ancient Chinese cities were circled by two walls. City walls were built to protect the people. If you visit China today, you will still be able to see the remains of these walls in many cities. The inner wall was called cheng and the outer wall was called guo. Often moats, called chi, surrounded these walls. The inner city was called geng, and together they were known as cheng chi.



E Family values Rich and poor people lived in extended family groups. Their belief in Confucian values strengthened family ties. Ancestor worship and respect for elders were important values.

F Crafts and goods Murals, jade jewellery and carvings, glazed pottery, silk goods, and objects made from cast iron such as ploughs were bought and sold.

G Women According to Confucian principles, women were subordinate to men, and life was difficult for females living in a male-dominated society. A daughter was given no education and worked under the direction of her mother. Her father decided whom she would marry. Once married, a girl would live with her husband's family and obey her mother-in-law. A female had no status until she gave birth to a male child.

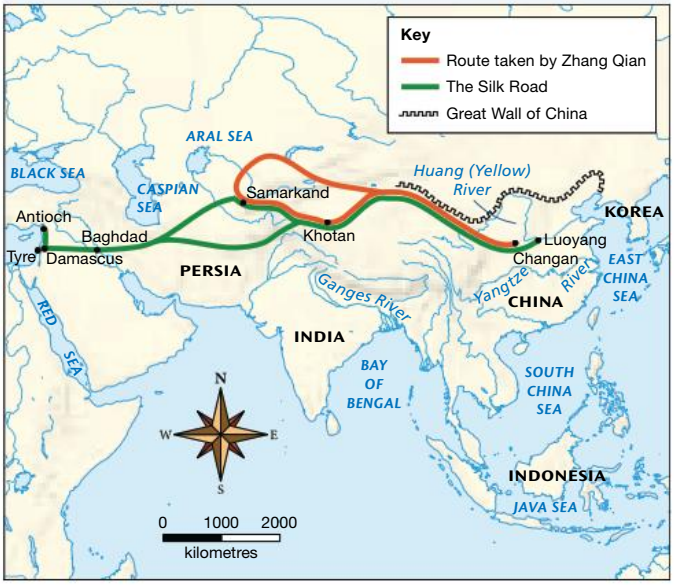
DID YOU KNOW?

The Han dynasty is usually regarded as more tolerant than the Qin dynasty. However, when the great historian Sima Qian dared to speak in defence of an officer who was unfairly blamed for a Chinese defeat by the Xiongnu, Emperor Wudi had Sima Qian **castrated** and thrown into prison.

China expands

China expanded under the Han. In 138 BCE, Emperor Wudi (140–87 BCE) sent Zhang Qian and 99 others on a mission to establish relations with people in the remote west. After twice being captured and enslaved by the Xiongnu and twice escaping, Zhang returned in 125 BCE with stories of civilisations that China had never heard of before. Zhang Qian was sent on two further missions to find a trade route to Central Asia and India. In the following years, Chinese rule was extended into the north of Korea in 109 BCE, and from Korea the influence of Chinese culture spread to Japan. Much of what is now south-eastern China and western China was brought under Han control by about 102 BCE.

SOURCE 2 The Silk Road — the world's longest trade route in continuous use



Source: Map drawn by Spatial Vision.

The Silk Road

By the early first century BCE, further Chinese missions led to the founding of the famous Silk Road. From this time onward, camel trains loaded with valuable silk were able to make the hazardous journey from China through the deserts and mountains of Central Asia to India, Persia and the Roman Empire. Traders from other lands used the Silk Road to bring products including jade, silver and Roman glassware to China.

Explore more with myWorldHistoryAtlas

Deepen and check your understanding of this topic with related case studies and auto-marked questions.

- The Asian world > **Silk Road**

20.9.2 Growing discontent, rebellion and the fall of the Han

The rich get richer and the poor get poorer

To control newly conquered territories, the Han rulers **deported** many local people and settled their lands with Chinese. The ruling classes and merchants benefited from this growth of the empire, but the ordinary people of China paid a terrible price. The Han rulers paid for wars of conquest through increased taxes on the peasants. Many peasants had to sell their land to pay taxes. Others were so desperate that they were forced to sell their children or themselves into slavery.

Wang Mang

The peasants became more desperate while powerful landlords became richer. Even among the privileged there were people who saw this as unjust.

castrated having had the testicles cut off

deported forced to leave the country

Wang Mang was an official who had support from many Confucian scholars. In 9 CE he seized control of China from the infant Han emperor and set up the Hsin dynasty. In his first year as ruler, Wang Mang proclaimed many reforms.

- All land was to become the property of the emperor so that the estates of big landlords could be given to the peasants.
- The slave trade was to be banned.
- Government loans were to be given to peasants at low interest rates. This would have helped peasants who had to borrow from moneylenders at high interest to pay taxes but lost everything when their debts became too big to repay.

SOURCE 3 Terracotta figures representing Han dynasty cavalry. Cavalry became a major part of the Han army because of the mobility it gave Chinese armies fighting mounted nomads.



SOURCE 4 From a Chinese scholar of the early second century BCE, in the *Han-shu Han History*

These days a family of five peasants will have at least two persons who are liable for labour-services and conscription. What with their ploughing in the spring and hoeing in the summer, harvesting in the autumn and storing in the winter, with felling firewood, repairing government offices and rendering labour-service . . . in none of the four seasons will they have a day of rest. And, in spite of all this painful toil, they will still have to endure such natural disasters as flood and drought and also the cruelty of an impatient government which imposes taxes . . . those who own something sell it off at half its price; and those who own nothing borrow at doubled rates of interest. It is for this reason that some dispose of their lands and houses, and sell their children and grandchildren to redeem their debts.

SOURCE 5 From the statement of a Han dynasty official in 81 BCE

Those who live in . . . spreading mansions ... know nothing of the discomforts of one-room huts and narrow hovels, of roofs that leak and floors that sweat.

Those with a hundred teams of horses ... and wealth heaped in their storehouses ... do not know the anxiety of facing days that have a beginning but no end ...

The fall of the Hsin dynasty

The privileged classes forced Wang Mang to abandon these reforms, and so peasant revolts began in 14 CE. Four years later, led by a secret society called the Red Eyebrows, the rebels attacked towns, killing officials and landlords. When powerful members of the old ruling family joined the fight against Wang Mang, his armies were defeated. Wang Mang was killed and beheaded in 23 CE. This was the end of the Hsin dynasty. The armies of the old ruling family crushed the Red Eyebrows and in 25 CE a new Han emperor took the throne.

The Eastern Han dynasty

The second period of Han rule is called the Eastern Han dynasty because the capital was moved to the east. So many people had died in the rebellion that there was now enough land for the peasants. Large areas of state

land were given to them and taxes were reduced. But the big landowners benefited most from these reforms. They paid the lower taxes but continued to take at least half the harvest of their tenant farmers. Increasingly, the great landowning families were becoming more powerful than the Han government.

The Yellow Turbans and the fall of the Eastern Han

By the middle of the second century CE, more local peasant uprisings had broken out. These were crushed, but in 184 CE a secret society called the Yellow Turbans led a countrywide revolt. As the central government collapsed, **warlords** became the absolute rulers of their own local areas. Their armies massacred many peasants during the years that it took to smash the revolt. When they finally defeated the Yellow Turbans, the warlords fought each other for the throne of China. By 220 CE, the Han dynasty was finished and China began centuries of civil war, division and suffering.

warlords generals from powerful landowning families

DISCUSS

Peasant rebellions were able to overthrow dynasties but were unable to change the system that caused their problems.

General capability: Creative and critical thinking

20.9 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 1, 4, 6, 10	Questions 2, 7, 8, 11, 13	Questions 3, 5, 9, 12, 14

Check your understanding

1. How did Liu Bang become the founder of the Han dynasty?
2. Why do modern Chinese people call themselves ‘Han’?
3. How did the Han try to win support for their rule?
4. In what ways did the Chinese education system suppress critical thinking?
5. How were China’s trade, territory and influence expanded under the Han?
6. Why did the Han rulers establish colonies of Chinese in newly conquered lands?
7. Which social class benefited and which suffered as a result of wars waged to expand the empire? How would members of those classes have regarded colonisation and war?
8. How did Wang Mang try to help the peasants and how did the ruling classes regain control?
9. What events brought about the end of the Eastern Han dynasty?

Apply your understanding

10. Look at **SOURCE 1** and analyse it using these questions.
    a. Why were cities enclosed by walls?
    b. What role did marketplaces play in expanding trade?
    c. What can you discover from this source about activities, clothing and hairstyles in a Han-era town?
11. Study **SOURCE 2**.
    a. Use the scale to work out approximately how far Zhang Qian travelled.
    b. Explain how China would have benefited from the contacts established through the Silk Road.

12. Study **SOURCE 3**. Why did the Han adopt cavalry as a major part of their army?
13. Read **SOURCES 4** and **5**.
    a. What social problems do the sources describe?
    b. What are the perspectives of the writers of each source?
    c. What evidence do the sources provide for the motives of peasants who rebelled against Han rule?
14. Using the sources and information in this subtopic, explain what caused rebellions such as that of the Red Eyebrows and the Yellow Turbans.

For sample responses to every question, go to www.jacplus.com.au.

20.10 The heritage of China

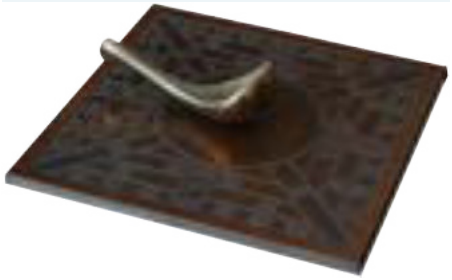
LEARNING INTENTION

By the end of this subtopic, you will be able to describe the contributions ancient China made to the wider world including the many inventions and scientific developments that occurred in China long before emerging in the western world.

20.10.1 Some great Chinese inventions

There are many legacies of ancient China. One of the most significant was the system of rule by emperors, which persisted until 1911. Even in modern times, Chinese leaders have continued to exercise powers that are not very different from those of the emperors. China's heritage also includes traces of the ancient past, such as the Great Wall and the amazing discoveries from Qin and Han tombs. Perhaps the most remarkable part of China's heritage is the scale of discoveries and inventions that originated in ancient China, in many cases long before similar developments occurred in the western world.

SOURCE 1 An ancient compass



Many things we take for granted today were invented by the people of ancient China. Here is a list of some of the more important ones:

- paper
- printing
- decimal system
- wheelbarrow
- seismograph
- matches
- gunpowder
- parachute
- kung fu/wushu
- cast iron
- ink
- helicopter rotor and propeller
- horse collar
- silk
- kite
- rocket
- compass
- umbrella
- printed book
- fan
- abacus
- origami
- cannon
- bomb
- acupuncture
- spinning wheel
- iron ploughshare
- paper money
- chopsticks.

Compass

The Chinese invented the magnetic compass. Compasses were first used to ensure houses were built facing a direction that was in harmony with nature.

Paper and printing

The inventions of paper and printing were to have an enormous impact on people's lives. The earliest paper was made by mixing rags, rope, bark and even fishing nets in a watery solution and crushing the material down to a wet pulp (see **SOURCE 2**). The disintegrating fibres were used to create sheets of paper, which were used for many things including umbrellas, clothing, toilet paper, curtains, money and wallpaper. Paper revolutionised communication. Traditionally, silk had been used for writing, but it was expensive. Paper was cheaper, so more people could afford to use it for writing.

Following the invention of block printing (see **SOURCE 3**) in 750 CE, every Chinese scholar and public servant bought copies of the most important books for their shelves. With paper, records could be kept and instructions sent more easily and more often. Today we still rely heavily on paper for communication.

SOURCE 2 Paper-making in ancient China



SOURCE 3 Printing in ancient China



20.10.2 Also made in China

Today we are used to buying all sorts of goods that are made in China. But how many people realise that, long ago, China led the world in inventions such as gunpowder and in developments in medicine, earthquake detection and even a favourite hobby of many people's childhoods, flying kites?

Gunpowder

From very early times the Chinese searched for a drug that would give the emperor eternal life. By accident they discovered gunpowder. At first, gunpowder was used in fireworks for entertainment and in religious ceremonies. Later it was used in making simple bombs. Lengths of heavy bamboo were loaded with gunpowder and a fuse set in the side. When cast iron was developed, pipes were loaded to create the first cannons. The Chinese then developed cannons that fired arrows with individual rockets attached — the first multi-stage rocket. Flame-throwers, mines and hand grenades were also used by Chinese armies.

SOURCE 4 Gunpowder was first used in fireworks.



Medicine

Acupuncture appears to have been used in China since the third century BCE. Needles were understood to block or stimulate the flow of yin and yang to certain areas of the body. The ancient Chinese were also the first to understand blood circulation, and, by 200 CE, were using an **anaesthetic** based on hemp. Possibly the first human **dissection** was carried out on the body of a criminal in 16 CE by a doctor and a skilled butcher. Human dissection was soon banned, though, as it conflicted with the Confucian belief in the purity of the body.

SOURCE 5 Zhang Heng's seismograph



Seismographs

Zhang Heng invented the world's first seismograph — an instrument for detecting earthquakes — in 132 BCE. An earth tremor caused a ball to be released from a dragon's mouth and fall into a toad's mouth farthest away from the earthquake epicentre. This showed the emperor the direction of the disaster.

SOURCE 6 Kites like this could also be seen in ancient China.



Kites

Kites were first made out of bamboo and silk and, later, paper. They were used mostly during festivals, but they were also used in battle to frighten enemies (by creating unusual sounds through the strings) and to send signals to the troops. Kites were even used for fishing and for scaring birds away from crops.

20.10.3 Conserving China's cultural heritage

The United Nations Educational, Social and Cultural Organization (UNESCO) is the world body responsible for identifying natural and cultural sites in all countries that are of such great value that they must be conserved. These sites include the remains and heritage of ancient civilisations. UNESCO maintains a list of these World Heritage Sites, which you can view on its website. You will not be surprised to find that China has more UNESCO-listed sites than almost any other country and that the Mausoleum of Qin Shihuang (see **SOURCE 7**) and the Great Wall of China are among the listed sites.

acupuncture a medical practice in which long, sharp needles are inserted under the skin as a means of diagnosing, relieving or curing illness
anaesthetic drug to deaden pain
dissection systematic cutting up of a body for medical study

SOURCE 7 Terracotta soldiers and horses at the Mausoleum of Qin Shihuang



20.10 ACTIVITY

Look at **SOURCES 4, 5 and 6**. Choose one of these ancient Chinese inventions and conduct research on the internet to prepare a PowerPoint presentation that answers the following questions:

a. When was it first discovered?
b. How was it made?
c. How did it work?
d. How was it used?
e. What effect did it have on people's lives?
f. Is the invention used today and, if so, how is it now used?

HASS skills: Analysing
History concept: Evidence

20.10 EXERCISE

To answer questions online and to receive **immediate feedback** and **sample responses** for every question, go to your learnON title at www.jacplus.com.au.

Learning pathways

LEVEL 1	LEVEL 2	LEVEL 3
Questions 2, 4, 6, 8	Questions 1, 5, 10	Questions 3, 7, 9, 11

Check your understanding

1. For what purpose were compasses first used in China?
2. What material was traditionally used for writing in China and what was gained from the invention of paper?
3. How did the Chinese discover gunpowder?
4. In what medical advances did China lead the world?

5. What is the role of UNESCO?
6. Name two UNESCO World Heritage-listed sites in China.

Apply your understanding

7. Look at **SOURCE 1** and suggest how this early compass worked.
8. What can you tell from **SOURCE 2** and **3** about early Chinese methods of paper-making and printing?
9. In **SOURCE 7** what evidence can you see of measures that have been taken to conserve the objects that were excavated from around the tomb of China's first emperor?
10. Compare the various ancient Chinese inventions described in this subtopic and choose one that you think had the biggest impact on people in its time and on future generations. Write an advertisement for it.
11. Refer to the text and sources to write a one-paragraph explanation of the meaning of 'cultural heritage'. Identify cultural heritage sites within China that are in great need of protection and conservation.

For sample responses to every question, go to www.jacplus.com.au.

20.11 SkillBuilder: Analysing different perspectives

LEARNING INTENTION

This SkillBuilder shows you how to analyse different perspectives. Analysing different perspectives is part of the Analysing HASS skill.

20.11.1 Tell me

What are different perspectives and why do they occur?

A perspective is a point of view, which is formed from someone's values and beliefs, attitudes and experiences. In a study of a period of history, perspectives on an event or a period can be gathered from primary sources, especially eyewitness accounts as might be found in a source such as a diary, as well as official sources such as records produced by those in power. Primary sources often give different perspectives because not everyone will have seen an event or problem from the same point of view. Some primary sources are biased (one-sided or prejudiced) or were created as propaganda (attempts to persuade people to accept a biased view). Each source will reflect the perspective of its creator and their target audience and purpose.

Why is it important to analyse different perspectives, especially bias and propaganda?

To find the truth on any matter, we have to be aware that what someone says or writes about it may be one-sided and an attempt to persuade and possibly to deceive. This is as important when trying to make up our minds on current issues as it is when trying to understand the past. For example, when buying a product you do not necessarily trust what advertisements say about it. An advertiser will wish to show a product in its best light — that is, present only positive aspects of it, so that a consumer will buy it. In the same way, a ruler may only want positive records of their rule to be made or displayed to ensure no dissent from those they rule or that their legacy is protected. Sometimes, the perspectives of those not part of the ruling group may be silenced — their absence from the public record also tells a historian something about that period. Historians must often research extensively to find the perspectives of a range of people about events from the past in order to build up a balanced picture of the event or time period.

20.11.2 Show me

How to analyse different perspectives in primary sources

When you read an interpretation of a historical event or development you need to ask:

1. What is the subject or main idea of the source?
2. When was the source created?
3. Who created the source?
4. Why was it written?
5. Does it try to persuade and if so how does it do this?
6. Is the source supported or contradicted by the evidence of other sources?

An example: Qin Shihuang's achievements

Qin Shihuang wanted to be seen as a great and powerful ruler who brought peace and happiness to his people. **SOURCE 1** is an example of his propaganda. **SOURCES 2** and **3** provide other evidence. The six questions have been applied to **SOURCE 1**.

SOURCE 1 From an inscription ordered by Qin Shihuang (shown in image). It was carved in 219 BCE.

. . . Great are the Emperor's achievements . . .

All people under heaven

Work with a common purpose.

Tools and measures are the same . . .

The written script is made the same . . .

He defines the laws, leaving no one in doubt,

Making known what is forbidden . . .

No evil is tolerated,

So all strive to be excellent people . . .

None dare to be lazy . . .

The ordinary people know peace . . .

People help each other,

There are no robbers or thieves:

People delight in his rule . . .

Wherever life is found,

All acknowledge his supreme rule . . .



SOURCE 2 From a Qin imperial edict. When the First Emperor decided to standardise weights and measures, his order was published on bronze plates. Attached to the plates were wooden measures.

In the twenty-sixth year of his reign [221 BCE], the Emperor unified all the lands under heaven, brought peace to the people, and mounted the throne as Emperor. [He] ordered the prime minister to reform the measures and weights. For those who do not know the new system, this [object] is a standard model for making more copies.

SOURCE 3 Hsun-tzu, a Confucian scholar of the third century BCE, commenting on the methods of the rulers of the state of Qin in the last years of the Warring States period. These same methods were used throughout China under the Qin dynasty.

The Qin rulers employ their people harshly, terrorise them with authority, embitter them with hardship, bribe them with rewards, and destroy them with punishments.

1. *What is the subject or main idea of the source?* The main idea is that the First Emperor's reforms have unified China, given its people certainty about the laws, protected them from wrongdoers and made them hardworking, responsible, happy and grateful to their ruler.
2. *When was this source created?* It was written in 219 BCE.
3. *Who created the source?* Qin Shihuang ordered it to be written.
4. *Why was the source written?* It was written to tell people that the emperor acted for their benefit.
5. *Does it try to persuade and if so how does it do this?* It tries to persuade by giving a distorted account of what was happening. It makes no mention of forced labour, high taxes and the cruelty of the emperor's punishments.
6. *Is the source supported or contradicted by the evidence of other sources?* **SOURCE 2** supports the statement about measures. **SOURCE 3** contradicts most of the source by accusing the Qin rulers of causing misery and suffering rather than happiness.

20.11.3 Let me do it

Complete the following activities to practise this skill.

20.11 Activities

1. In 213 BCE, Qin Shihuang ordered the burning of many books. He followed this up by executing hundreds of scholars who kept their books. **SOURCE 4** gives the official reasons for these harsh measures. Now use the six questions to see if you can recognise the bias in this source and analyse it. **SOURCE 5** provides other evidence.

SOURCE 4 Advice given by Prime Minister Li Si to Qin Shihuang

Your Majesty rules a unified Empire in which the difference between right and wrong is as clear as your own total authority. Yet there are people who unofficially spread teachings that are against official orders . . . they openly criticise your commands . . . The people are thus encouraged to be disrespectful. If this lying is not stopped the imperial authority will be weak . . . all people owning books . . . should destroy them.

SOURCE 5 From Sima Qian's book *Shiji*, 91 BCE

But the First Emperor was greedy and short-sighted, confident in his own wisdom, never trusting his meritorious officials, never getting to know his people . . . outlawing books and writings, making the laws and penalties much harsher, putting deceit and force foremost and humanity and righteousness last, leading the whole world in violence and cruelty.

2. Sima Qian was Grand Historian of China during the Han dynasty. He did not live in the period when Qin Shihuang ruled. How does this fact affect your assessment of the usefulness of **SOURCE 5**?
3. Suggest sources or people from the time that might present other perspectives on Qin Shihuang's book-burning edict.
4. Explain why primary source evidence from ancient China often provides different perspectives.
5. Explain why, despite differing perspectives, primary source evidence from ancient China rarely gives the perspectives of the lower classes.
6. Why would **SOURCES 1** and **2** need to be questioned very thoroughly?
7. Explain why differing perspectives can sometimes make it difficult to judge the reliability of ancient Chinese primary sources.

20.12 Thinking Big research project: Han dynasty guide

Scenario

It is the first century BCE and you are an important official in the court of the western Han dynasty. Several foreign dignitaries are expected at court; they are making their first visit to the Middle Kingdom. You have been appointed as their guide and cultural envoy. It is your responsibility to ensure that these visiting foreign 'barbarians' behave according to Chinese tradition in the presence of the emperor. They will also need to have a basic understanding of the way your government operates, the philosophy of Confucianism, which has shaped China's government and cultural values, and the key features of Chinese daily life.



Task

The highly developed technology of your ancient Chinese civilisation has been producing a type of paper made from hemp from the second century BCE. You are required to create a short, printed guide to understanding the position of emperor, the basic structure and functioning of government, the principles of Confucianism and the etiquette of court behaviour. Begin by forming small groups to plan and share research and discuss concepts to develop your own clear understanding of terms such as the 'mandate of heaven'.

Follow the steps detailed in the **Process** section to complete this task.

Process



- Open the projectsPLUS application for this topic. Click the **Start new project** button to enter the project due date and set up your project group. Your group can have any number of members, but each student can be a member of only one group.
- Navigate to the **Research forum**, where you will find starter topics loaded to guide your research. You can add further topics to the Research forum if you wish. When you have completed your research, you can print out the **Research report** in the Research forum to easily view all the information you have gathered.
- Begin your research by reading through subtopic 21.7 to familiarise yourself with the principles of Confucianism and the influence the philosophy had on Han dynasty government. Locate at least three other sources of information. In the **Media centre** you will find an assessment rubric to guide your work and some weblinks that will provide a starting point for your research.
- Decide on the headings you are going to use to organise your research findings; for example, The mandate of heaven and government; Confucius and philosophy; the Han Empire.
- Enter your research findings under each heading in your Research forum. You can view, share and comment on other group members' research findings. Be sure to enter the source for any information you find online.
- Collect images to add to your guide to assist you in explaining the unique features of the life, beliefs and government of China during the Han dynasty. Look at the Media centre template of your 'dynasty guide' to provide ideas on how to creatively organise your research.
- Try to make each of the headings in your Han dynasty guide sound interesting and informative; for example, 'the Han Book of Politics, Politeness and Protocol' sounds more engaging than 'Han Dynasty Guide'.
- Email your Han dynasty guide to your teacher for assessment and feedback.

Resources

ProjectsPLUS Han dynasty guide (pro-0231)

20.13 Review

20.13.1 Key knowledge summary

20.2 Examining the evidence

- Shang dynasty inscriptions are our earliest written evidence of ancient China.
- Archaeological finds provide evidence of rich cultures during Qin and Han times.
- The most exciting find was the discovery of the terracotta warriors guarding the tomb of Qin Shihuang.

20.3 China's civilisation begins

- There is no primary source evidence for the legendary Xia dynasty.
- Early Chinese rulers based their authority on the mandate of heaven.
- Early Chinese civilisation was based on farming in river valleys in eastern China.

20.4 The people of ancient China

- Rulers were supported by powerful lords and landowning gentry, who included warriors and bureaucrats.
- Women had an inferior status.
- Peasants formed the largest group and they suffered through natural disasters and wars.
- Merchants and slaves were at the bottom of Chinese society.

20.5 Everyday life and death

- Life for all classes of the common people was harsh, especially for women.
- We know much more about death and funeral customs of the ruling classes than of the common people.
- It was the custom of the ruling classes to bury goods with the dead to provide for them in the afterlife.
- Until Han times, people were also buried with rulers to serve them in the afterlife.

20.6 Ancient China and the natural environment

- China is a vast country with a wide variety of climates and landscapes.
- Ninety per cent of the large population lived in the east, where agriculture was based along river valleys.
- Intensive clearing of land for farming caused massive soil erosion and other environmental damage.

20.7 Confucianism, religion and law

- Confucianism is not a religion. It is concerned with how good conduct can create social harmony.
- Confucianism had no influence in its founder's lifetime but much influence in later periods.
- Daoism and Buddhism became major religious influences in ancient China.
- The laws of China's First Emperor were based on the harsh laws of the state of Qin.
- Confucianism regained influence under the Han and later dynasties.

20.8 Qin Shihuang, the first emperor of China

- Qin Shihuang took control of China in 221 BCE after completing his conquest of the other Chinese states and turned the system of defensive walls into the Great Wall of China.
- He stamped out potential threats to his power through several measures, including confiscating weapons, controlling the nobles and burning books.
- In 209 BCE, the Qin dynasty was destroyed in a peasant rebellion.

20.9 The rise and fall of the Han

- The Han dynasty carried out reforms to avoid the fate of the Qin, and China expanded under the Han.
- Chinese missions led to the founding of the Silk Road, which opened trade between China and India, Persia and the Roman Empire.
- Inequality grew under the Han and rebellions led to its fall in 220 CE.

20.10 The heritage of China

- China's legacies include an amazing number of inventions, including printing and gunpowder.
- China's cultural heritage includes many UNESCO-listed sites, among which are the Great Wall and the Mausoleum of the First Emperor.

SOURCE 1 The Great Wall of China



20.13.2 Key terms

acupuncture a medical practice in which long, sharp needles are inserted under the skin as a means of diagnosing, relieving or curing illness
anaesthetic drug to deaden pain
artificer craftsperson or inventor
bureaucrat government official
castrated having had the testicles cut off
concubines women who lived with the emperor in a sexual relationship but were not married to him
conscripted forced to become a soldier
constellations groups of stars
Daoist a follower of Daoism
deported forced to leave the country
dissection systematic cutting up of a body for medical study
halberds daggers mounted on axe handles
infantry foot soldiers
mandate of heaven Chinese expression meaning that a ruler had been chosen by the gods
mausoleum large tomb structure
philosopher one who studies the fundamental principles and causes of things
warlords generals from powerful landowning families
Xiongnu the ancient Chinese name for the nomadic Turkic tribes of Central Asia

20.13.3 Reflection

Complete the following to reflect on your learning.

Revisit the inquiry question posed in the Overview:

How did ancient China begin, grow and change to become the world's oldest continuous civilisation?

1. Now that you have completed this topic, what is your view on the question? Discuss with a partner. Has your learning in this topic changed your view? If so, how?
2. Write a paragraph in response to the inquiry question outlining your views.

on Resources

eWorkbook
- Customisable worksheets for this topic (ewbk-4296)
- Reflection (ewbk-4447)
- Ancient China crossword (ewbk-4446)
- Ancient China find-a-word (ewbk-4444)
- Ancient China revision quiz (ewbk-4445)
- Student learning matrix (ewbk-4438)

Interactivity
- Ancient China crossword (int-7696)

20.13 Review exercise

Multiple choice

1. Shang dynasty inscriptions provide early evidence of ancient Chinese:
   - A. ironwork.
   - B. gunpowder.
   - C. farming.
   - D. manufacturing.

2. The mandate of heaven meant which of the following for Chinese emperors?
   - A. They were believed to be gods.
   - B. They were supposedly chosen by the gods to rule.
   - C. They lived like gods.
   - D. They said there were no gods.

3. During the Warring States period there were wars between which of the following?
   - A. Local lords who controlled their own states within the Zhou kingdom
   - B. Local lords who controlled their own states outside the Zhou kingdom
   - C. Nomads who wanted to invade China
   - D. Nobles and peasants

4. Merchants occupied which of these positions in Chinese society?
   - A. At the top, along with nobles
   - B. Between nobles and peasants
   - C. Almost at the bottom
   - D. Between peasants and artisans

5. Environmental problems in ancient China were caused mainly by which of the following?
   - **A.** Polluting the air
   - **B.** Burning coal
   - **C.** Polluting the ocean
   - **D.** Clearing forests for farming

6. The main ideas of Confucius were concerned with:
   - **A.** worshipping gods.
   - **B.** conduct that ensured a harmonious society.
   - **C.** obedience to kings.
   - **D.** rebelling against authority.

7. The martial art of kung fu was developed by which of these groups?
   - **A.** Daoists
   - **B.** Buddhists
   - **C.** Followers of Confucius
   - **D.** Qin Shihuang's army

8. Qin Shihuang changed the feudal system by which of these means?
   - **A.** Burning books
   - **B.** Executing scholars
   - **C.** Confiscating weapons
   - **D.** Allowing farming land to be bought and sold

9. Around how many people might have died constructing the Great Wall of China?
   - **A.** Five hundred
   - **B.** A million
   - **C.** Two thousand
   - **D.** Five million

10. Under Qin Shihuang's orders, scholars who refused to burn their books were:
    - **A.** beheaded.
    - **B.** fined.
    - **C.** imprisoned.
    - **D.** buried alive.

11. Yellow Turbans and Red Eyebrows were which of these?
    - **a.** Ancient Chinese fashions
    - **b.** Games played by the landowning gentry
    - **c.** Secret societies that organised rebellions
    - **d.** Distinguishing features of the Xiongnu nomads

12. The Silk Road was the land route for trade between China and which places?
    - **A.** India, Persia and the Roman Empire
    - **B.** South-East Asia
    - **C.** Japan and Korea
    - **D.** Mongolia

Short answer

13. Analyse **SOURCE 1** using the following questions.

- **a.** Describe the details of the painting.
- **b.** Identify ways in which the appearance of the students and the room differ from a modern examination room.
- **c.** Describe the kinds of questions that examiners would be likely to ask.
- **d.** Describe the types of answers that students would be expected to give.
- **e.** To fully analyse this source, you would need information that is not provided here. Give examples of such types of information.

SOURCE 1 This painting depicts a Chinese emperor assessing the performance of students in exams for the civil service.



14. Imagine that you have been hired by the Chinese tourism authorities who erected the stone marker in **SOURCE 2**. Your job is to prepare a guide to this site for Australian and other English-speaking tourists visiting the site. You will need to use what you have learned in this topic as well as information you can gather using the internet, including the UNESCO World Heritage List. Your guide should include:

- **a.** the history of this section of the wall from the time when the various walls were joined under Qin Shihuang up to the time when this section was rebuilt during the early Ming dynasty
- **b.** an explanation of what was involved in building the wall
- **c.** information about what the wall would have meant to Chinese people in Qin times and later.

SOURCE 2 The stone marking the modern entrance to the Mutianyu section of the Great Wall of China, about 70 kilometres north of Beijing



RESOURCE SUMMARY

on Resources

This is a summary of the digital resources you will find online for Topic 20 to help support your learning and deepen your understanding. When you see these icons next to an image or paragraph, go to learnON to access video eLessons, interactivities, weblinks and other support material for this topic.

20.1 Overview

eWorkbook
- Ancient China Timeline exercise (ewbk-4579)

Video eLesson
- Ancient China (eles-1838)

Interactivity
- Interactive timeline (int-4296)

20.3 China's civilisation begins

My World History Atlas
- The Asian world > Early Chinese kingdoms

20.7 Confucianism, religion and law

eWorkbook
- Beliefs and religion (ewbk-4439)

20.8 Qin Shihuang, the first emperor of China

eWorkbook
- A great wall (ewbk-4440)
- Acrostic poem for an emperor (ewbk-4441)
- The First Emperor (ewbk-4442)

Interactivity
- The Great Wall of China (int-5995)

My World History Atlas
- The Asian world > Unification of China

20.9 The rise and fall of the Han

Interactivity
- Chinese life under the Han (5996)

My World History Atlas
- The Asian world > Silk Road

20.10 The heritage of China

eWorkbook
- Legacy of Ancient China (ewbk-4443)

20.12 Thinking Big research project: Han dynasty guide

ProjectsPLUS
- Han dynasty guide (pro-0231)

20.13 Review

eWorkbook
- Reflection (ewbk-4447)
- Ancient China crossword (ewbk-4446)
- Ancient China find-a-word (ewbk-4444)
- Ancient China revision quiz (ewbk-4445)
- Student learning matrix (ewbk-4438)

Interactivity
- Ancient China crossword (int-7696) ?

To access these online resources, log on to **www.jacplus.com.au**.

GLOSSARY

absolute dating techniques methods used to assess the age of something (e.g. radiocarbon dating, tree-ring dating)
accurate source the information is correct and factual
acropolis stronghold on high ground in an ancient Greek city-state
acupuncture a medical practice in which long, sharp needles are inserted under the skin as a means of diagnosing, relieving or curing illness
adobe bricks made from sand, clay, water and straw and dried by the sun
aerial photograph a photograph taken of the ground from an aeroplane or satellite
afterlife life after death
agora large open space in the centre of a Greek city that served as a public meeting area and marketplace
agriculture the cultivation of land, growing of crops or raising of animals
alluvial soil a fine-grained fertile soil brought down by a river and deposited on its bed, or on the floodplain or delta
amulet charm believed to protect against evil
anaesthetic drug to deaden pain
analysing examining information and opinions closely to see how they are constructed and looking for connections between their parts or with other ideas and opinions
ancient history the period from the beginning of civilisation to the fall of the Roman Empire
anno Domini latin for 'in the year of our Lord'
antedate to come before, to be earlier in time
anthropoid human-like
anthropologist someone who researches the appearance and features of the life of prehistoric people and the connections they had with other human populations
anthropomorphic describing or representing something as having human traits, despite its original lack of these characteristics
appropriate technology technology designed specifically for the place and the people who will use it. It is affordable and can be repaired locally.
aqueduct structure built to carry water long distances
aquifer a body of permeable rock below the Earth's surface that contains water, known as groundwater. Water can move along an aquifer.
arid lacking moisture; especially having insufficient rainfall to support trees or plants
artefact an object made or changed by humans
artesian aquifer an aquifer confined between impermeable layers of rock. The water in it is under pressure and will flow upward through a well or bore.
artificer craftsperson or inventor
artisans skilled craftspeople
Asiatic peoples of Asia, including the Middle East
aspect the direction in which something is facing
astrology interpreting the influence of the stars on human affairs
astronomy study of the stars and planets
atmosphere the layer of gases surrounding the Earth
auxiliaries soldiers in the Roman army drawn from areas conquered by Rome and made part of its empire
bail the promise that an accused person makes to appear in court at a later date
barbarians the Roman term for all peoples who lived beyond the borders of the empire
base map the map underneath an overlay
bettong small nocturnal marsupial, resembling a small wallaby, with brown-grey fur on top and white on the underside

beyond reasonable doubt the standard of proof required in a criminal trial where the prosecution must prove that the accused is guilty to such a high degree that a reasonable person would have little doubt that the accused committed the crime
bias prejudice or one-sidedness; seeing something from just one point of view
biased one-sided or prejudiced; seeing something from just one point of view
bicameral a parliament with two houses
biodiversity the variety of life in the world or in a particular habitat or ecosystem
biomass organic (once living) matter used as fuel
bitumen tar, as used on modern road surfaces
blue water water that has been sourced from surface or groundwater. It is either evaporated, incorporated into a product or taken from one body of water (e.g. a river) and returned to another (e.g. an irrigation channel)
built environment a place that has been constructed or created by people
burden of proof the legal principle describing who has to prove a case in court. In a criminal trial, this burden is on the prosecution.
bureaucrat government official
business activities the combined economic activities of buying, selling and investing performed by an organisation
business an organisation that provides goods and/or services to consumers in order to make a profit; any activity conducted by an individual or individuals to produce and sell goods and services to make a profit
canopic jars jars used to store the liver, lungs, intestines and stomach of the person being mummified
cash flow the amount of money moving in and out of the business at any given time
castrated having had the testicles cut off
casual describes an employee who works only when needed
cataract series of waterfalls
cause and effect the concept that every event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences; the concept that every historical event will have a cause, and every event or action is likely to be the cause of subsequent effects or consequences
census a regular survey used to determine the number of people living in Australia. It also has a variety of other statistical purposes.
chronology a record of past events in order of time, from Latin *chronos* meaning time and *logos*, meaning to work out
cite to give the details of
civilisation term used to describe societies that have towns and features such as complex forms of government and religion
civil war war between rival factions within one state or country
climate change any change in climate over time, whether due to natural processes or human activities
colonies countries or regions taken over and controlled by another state
committal hearing in very serious cases, the procedure held in a lower court to determine if enough evidence exists for the case to move to a higher court
communism a belief system that promotes the overthrow of existing society and its replacement with one in which all property and possessions are shared equally, and resources are controlled by the government
community a group of people who live and work together, and generally share similar values; a group of people living in a particular region
concubines women who lived with the emperor in a sexual relationship but were not married to him
conscripted forced to become a soldier
conservation the preservation and protection of artefacts or relics from damage or decay
conservators specially trained people who clean, care for or repair artefacts for display in a museum or gallery
constellations groups of stars
constitution a set of rules that determines the structure of government and its law-making powers
consumer a person or group who is the final user of goods and services produced within an economy
contestability when particular interpretations of the past are open to debate

continent one of seven very large, continuous bodies of land; they are Europe, Asia, Africa, Antarctica, Australia, North America and South America.
continuity and change the concept that while many changes occur over time, some things remain constant
conurbation an extended urban area, usually made up of a town merging with the suburbs of a city
cost–benefit analysis an examination of the strengths and weaknesses of different options in order to see if the benefits are greater than the costs
counsel for the defence a lawyer who represents the accused person
country the place where an Indigenous Australian comes from and where their ancestors lived; it includes the living environment and the landscape
crucified killed by crucifixion, an ancient form of execution in which the victim was tied or nailed to a pole or (as was Jesus) a cross and left to die slowly in agony
cubit an ancient measure of length, based on an adult's forearm
curators people who look after a museum collection
customer survey the polling of customers to identify their level of satisfaction with the business's products and quality of service
Daoist a follower of Daoism
deities gods or goddesses
delta low, triangular area where a river fans out as it nears the sea
demise death
democracy a political system according to which citizens choose the way in which they are governed
demographic characteristics statistics/data about specific people and groups; describes statistical characteristics of a population
demotic script the simplest of the ancient Egyptian scripts, which was almost like handwriting
deported forced to leave the country
desalination a process that removes salt from sea water
dictator a person who has absolute power within a country, and who usually cannot be voted out of power by democratic elections. A government headed by a dictator is usually referred to as a dictatorship.
dissection systematic cutting up of body for medical study
distribution the way things are spread across an area
divination the skill of reading omens
divine to guess or predict
Dorians tribes from the north of Greece who moved into the south during the Dark Age
Dreaming in Aboriginal and Torres Strait Islander spirituality, the time when the Earth took on its present form and cycles of life and nature began; also known as the Dreamtime. It explains creation and the nature of the world, the place that every person has in that world and the importance of ritual and tradition. Dreaming stories pass on important knowledge, laws and beliefs.
dynasty a line of rulers from the same family, and the period during which they ruled
ecological footprint the total area of land that is used to produce the goods and services consumed by an individual or country
economic performance the measure of how well an economy is performing, based on whether it is achieving its economic objectives
economic relating to wealth or the production of resources
economic system a way of organising the production and distribution of the nation's goods, services and incomes
economics a social science (study of human behaviour) that analyses the decisions made by individuals, businesses and governments about how limited resources are used to satisfy society's unlimited needs and wants
economy a system established to determine what to produce, how to produce and to whom production will be distributed
edict order issued by a sovereign to his or her subjects
El Niño the reversal (every few years) of the more usual direction of winds and surface currents across the Pacific Ocean. This change causes drought in Australia and heavy rain in South America.
elevation height of a place above sea level

emotive words words that create a strong emotional reaction
employed describes someone working in return for a wage or salary
employees people who work for a wage or salary
employer a person or organisation hiring others to work for them
Ensi ruler of any Sumerian city-state
enterprise the creative or bold efforts made by someone to achieve something new
enterprising behaviours describes a range of skills including adaptability, initiative, communication, management, leadership and problem solving, and associated behaviours such as working productively with others to achieve common goals, planning and organising, using resources effectively, analysing issues and managing risk
entrails internal organs of an animal
entrepreneur a person who takes on a risk by starting a business with an idea, hoping to make a profit through initiative and enterprise
entrepreneurship the ability to demonstrate the skills and risk-taking related to the creation, organisation and management of a business or enterprise
Ephorate five-man ruling body in Sparta that advised the kings
eternal life living forever
ethical management the decisions made by the business owner abiding by moral standards
Etruscans advanced, civilised people who dominated early Rome from about 575 BCE to about 396 BCE
evaluating looking critically at information, including trends, relationships and points of view, to form conclusions or make decisions
evaporation the process by which water is converted from a liquid to a gas and thereby moves from land and surface water into the atmosphere
evidence information that indicates whether something is true or really happened
extinct died out
fauna animals
federation the formation of a united country from a number of separate states or colonies, with law-making power shared between the national government and the governments of each of the states
fertile crescent the area now roughly covered by Israel/Palestine, Lebanon, Jordan, Syria, south-east Turkey and Iraq
flint a very hard stone, useful for tools and for making sparks to start fires
fly in, fly out (FIFO) describes workers who fly to work in remote places, work 4-, 8- or 12-day shifts and then fly home
focus questions questions that break a big topic down into its main parts or key areas
formal describes an event or venue that is organised or structured
forum open meeting place of a town or city
fossil fuels fuels that come from the breakdown of living materials, and which are formed in the ground over millions of years. Examples include coal, oil and natural gas.
fossils remains of plants or animals found in rocks
full-time describes an employee who works 35 hours or more per week, or who works the minimum number of hours stipulated by the industrial award for that occupation or industry
genetics study of heredity
geologist someone who studies the sediments and landforms associated with ancient campsites
global citizens people who are aware of the wider world, try to understand the values of others, and try to make the world a better place
goods physical items that satisfy needs and wants
granary place for storing grain
Great Pyramid the oldest and largest pyramid in Egypt; one of the Seven Wonders of the Ancient World
Great Sphinx monument with the body of a lion and the face of a man; located in Giza near the Great Pyramid
green water water from precipitation that is stored in the root zone of the soil and transpired or used by plants
grid system a street network that creates square and rectangular blocks
groundwater water held within water-bearing rocks, or aquifers, in the ground

halberds daggers mounted on axe handles
helot slave of the Spartan state
heresy an opinion or belief that contradicts orthodox beliefs, especially in religion
heritage everything that has come down to us from the past
hieratic script Egyptian script that was less decorative and complex than hieroglyphs
Holocene Epoch the past 10 000 years
hoplites Greek foot soldiers
horticulture the growing of garden crops such as fruit, vegetables, herbs and nuts
hunter-gatherers people who live by hunting animals and gathering plants
hydrologic cycle another term for the water cycle
hygienic healthy, sanitary
hypocaust underfloor and water heating system used in Roman villas and public baths
hypothesis (plural: hypotheses) a theory or possible explanation; an idea or explanation that is used as a starting point for deeper investigation or research
Ice Ages long periods during which glaciers covered much of the northern hemisphere
identify to recognise and name
immortals gods who lived forever
improved drinking water drinking water that is safe for human consumption
incentive something that encourages a person to do something
income money earned through employment or investment
Indus seals imprints of stamps found on pottery made during the Indus Valley Civilisation
industry-wide awards legally binding documents that set out the minimum wages and other entitlements for all employees in an industry or occupation
infantry foot soldiers
inference to infer, or make an inference, is to come to a reasonable decision about what evidence suggests; to make an educated guess
informal sector jobs that are not officially recognised by the government as official occupations and that are not counted in government statistics
infrastructure the basic physical and organisational structures and facilities that help a community run, including roads, schools, sewage and phone lines
initiative the first step or opening move in a series of actions
innovation either adding a new product to an existing product line, or significantly improving an existing product or process
intensive agriculture any method of farming that requires concentrated inputs of money and labour on relatively small areas of land; for example, battery hens and rice cultivation
interdependence the mutual dependence between participants in an economy; that is, the reliance of consumers, workers, businesses and governments on each other
Inundation the seasonal flooding of the Nile
Iron Age period in which people learned to use iron to make tools and weapons
irrigation water provided to crops and orchards by hoses, channels, sprays or drip systems in order to supplement rainfall
judge a court official who hears cases in the higher courts, such as the District or County Court, or the Supreme Court
judiciary a collective name given to the judges who preside over law courts
juror a person selected to hear and assess the evidence in a court case
jury a group of ordinary people randomly selected to hear and assess the evidence in a court case
justice the use of laws to treat people fairly and in a way that is morally right
labour the human skills and effort required to produce goods and services
labour force people aged 15 and over who are able to work, and are either employed or looking for work
latin the language of ancient Rome and its empire
legacy something handed down from the past
legal aid the provision of legal assistance to those involved in a dispute or criminal matter who are unable to pay for legal representation

legal representation services performed by a qualified legal practitioner, such as a lawyer, who deals with legal matters on behalf of the person who has hired them
legal system a system for interpreting and enforcing the laws of a country
legislation a term used to describe laws passed by parliament
legislature the parliaments, or bodies, who have been elected to make laws to run a country or state
literacy rate the proportion of the population aged over 15 who can read and write
liveable city a city that people want to live in, which is safe, well planned and prosperous and has a healthy environment
livestock animals raised for food or other products
location a point on the surface of the Earth where something is to be found
loot goods or property taken from a defeated enemy after a battle
lore the customs and stories that came from the Dreaming and continue to govern all aspects of traditional life
lust sexual desire, strong appetites
Macedonian native of Macedon, an ancient kingdom north of Greece
magistrate a court official who hears cases in a magistrates court
magistrates men elected by the citizens to run Rome for a year
mammoth a large extinct mammal like a modern elephant but with larger tusks and woolly fur to keep it warm
mandate of heaven Chinese expression meaning that a ruler had been chosen by the gods
manufacture to make products on a large scale
market the place where goods, services or resources are exchanged between buyers and sellers
market capitalist economy an economic system that relies on the market to allocate resources based on the actions of consumers and producers, and where resources are generally owned by private individuals and businesses
marshland low-lying land that is usually boggy and often flooded
mausoleum large tomb structure
medallion a coin-shaped, usually metal, decorative disk
medieval of the Middle Ages
meditation exercising the mind through contemplation
mercenaries people who fight for a foreign country for money or other rewards
metic free man living in Athens but not born there; could not vote or own property but served in the army and paid taxes
metope part of the pattern of alternating motifs under the pediment (the triangular part crowning the front) of a Greek building
microliths small stone artefacts
Middle Ages between ancient and modern historical periods (generally between the fifth and fifteenth centuries)
monastery residence of a community of monks
monsoon rainy season accompanied by south-westerly summer winds in the Indian subcontinent and South-East Asia
mosque place of worship for people who follow Islam (Muslims)
mound spring mound formation with water at its centre, which is formed by minerals and sediments brought up by water from artesian basins
mummy body that has been embalmed
mythology a body of myths
natron a mineral salt used to dry out dead bodies
natural environment elements — such as wind, soil, flowing water, plants and animals — that influence the characteristics of an area
natural resources resources (such as landforms, minerals and vegetation) that are provided by nature rather than people
needs goods or services that consumers consider necessary to maintain their standard of living
neighbourhood a region in which people live together in a community
Neolithic Revolution the beginning of the New Stone Age

niche a shallow recess, especially in a wall, to display a statue or other ornament
niche market a market in which a limited and clearly defined range of products is sold to a specific group
nomadic moving about from place to place
nomads tribal groups who wander from place to place, generally in search of food or pasture
non-government organisations non-profit groups run by people (often volunteers) who have a common interest and perform a variety of humanitarian tasks at a local, national or international level
objective objective information is where data or events are presented without emotive words or opinion
oligarchy governing council of rich aristocrats
Olympiad a staging of the Olympic Games
omen sign that predicts good or evil
opportunity cost the next best alternative given up whenever a choice is made
organisation an entity formed for a specific purpose, usually related to the production or provision of a good or service
ostracism the punishment of being banished from Athens
pagan name used to refer to people who believed in non-Christian gods
palaeontologist a scientist who studies fossils
paleolithic of the Old Stone Age
pan-Hellenic for all the Greeks
papyrus paper made from crushing reeds
Parthenon Athenian temple dedicated to the goddess Athena
part-time describes an employee who works less than 35 hours per week
passing trade the sales a business makes as a result of customers walking or driving past the store
patricians members of the aristocratic families that founded the Roman Republic
patronage supporting and encouraging authors and artists
Peloponnese Peninsula the southern part of mainland Greece, joined to the north by the narrow Isthmus of Corinth
percentage mark-up a way of determining selling price by adding a fixed percentage to the cost of the product
perioeci peoples of Laconian towns around Sparta who could be required to fight for Sparta but were not citizens
permafrost permanently frozen ground not far below the surface of the soil
perspective point of view or attitude
philosopher one who studies the fundamental principles and causes of things
philosophy study of the causes and meanings of things
place specific area of the Earth's surface that has been given meaning by people
plagiarise to copy other people's work and present it as though it is your own
plebeians all non-patrician citizens of Rome
pleistocene epoch the glacial period before the Holocene Epoch
polis (plural **poleis**) ancient Greek city-state
population density the number of people living in a square kilometre
portico a roof supported by columns, usually attached as a porch to a building
power vacuum a situation in which there is a lack of political leadership
precipitation rainfall, a form of water from the atmosphere
prehistory the period before writing was invented
premises the land and buildings occupied by a business
presumption of innocence the principle that all accused people who appear before a court are presumed to be innocent until the prosecution proves that they are guilty
primary sources objects and documents that were created or written in the period of time that the historian is investigating
producer an individual or business involved in the production of goods and services
productivity a measure of how efficiently inputs are used to produce outputs
profit what remains after all business expenses have been deducted from the money that has been collected from selling goods or services

prophet a revealer or interpreter of God's will
prosecutor the party bringing a criminal action against the accused
providence act of God
public bath public building complexes containing baths of varying temperatures, and sports and beauty facilities; a popular meeting place for Roman citizens
pull factors positive aspects of a place; reasons that attract people to come and live in a place
pumice lava ejected from a volcano that solidifies into a light, porous rock
push factors reasons that encourage people to leave a place and go somewhere else
quarry an excavation or pit from which stone or building material is cut
radiocarbon dating a way of dating objects of plant or animal origin according to the amount of carbon left within them
rainfall variability the change from year to year in the amount of rainfall in a given location
rebate a partial refund on something that has already been paid for
referendum a process of allowing the people to vote on an important issue
region any area of varying size that has one or more characteristics in common
reincarnation the process of being reborn over and over again in another human or animal body
relationship the link connecting two or more people or things
relative dating techniques methods used to assess whether something is older than something else (e.g. stratigraphy, fluorine dating)
relative humidity the amount of moisture in the air
reliable source trustworthy and well backed-up with strong evidence, able to be relied on
remote describes a place that is distant from major population centres
remuneration payment for work or services performed
repeal to remove a law so that it no longer applies
republic system of government in which the head of state is not a monarch
resource allocation relates to decisions about how scarce resources are distributed among producers, and which types of goods and services will be produced to satisfy wants and needs
resource items of value that we use to produce goods and services to satisfy needs and wants, which include land, labour, capital and enterprise
retail describes a business that sells goods and services to consumers
rhetoric the art of public speaking
riverine environment the environment around a river or river bank
royal assent the formal approval by the monarch's representative, and the final step necessary before a law comes into force
rule of law the legal principle that all citizens are subject to the law, and equal before the law, as it is upheld by independent courts
run-off precipitation not absorbed by soil, which runs over the land and into streams
salary fixed or regular payment for work completed or services performed
Samnites a mountain tribe of central Italy
Sanskrit ancient Indian language used in classical Hindu literature
sarcophagus stone or wooden coffin (often inscribed or decorated) in Egypt
scarcity the economic problem of having unlimited needs and wants, but limited resources to satisfy them
scribe citizen who could read and write and was trained to keep records
sea change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small coastal town
seasonal describes an employee who usually works during a season, such as winter or the fruit-picking season
secondary sources reconstructions of the past written or created by people living at a time after the period that the historian is studying
sediment the material that settles at the bottom of a liquid
Senate governing body in ancient Rome, (in theory) an advisory body of ex-magistrates
services actions done for you by others to satisfy your needs and wants
shadoof irrigation device used to lift water from the river
shell midden a mound of shells and other waste material marking the site of an ancient community

significance the importance assigned to particular aspects of the past; for example, events, developments, movements and historical sites.
site a place where there are traces of past human activity
soak place where groundwater moves up to the surface
socially responsible management the decisions made by the business owner reflecting the business's obligations to the wellbeing of society
southern oscillation a major air pressure shift between the Asian and east Pacific regions. Its most common extremes are El Niño events.
sovereign a king, queen or emperor
specialisation a method of production where a worker, business or nation focuses on the production of a limited range of goods or services in order to increase production and make the most efficient use of resources
species a group or classification of living things
stadia the plural form of stadium, which is a measure of about 200 metres
stalemate a situation in a contest or conflict in which neither side can defeat the other
standard of living quality of life as measured by the amount of money made by an individual or household (using income per capita or income per household)
strata (singular: stratum) distinct layers of material beneath the ground, built up over time, that provide information for archaeologists and geologists
subcontinent large section of a continent (e.g. the Indian subcontinent)
subjective subjective information is where information is presented based on opinion or bias
subsistence farming a form of agriculture that provides food for the needs of only the farmer's family, leaving little or none to sell
target market a market at which a product is deliberately aimed
temperate climate climate with generally warm summers and cool winters, without extremes
tenant farmers poor farmers who rented small plots of land
Thracian a native of the Roman province of Thracia
timeline a diagrammatic tool representing a period of time, on which events are placed in chronological order
trade the activity of buying, selling or exchanging goods and services between producers and consumers and/or countries
tree change the act of leaving a fast-paced urban life for a more relaxing lifestyle in a small country town, in the bush, or on the land as a farmer
trend the direction in which something is developing, moving or changing
trial the court process to determine whether someone committed a criminal act
tribute riches given by a state to acknowledge submission to another state or ruler
turbine a machine for producing power, in which a wheel or rotor is made to revolve by a fast-moving flow of water, steam or air
undernourished not getting enough food for good health and growth
unicameral a parliament with only one house
uranium radioactive metal used as a fuel in nuclear reactors
useful source the information helps to answer your research or focus questions
utopia a perfect social and political system
Valley of the Kings gorge on the Nile in Upper Egypt that contains many royal tombs
vassal state a state whose ruler recognises another, more powerful ruler as his overlord
villein a poor farmer who worked the land of a big landowner and had fewer rights
virtual water all the hidden water used to produce goods and services
virtue moral standard or value
vision a statement expressing where a business is going or what it will be like
wage payment for work completed or services performed, usually dependent on hours worked per week/month
wants goods or services that are desired in order to provide satisfaction to the user, but which are not necessary for survival or to meet the basic standard of living in a community
warlords generals from powerful landowning families

water footprint the total volume of fresh water that is used to produce the goods and services consumed by the individual or country

water scarcity a situation that occurs when the demand for water is greater than the supply available

water stress a situation that occurs in a country with less than 1000 cubic metres of renewable fresh water per person

wellbeing an overall measure of quality of life

Westminster system the parliamentary system of Great Britain, which has been copied and adapted by many other countries including Australia. It is called that because the British Parliament meets in a building called the Palace of Westminster.

wilderness a natural place that has been almost untouched or unchanged by the actions of people

word-of-mouth the passing of information about a business from a satisfied customer to prospective customers

work human labour — whether paid or unpaid, including voluntary labour

working conditions refers to all those things an employer has agreed to provide in exchange for the employee's work, ranging from the physical work environment to hours of work, rates of pay and leave entitlements

work–life balance a balance between working time and leisure/recreation

Xiongnu the ancient Chinese name for the nomadic Turkic tribes of Central Asia

zoning regulations the decisions made by local council outlining the purpose for which a building or land can be used. Zones are usually based on land uses such as residential, commercial or industrial in the future.

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