Third Edition

OXFORD HUMANITIES

Victorian Curriculum

7

VICTORIAN CURRICULUM VERSION 2.0

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Mark Easton | Maggy Saldais | Sarah Coleman
Geraldine Carrodus | Katrina Davey | Vladimir Dumovic
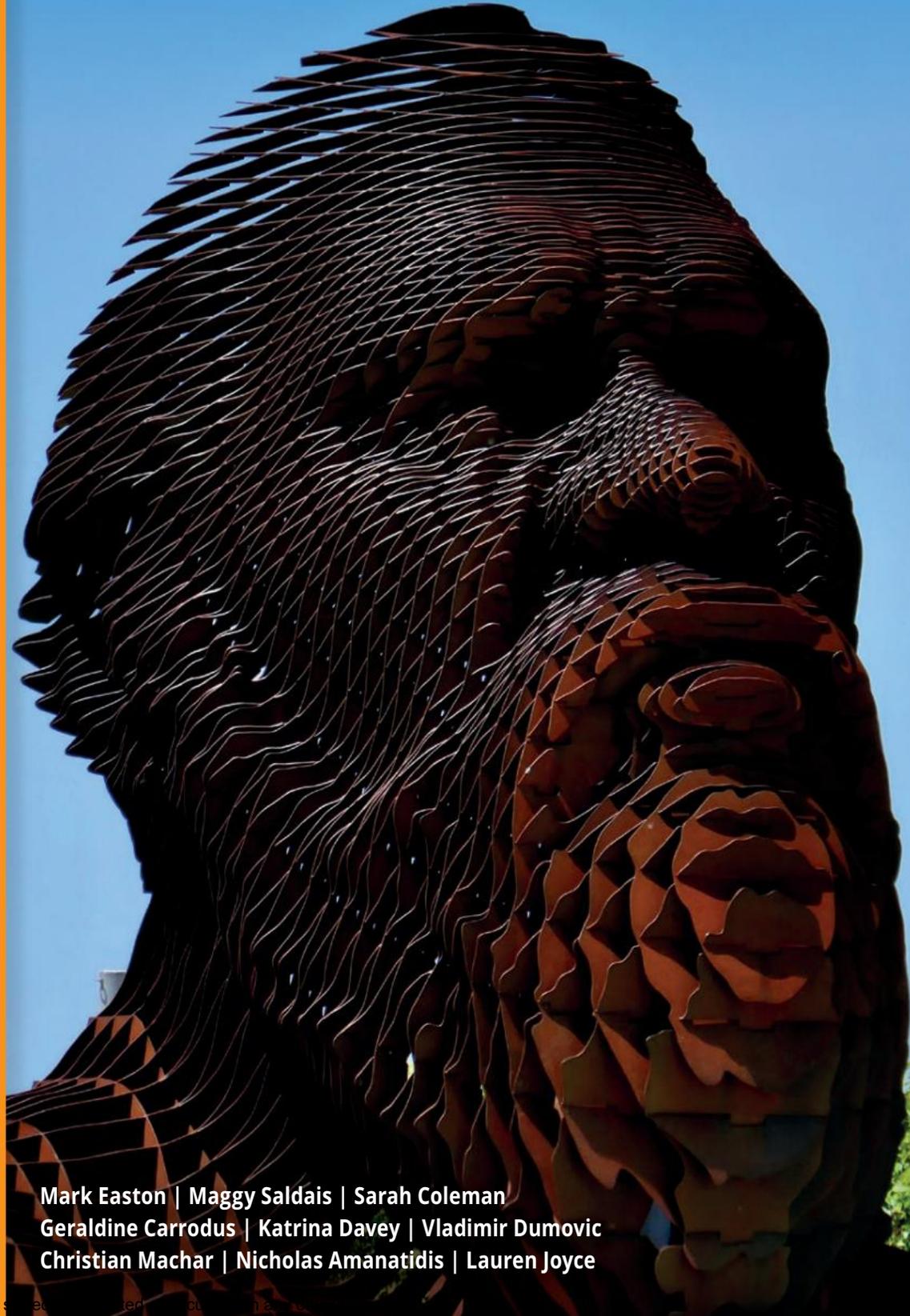**Christian Machar | Nicholas Amanatidis | Lauren Joyce**

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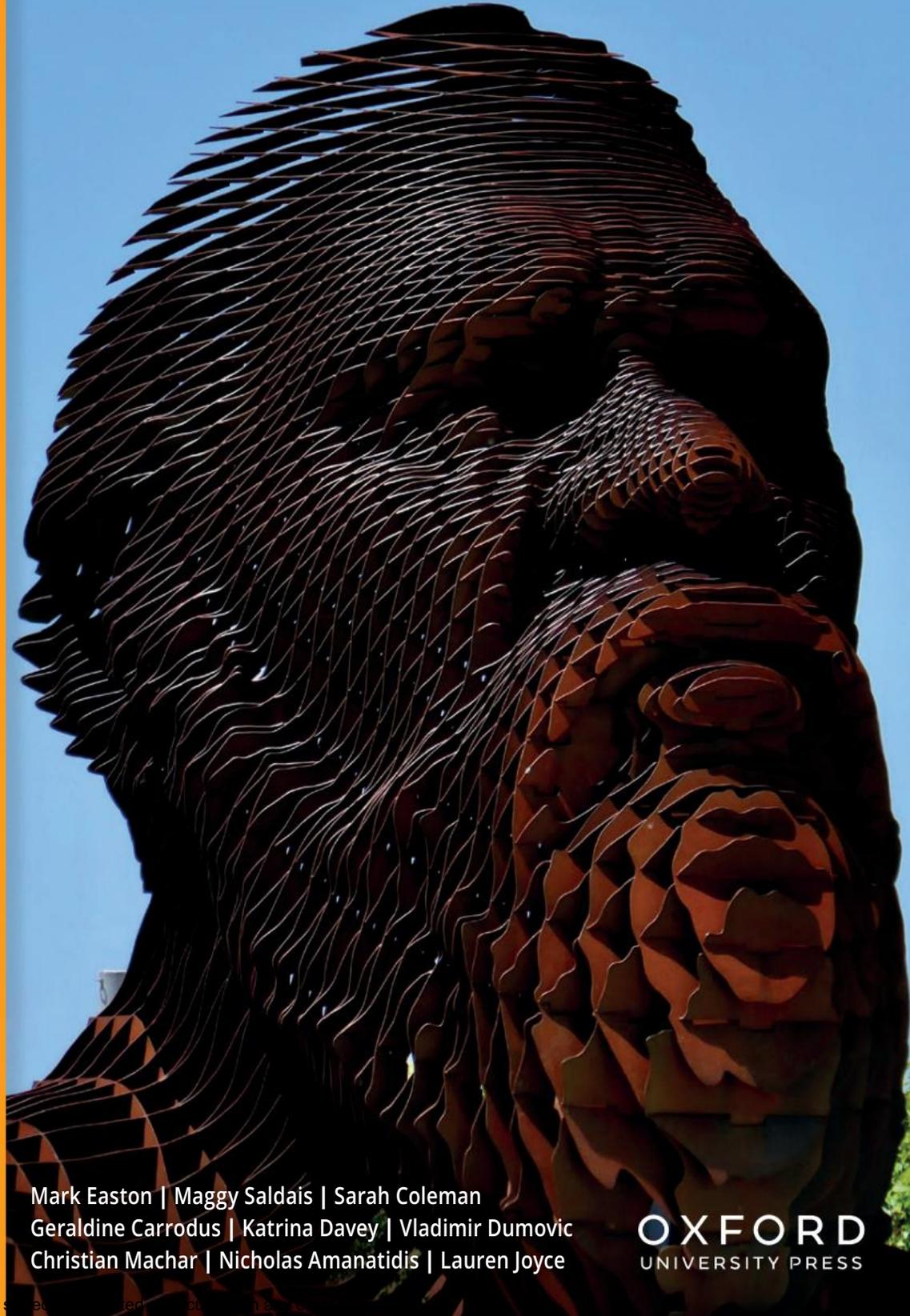Christian Machar | Nicholas Amanatidis | Lauren Joyce

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The authors and publisher of *Oxford Humanities Victorian Curriculum* Third Edition would like
to thank Emily Yates (Bundjalung) for her review of content concerning First Nations peoples
of Australia.

Acknowledgement of Country
Oxford University Press acknowledges the Traditional Owners of the many lands on which
we create and share our learning resources. We acknowledge the Traditional Owners as the
original storytellers, teachers and students of this land we call Australia. We pay our respects
to Elders, past and present, for the ways in which they have enabled the teachings of their rich
cultures and knowledge systems to be shared for millennia.

Warning to First Nations Australians
Aboriginal and Torres Strait Islander peoples are advised that this publication may include
images or names of people now deceased.

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About this course

Contents by skill

Throughout Humanities, you will study four distinct subjects: Geography, History, Economics & Business and Civics & Citizenship. Each of these subjects has its own set of key skill areas that you will learn about and develop through the course of your study. This table of contents shows where you can find the opportunities to practise these skills, both in the book and on Oxford Digital. For more information on the key skill areas listed, visit the Toolkit for each subject.

Geography

Curriculum sub-strand	Key skill	Practise the skill	Lesson
Geographical inquiry	Asking questions	Researching a location from afar	4.7
		Investigating who makes policy in Australia	4.12
	Collecting information	Writing a basic fieldwork report	1.4
		Drawing climate graphs	3B, page 104
		Creating a line graph	4.4, page 132
		Reading population pyramids	4.6, page 139,
		Accessing census data	4B, page 161
		Interpreting graphs	5A, page 184
	Conducting fieldwork	Conducting fieldwork	3.8
		Conducting a survey and collating the results Survey form template Survey results table	4A, page 145,
		Completing a map survey Completing a street survey Conducting fieldwork	5B, page 197,
		Capturing and annotating a geographical photo	5C, page 208
	Analysing maps	Understanding BOLTSS features Understanding direction Understanding six-figure grid referencing and topographic maps	1.5
		Using a map legend and scale	2A, page 54
		Using a topographic map	2B, page 69
		Collecting & representing data	4.4
		Using GIS maps	5.1,page 166
	Identifying patterns and relationships	Using maps to describe change	3A, page 95
		Interpreting a flow map	3.10
		Reading a weather map	3C, page 117
		Interpreting a proportional circle map	4.5

Curriculum sub-strand	Key skill	Practise the skill	Lesson
Geographical inquiry (continued)	Interpreting geographical images	Using satellite images	2C, page 79
		Analysing change	3.11
		Comparing different types of geographical images	5.11
Concluding and decision making	Representing data	Distinguishing between qualitative and quantitative data	1.4
		Drawing a concept map	4.8, page 148
		Reading a scatterplot	5.8
	Concluding and decision making	Concluding and decision making	4.1
Communicating	Communicating	Communicating	2.14
		Communicating	3.13
		Justifying your response	4.3
		Communicating	4.13
		Proposing a response	5.15, page 205
		Communicating	5.16

History

Curriculum sub-strand	Key skill	Practise the skill	Lesson
Historical questions	Historical questions	Developing historical questions Asking questions and conducting research	6.2, page 216,
		Generating historical inquiry questions	11B
		Using the internet to find relevant and reliable sources	11C
		Generating historical inquiry questions	13D, page 472
Chronology	Chronology	Sequencing events Creating a timeline	6.3, page 220,
		Create a visual representation of a historical event	10D, page 377
		Ordering events chronologically	11.11
		Plotting events on a timeline	12C, page 422
Using historical sources	Using historical sources	Analysing primary and secondary sources	8A, page 281
		Using historical sources	8B, page 308
		Interpreting primary sources	10A, page 348
		Considering perspectives	10.4
		Understanding bias	11.4
		Assessing the usefulness of sources	11D

This skill can be practised using the key skill worksheet on Oxford Digital.

Contents by skill   ix

Curriculum sub-strand	Key skill	Practise the skill	Lesson
Using historical sources (continued)	Using historical sources (continued)	Analysing sources using DAMMIT	12A, page 392
		Understanding perspectives Using historical sources	12.5, page 396,
		Understanding purpose, perspectives and empathy	12D, page 429
		Understanding perspectives	13B, page 452
		Identifying features in visual sources	13C, page 463
		Identifying and analysing perspectives	14B
Continuity and change	Continuity and change	Exploring continuity and change and the Olympic Games Continuity & change	6.5, page 230
		Continuity and change in customs and ceremonies	8.6
		The use of fire	8.9
		Using a Venn diagram to help with comparison	11A
		Exploring changes in the Mauryan Empire	14.10
Causes and consequences	Causes and consequences	Exploring causes and consequences and the Great Wall of China Analysing causes & consequences	6.6, page 233,
		Julius Caesar's death	12.6
		The impact of causes and consequences	13A, page 438
		Foot binding	13.5
Historical significance	Historical significance	Using primary sources as evidence	10B, page 358
		Chinese New Year	13.7
		The historical significance of visual sources	14A
Communicating	Communicating	Creating and delivering an audiovisual presentation	8C, page 315
		Creating a flow chart	10C, page 370
		Communicating	10.14
		Using historical terms and concepts Communicating	11.1 11.14
		Women in ancient Rome	12.5
		Writing an extended response	12B, page 402
		Communicating	12.15
		Communicating	13.14
		Creating and delivering an audiovisual presentation	14C
		Communicating	14.12

Note: Some skills may appear multiple times across History as not all modules are compulsory.

Economics and business

Curriculum sub-strand	Key skill	Practise the skill	Lesson
Investigating	Investigating	Interviewing an entrepreneur	17A, page 517
Interpreting and analysing data and information	Interpreting and analysing data and information	Analysing house prices Interpreting & analysing data and information Why do house prices increase?	16.3, page 498,
Evaluating, concluding and decision making	Evaluating, concluding and decision making	Evaluating pros and cons Evaluating, concluding and decision making Making a list of pros and cons	15.4, page 485, 16A, page 496
Communicating	Communicating	Using a model Communicating Constructing a demand graph Continuity & change	16.2, page 493, 16B, page 505 16.6

Civics and citizenship

Curriculum sub-strand	Key skill	Practise the skill	Lesson
Investigating contemporary civics and citizenship issues	Investigating contemporary civics and citizenship issues	Asking what, who, where, how and why Investigating contemporary civics and citizenship issues	18.2, page 525,
		Collecting information	19B, page 559
		Conducting a census survey Investigating in the name of the Torres Strait Islands	20A, page 574 20.2
Evaluating democratic institutions and systems	Evaluating democratic institutions and systems	Recognising different points of view	18.3, page 529,
		Comparing Australia's parliamentary system to the English system	19A, page 550
Participating in civic processes	Participating in civic processes	Exploring active citizenship	20.3
Communicating	Communicating	Communicating	19.9
		Writing a letter to your local MP or to the prime minister	20B, page 580
		Communicating	20.6

This skill can be practised using the key skill worksheet on Oxford Digital.

Task words

What are task words and why do we use them?

A task word is a verb or "doing word" that helps you understand how to answer a question. For example, the word "describe" is a task word because it requires you to remember what you know about something and talk about its features. Task words are commonly shown in bold in the questions throughout this book. You will encounter a variety of task words as you learn new information.

Common task words and the activities associated with them are shown in Source 1. Understanding these task words and the activities behind them will help you work out how to best answer a question.

Some task words need more thinking and understanding than others. For example, if you were given a picture of an apple and an orange, and asked to name the two fruits, you might instantly remember "apple" and "orange" and could write the names down without much trouble. However, if you were asked to compare the two fruits, you would need to think about the two fruits and identify at least one similarity and one difference between them. In this sense, compare requires a deeper level of thinking than name.

Throughout this book you will notice that the questions in the Check Your Learning boxes are categorised in the following order:
- Review and understand
- Apply and analyse
- Evaluate and create

This is because working in order from "Review and understand" to "Apply and analyse" and finally to "Evaluate and create" helps your learning process.

Source 1 shows the thought processes required for each task word, and the category it belongs to.
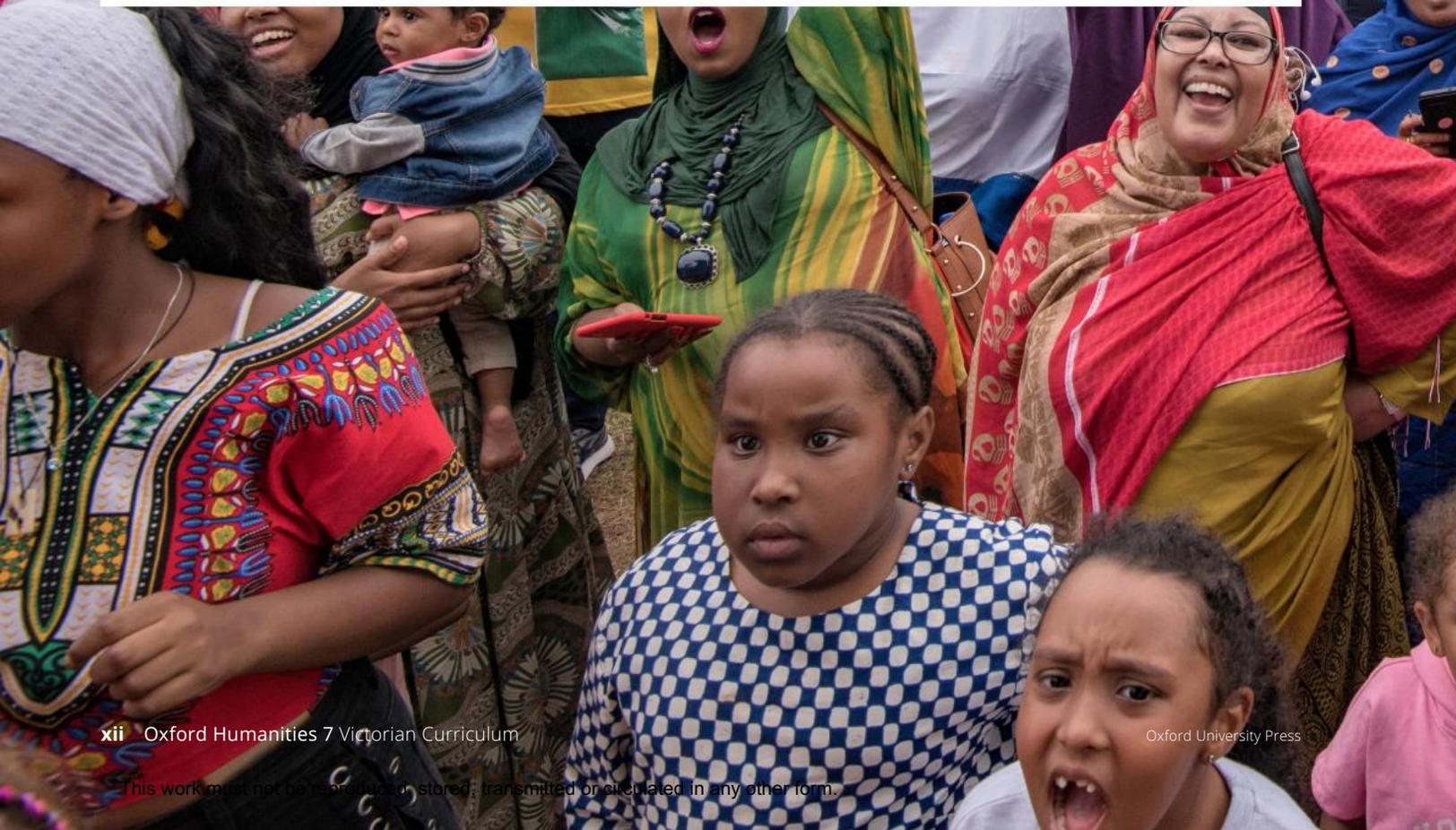
Source 1 The definitions and categories associated with task words

Task word	Definition	Category
Identify	To state or name a feature or factor	*Review and understand –* recall information from permanent memory and activate and transfer knowledge from your permanent memory to your working memory
Describe	To give a detailed account of something	
Define	To state the meaning or qualities of a word or phrase	
Outline	To briefly provide the main idea or point without going into too much detail	
Summarise	To give an overview of something in your own words	
Suggest	To put forward an idea for consideration	*Apply and analyse* – use your knowledge in specific situations and your reasoning to go beyond what was directly taught
Explain	To make a situation, idea or concept clear or plain, by describing it in detail and adding supporting evidence, such as quotes, data or information from a source	
Analyse	To examine a complex feature, issue or concept by breaking it down into smaller parts and showing how they relate to each other	
Classify	To divide into parts or categories in a logical way	
Compare	To explain how two (or more) things are similar and how they are different	
Examine	To consider something in detail	
Distinguish	To explain the differences and distinctive characteristics. This is different to comparing two things, as you need to explain how two things are different.	
Determine	To decide or come to a conclusion about something	*Evaluate and create* – develop ideas and use higher order analysis skills to go deeper
To what extent	To describe the degree or level to which a statement or opinion or contention is correct. You might think it is totally correct, somewhat (a little bit) correct, or not correct at all.	
Justify	To show (or prove) your statement or opinion by using evidence or examples to support yourself	
Discuss	To give a reasoned argument for and against a particular issue, including strengths and weaknesses if appropriate. you can also give your opinion – and you should if the question asks you to	
Evaluate	To identify key features of something, and assess their strengths and weaknesses; to provide your opinion about the overall worth of what you are evaluating	
Create	To bring something into existence	
Research	To investigate a topic using library and internet resources in order to find out more about it	

Introducing *Oxford Humanities 7 Victorian Curriculum* (Third edition)

Oxford Humanities 7 Victorian Curriculum (Third edition) has been purpose-written to meet the requirements of the Victorian Curriculum Version 2.0 Humanities. As well as offering complete coverage of Geography, History, Economics and Business, and Civics and Citizenship, it includes a range of flexible print and digital products to suit your school and incorporates a wide variety of features designed to make learning fun, purposeful and accessible to all students!

Toolkit modules
- Standalone toolkit modules for each subject explicitly teach skills relevant to the subject.

Skills in context tasks
- Skills in context tasks provide in-depth skills practice, encouraging students to apply the knowledge and skills they have learnt to a new case study, event or issue.

Margin glossary terms
- On-page glossary definitions for key terms support students at their point of learning.

Key skills
- Key skill activities enable students to practise and master skills in each subject.

Extend your understanding
- These activities challenge students to conduct further research to deepen their understanding of an issue or skill.

Lesson-based approach
- Module content is sequenced in numbered lessons to support teaching and learning.

Cognitive verbs
- Questions are generally phrased using bolded cognitive verbs, which state what is expected of a student and help develop their understanding of questions beyond "who", "what", "where", "when" and "why".

Integrated digital resources
- Digital icons signpost a range of engaging resources that can be accessed via Oxford Digital, including key content videos, quick quizzes and interactive maps.

Source materials
- A rich variety of sources, such as photographs, maps, illustrations, text extracts and graphs will spark students' curiosity and provide rich learning activities.

Module review
- At the end of each module, a review activity gives students a chance to consolidate their knowledge and apply the skills they have learnt.

Easy-to-access text and design
- The text is written in clear, concise language and the text design is engaging and easy to navigate.

Structured questions
- Questions for each lesson are graded from lower- to higher-order, catering for a range of abilities.

Integrated STEAM projects
- Take the hard work out of cross-curricular learning with engaging STEAM projects. Two fully integrated projects are included at the end of each book in the series, and are scaffolded and mapped to the Science, Maths and Humanities curricula. The same projects also feature in the corresponding Oxford Humanities and Oxford Science series to assist cross-curricular learning.

Problem-solving through design thinking
- Each STEAM project investigates a real-world problem that students are encouraged to problem-solve using design thinking.

Full digital support
- Each STEAM project is supported by a wealth of digital resources, including student booklets (to scaffold students through the design-thinking process of each project), videos to support key concepts and skills, and implementation and assessment advice for teachers.

Key features of oxforddigital

Oxford Digital has been designed in consultation with Australian teachers for Australian classrooms. The new platform delivers fully accessible, reflowable course content with videos, auto- and teacher-marked activities, interactives and more embedded right where you need them.

There's also a range of unique features designed to improve learning outcomes.
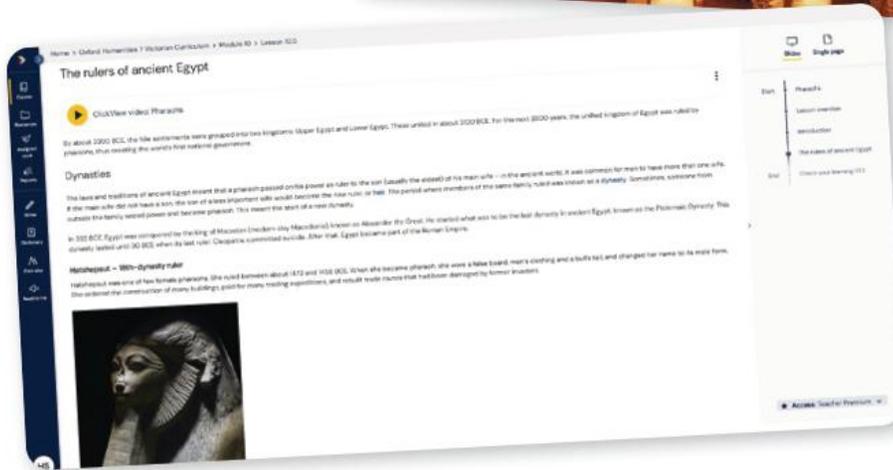
As a student, you can:

> **view** all Student Book content in a **fully accessible**, reflowable format that's delivered in bite-sized chunks so you can work at your own pace

> use the "Read to me" button to have any part of the course read aloud to you

> **highlight, take notes, bookmark pages,** or define words with the built-in **Australian Oxford Dictionary**

> **watch hundreds of concise key content videos** to help you revise anything you don't understand, catch up on things you've missed, or help you with your homework

> **complete** hundreds of interactive questions and quizzes as you work through the content and get the answers and results sent to you.
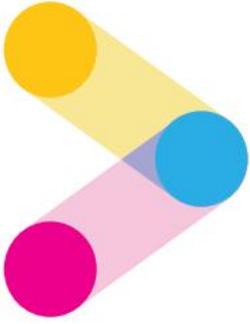
As a teacher, you can:

> **elevate** your teaching and **reduce planning and preparation time** with **Live Lesson mode**. This is an Australian first that lets you upgrade from traditional print-based lesson plans to **fully interactive, perfectly sequenced and timed interactive lessons complete with classroom activities** that are ready to go

> **personalise** learning for every student and **differentiate** content based on student strengths and weaknesses. Assign support or extension resources to any student using a range of differentiation resources

> begin every lesson with ready-made **learning intentions** and **success criteria**

> **revolutionise** your planning, marking and reporting with powerful analytics on student performance and progress.

  · **Assessment report** shows how students are performing in each online interactive assessment, providing feedback for teachers about areas of understanding

  · **Curriculum report** summarises student performance against specific curriculum content descriptors and curriculum codes
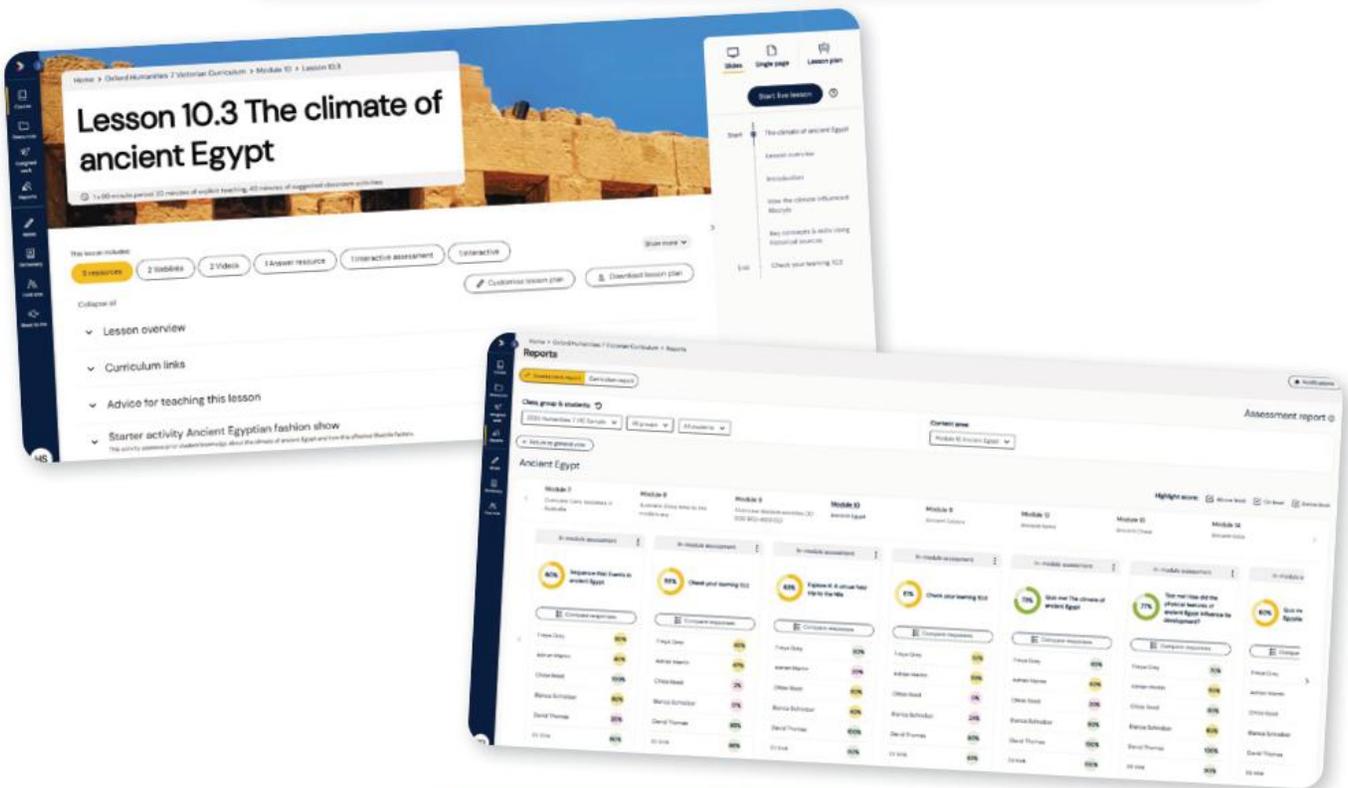
Find out more

For a complete overview of all the features and benefits of Oxford Digital:

> activate your digital access (using the instructions on the inside front cover of this book) and click on "About this course" in the Course menu.

Part 1

Geography
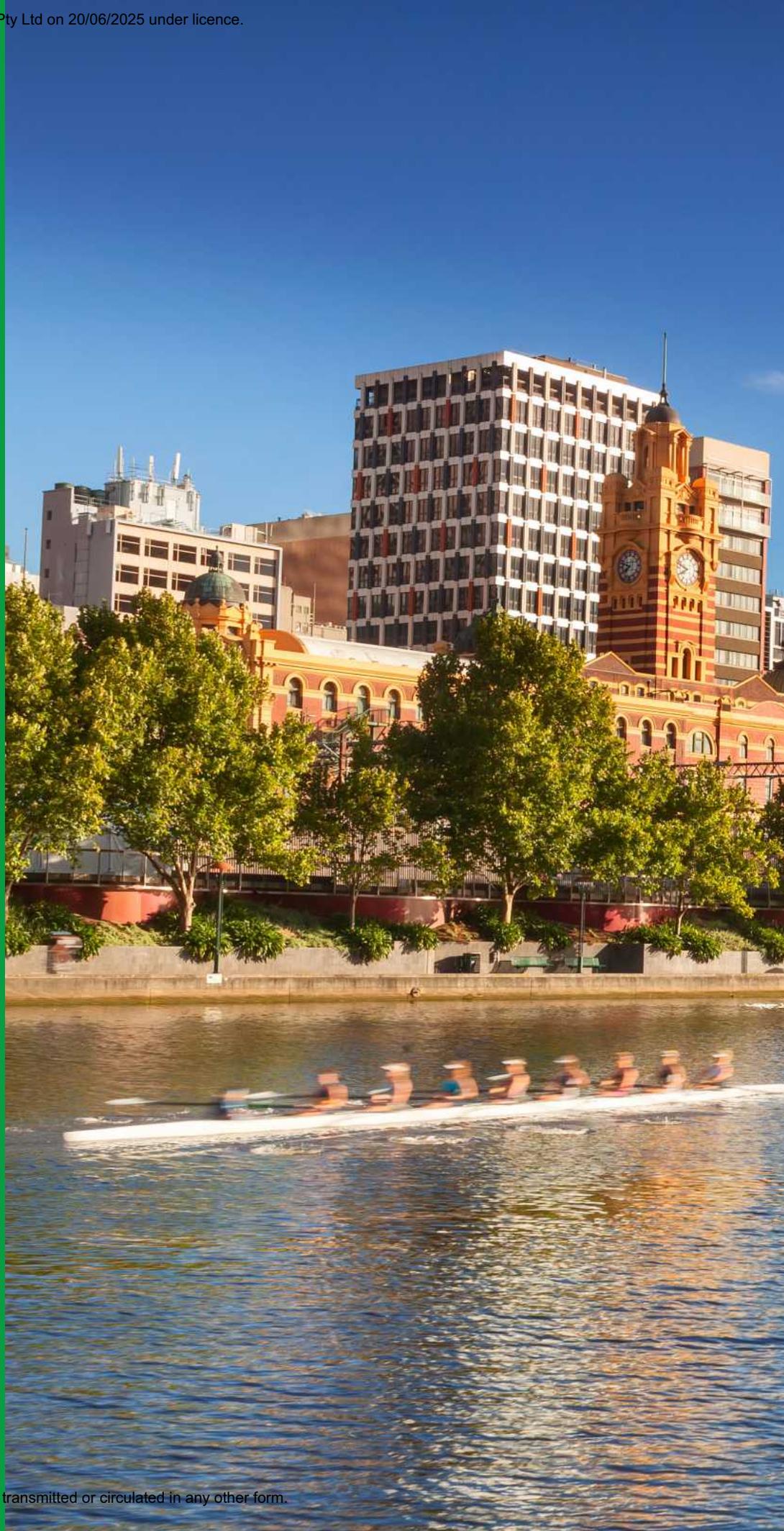
Overview

Concepts and skills

Water in the world

Place and liveability

Module

1

The geography toolkit

Sub-strand: Geographical skills

Overview

Geography is the study of the world around us. Studying geography helps us understand how the Earth works. This includes natural processes (such as volcanoes, floods and the weather) as well as human activities (such as mining, tourism and building cities).

Geographers use a range of key concepts and key skills to study the world. Each of these skills is a tool that you can use to better understand your world.

Geographers are curious. They look at the Earth's features and always want to know more about them. For example, when they look at Cathedral Rock, shown in Source 1, they wonder about many aspects of this natural feature. They want to know about:

- its size
- its location
- the way it is changing
- the types of rocks in the area
- the way it is used by people
- its significance to Aboriginal peoples
- the types of plants and animals in the area.

Source 1 A view of Cathedral Rock in Mount Buffalo National Park, Victoria. The park is located on the land of the Taungurung Aboriginal people.
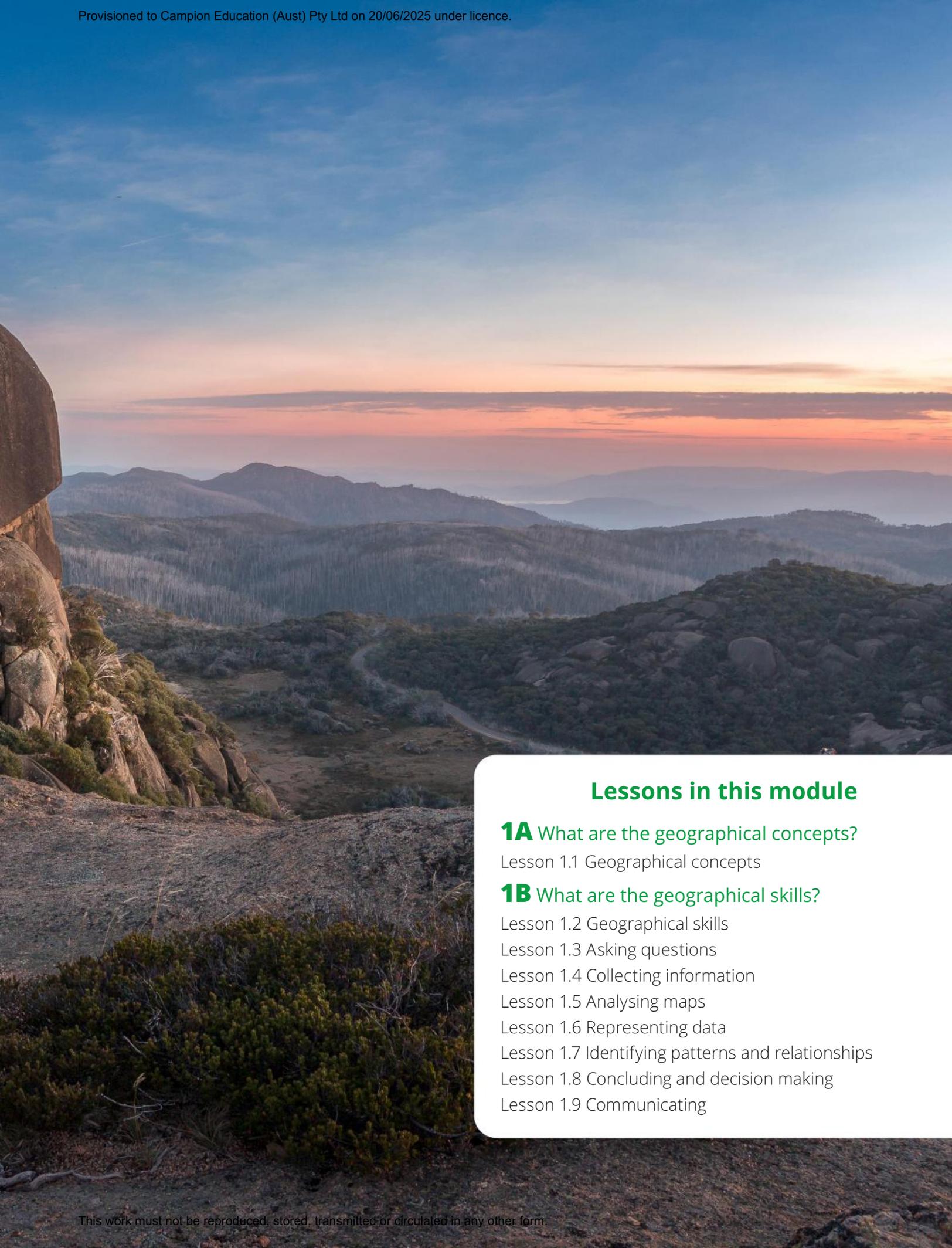
Lessons in this module

Lesson 1.1
Geographical concepts

Introduction

Geographers use seven concepts to help investigate and understand the world. As you learn to use each of the key ideas you will begin to think like a geographer. At times you will use several of these at once, while at other times you may focus on just one.

The seven key concepts in geography are:

1 place
2 space
3 sustainability
4 interconnection
5 environment
6 change
7 scale.

Place

Places are parts of the Earth's surface that are identified and given meaning by people. A place can be as small as your bedroom or as large as the entire planet! The life of every person and animal on Earth is influenced by place. Places can be natural (shaped by the environment and largely unchanged by humans) or built (constructed by humans). Places determine our relationships with one another (for example, our closest relationships are likely to be with people in the same place). The environmental and social qualities of a place also influence the way we live. Climate, landscapes, types of plants and resources, transport networks, entertainment venues and workplaces all have a major impact on the way we live.

For Aboriginal and Torres Strait Islander peoples, Place also has a deeper spiritual meaning. For Aboriginal peoples, Place means the special places within Country. These can include places of ceremony, initiation, birth and learning, as well as places for Sorry Business. They also include landmarks related to the ancestor spirits and creation. For Torres Strait Islander peoples, Place refers to spaces that individuals or groups occupy and regard as their own, and they may have spiritual significance. These spaces include lands, waters and the sky.

Source 1 Some Australians live in the world's most remote places, such as the Pilbara region of Western Australia.

Geographers use the concept of place when conducting any **geographical inquiry**. Just as place influences people, people also influence place. The ways in which we live, and the actions we take, change the places in which we live. Geographers investigate the outcomes of these changes.

Space

To a geographer, the concept of space is the way that things are arranged on the Earth's surface. Geographers investigate spaces, look for patterns and try to find explanations. The concept of space helps them to do this. It has three main elements:

1   location – where things are located on the Earth's surface
2   spatial distribution – the shapes and patterns in which things are arranged on the Earth's surface
3   organisation – how and why things are arranged and managed by people on the Earth's surface.

Geographers investigate the way that people use and change the space in which they live. They recognise that different groups of people use space in different ways and that this changes over time. They also investigate the ways in which improvements in transport and communication have made links between places quicker and easier and how this is changing the world.

The concepts of place and space can be difficult to separate, but it will help if you remember that places can be divided into spaces. For example, a small place, such as your school, has different spaces. Each of these spaces has its own purpose. There are spaces for learning (such as classrooms and computer rooms), playing (such as playgrounds and playrooms), eating (such as the cafeteria or canteen) and running the school (such as staff rooms and administration buildings).

Larger places (such as your suburb, town or city) are also organised into different spaces. There are spaces for housing (such as homes for families), businesses (such as shops and offices), industries (such as factories and warehouses), entertainment (such as concert halls and theatres) and sport and recreation (such as stadiums, parks and gardens).

geographical inquiry a process that geographers use to guide their investigations of places, people and issues

Source 2
The way our spaces are organised can affect how we access the things we need.

Sustainability

The concept of sustainability relates to the ongoing capacity of Earth to maintain all life. To live sustainably, we must manage the Earth's resources so that they can be used to meet our own needs without depleting these resources for future generations.

Sustainability is an important concept for geographers. They use it to investigate how natural and human systems work, and to understand how resources can be managed in such a way that they will be sustained into the future.

Many of the world's resources (such as oil, coal and natural gas) are non-renewable. This means that if we continue to use them they will run out one day. Other resources (such as wind, forests, solar and water) are renewable. This means that they replace themselves naturally, or can be replaced to meet the needs of society. Sustainability encourages us to think more closely about these different types of resources – the ways in which they are formed and the speed at which they are being used. It also encourages us to look more closely at renewable options and take greater care of the Earth. Actions to improve sustainability can operate at any scale: local, national, international or global.

Source 3
We must make sure we use the world's water resources in a sustainable way.

Interconnection

No place or thing on Earth exists in isolation. All environments and every living and non-living thing in them are connected. These connections can be on a local or global level.

Geographers use the concept of interconnection to better understand the complex links between natural and human processes that shape our Earth. Places and people can be linked through many different ways. These can be categorised as:

- natural processes, such as the water cycle and food chain
- human activities, such as the movement of people, the production and trade of goods, and the flow of investment and money linked within and between different countries.

Think of the Earth as a single living organism, much like the human body. Your brain, heart, lungs, stomach, arms and legs all work together as a single system to keep you alive and healthy. In much the same way, the Earth's living systems (such as climate, plants, animals, oceans, soils, atmosphere and energy) all function together and are interconnected. Even a slight rise in the Earth's temperature, for example, will affect the oceans (by damaging coral reefs and affecting fish populations and other sea creatures), the land (through failure of crops and drought) and the polar ice caps (by increasing sea levels and forcing millions of people to relocate their homes).
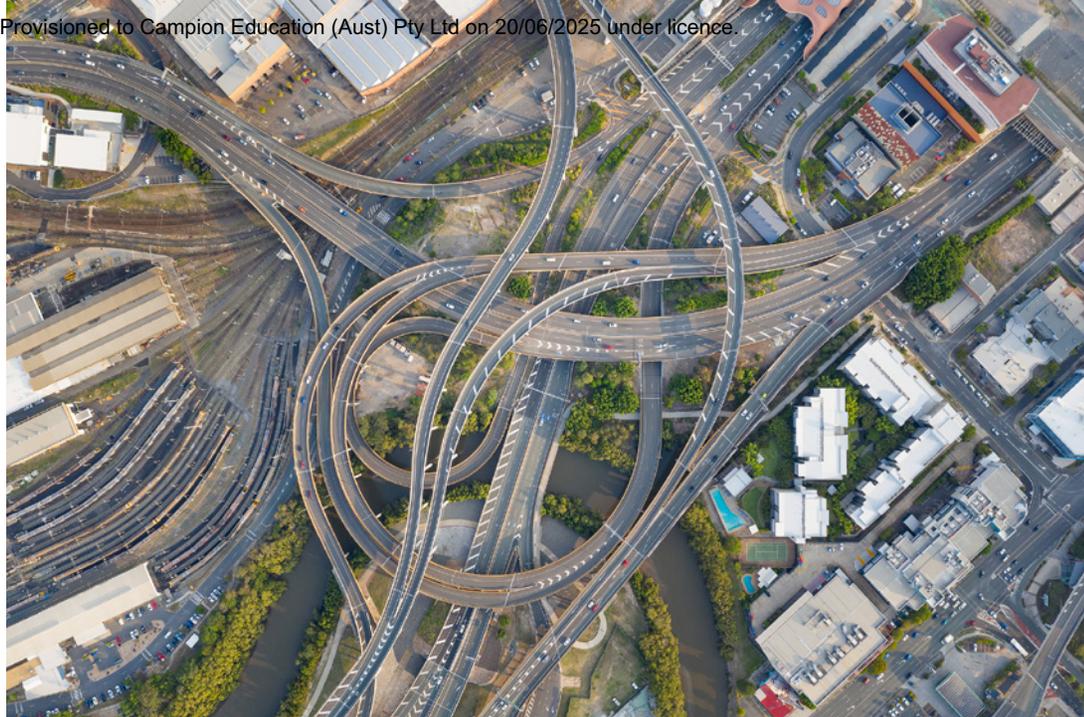
Source 4 Roads and railway lines connect places together and can help to make places more liveable.

Environment

Our world is made up of many different environments. Some environments are natural (or physical) such as deserts, grasslands, mountains, coral reefs, forests, oceans and ice caps. For an environment to be considered natural, its soils, rocks, climate, plants and animals must remain largely untouched by humans. Today, there are very few truly natural environments left on Earth.

Other environments have been so altered by humans that very few natural features remain. These environments are known as built (or human) environments and include large cities, towns, suburbs and vast areas of farmland. Human environments not only affect the natural features, they also affect the climate. For example, a large city such as New York will often be a few degrees hotter than the surrounding areas because concrete in the buildings traps the Sun's heat. Most environments on Earth are now a combination of natural and human features.

The study of different environments helps geographers to better understand and appreciate natural processes, such as how weather works, how mountains are formed and how rainforests and coral reefs grow. The concept helps geographers to analyse the changes humans make to natural environments and better appreciate their impacts, so they can be managed more wisely.

Source 5 The quality of the environment can impact liveability.

Change

Changes are constantly happening on Earth. Some changes occur very rapidly and are obvious, while others take place over millions of years and are almost undetectable to us. The concept of change helps us to understand what is happening around us and how the Earth has been shaped and changed by natural forces, such as climate, earthquakes, volcanoes, running water and storms. In more recent times, humans have shaped and changed the Earth to suit their own needs, but events such as volcanic eruptions and tsunamis are a reminder that powerful natural forces continue to alter the face of the Earth, regardless of what humans do.

Changes take place on many different levels, from personal and local right through to national and global. Small local changes that happen quickly, such as a tree falling over on your street, are often easy to observe and explain. Larger regional or national changes, such as an earthquake, can happen quickly and their effects can be widespread and have devastating impacts on places and people. Changes that take place on a global scale can take much longer. Global warming, for example, is a long-term change that happens over centuries or decades. Its widespread effects are becoming clearer each year.

Observing and understanding natural and human-made changes is an important part of any geographical inquiry. Geographers need to look at different types of changes, why they have occurred, over what time period they have occurred and what further changes may take place as a result. Sometimes changes can be positive, such as the conservation of plants and animals in national parks, while other changes can have negative consequences, such as the deforestation of native rainforests. Geographers play an important role in ensuring that change is managed in a sustainable way.

Source 6 The movement of water changes the landscape through which it flows.

Scale

The concept of scale is used to guide geographical inquiries. Geographers study things that take place on many different spatial levels – from small areas (such as a local park) to very large areas (such as the use of oil and coal all over the world). They use the concept of scale to look for explanations and outcomes at these different levels. A geographical inquiry into the ways that people use parks, for example, may be carried out at a range of scales (from smallest to largest):

- local – such as an inquiry into the number of daily visitors to a neighbourhood skate park
- regional – such as an inquiry into the types of visitors staying at campsites in the Gariwerd (Grampians) region of Victoria
- national – such as an inquiry into the yearly tourist numbers visiting national parks Australia-wide
- international – such as an inquiry into animal poaching in national parks and wild game reserves in different countries across Africa
- global – such as an inquiry into the use of all marine parks around the world and their effectiveness in protecting different species of marine animals.

Source 7 Geographical inquiries can be carried out on a number of different spatial levels: local, regional, national, international and global.

Local   Regional   National   International   Global
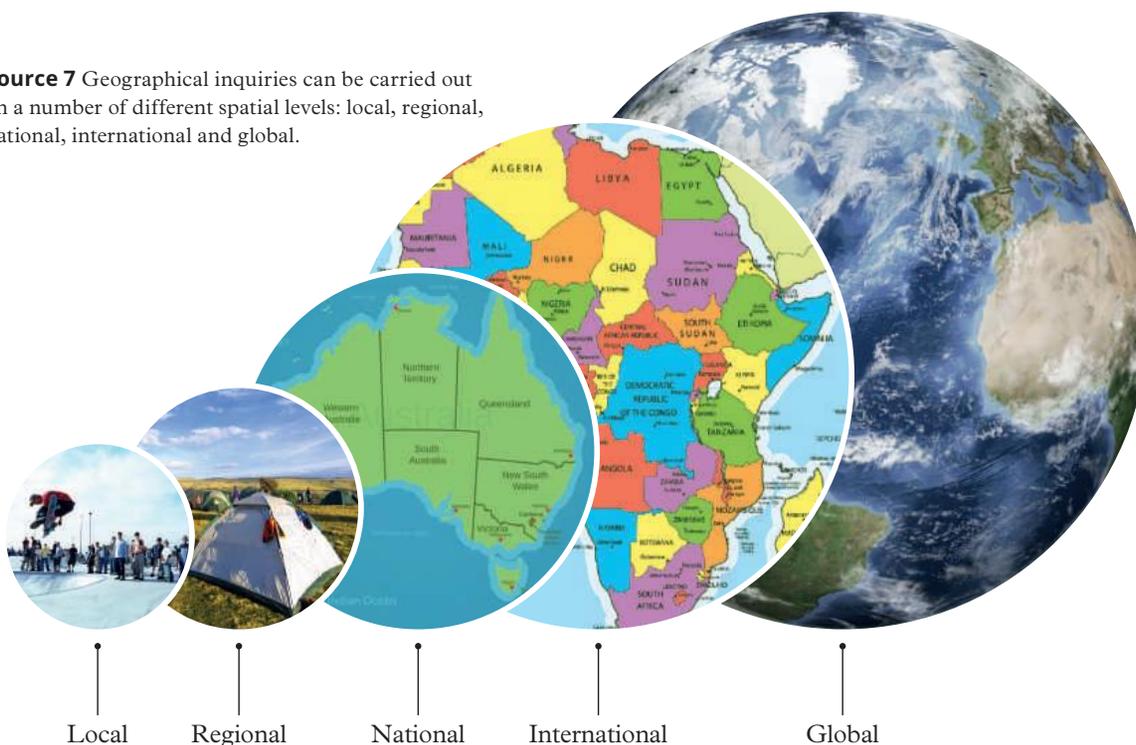
Check your learning 1.1

Lesson 1.2
Geographical skills

Introduction

Geographers look at the world around them, try to explain what they see, and look for ways to improve it. They aim to shape the world so that it is a better place for people and for the natural environment. To achieve these aims, they may undertake a geographic inquiry to explore an event, issue or challenge.

To solve problems through inquiry, geographers need a wide range of skills. In studying geography, you will gradually master each of these skills. You will find some of them easy to master, while others may take a little longer. As you develop each new skill, you will gain another important tool for explaining the natural processes and human activities that shape our amazing planet. The geographical skills are:

1 Asking questions
2 Collecting information
3 Analysing maps
4 Representing data
5 Identifying patterns and relationships
6 Concluding and decision making
7 Communicating.

Each of the skills you will learn over the course of this year is explained in this section. It might help you to think of each of these skills as individual tools in your toolkit.
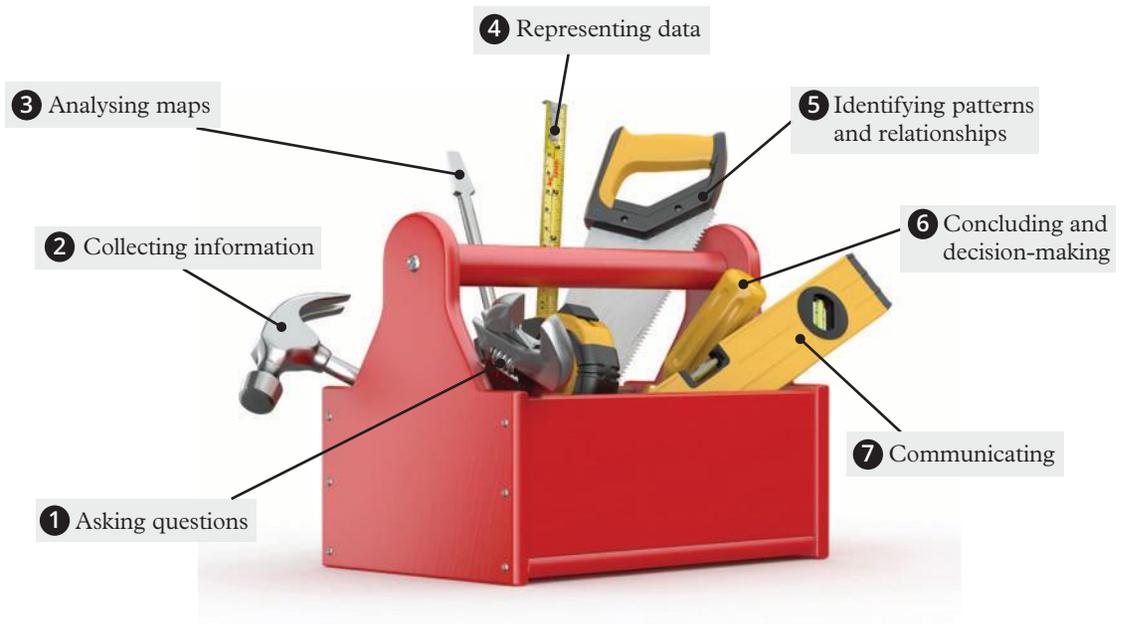
Source 1 As you explore geographic problems and ways to respond to them, you will use a range of different skills. Each of these skills is like a tool in a toolkit.

Lesson 1.3
Asking questions

Introduction

The first stage in a geographic inquiry is simple but important. It is to look at an issue, a challenge or an event and to begin to ask questions about it.

For example, imagine that you are watching the news on television and see a report of a cyclone in Bangladesh. As a geographer, you would be interested in finding out more about this event. Your enquiry might start with simple questions such as "What happened?" or "Where is it?". More complex questions such as "How did people respond to this event?" or "Are cyclones becoming more common?" would give you the opportunity to explore this disaster in more depth.

The seven geographic concepts (see Lesson 1.1 Geographical concepts, page 6) may be a good starting point for developing your questions. For example, when thinking about the facilities provided for young people in your local area you could use the concept of space to ask if everyone in your area has equal access to these facilities. Or you could use the concept of change and ask why a nearby new housing estate has so few facilities for young people.

Once you have observed your issue, challenge or event and developed your geographical questions, it is time to plan your geographical inquiry.

Source 1 Uluru is a place of great spiritual significance to Aboriginal peoples. It is also a popular tourist destination.

Key skill Asking questions

Planning a geographical inquiry

Look at the image of Uluru in Source 1. As a geographer, no longer will you look at something in your world, such as Uluru, and think of it just as an interesting place to visit. Instead, you will begin to ask questions about how it was formed and came to look the way it does. You will also start to ask questions about the area in which it is located, its vegetation, how it is managed and its significance for Aboriginal peoples.

Here is an example of how to begin planning a geographical inquiry into Uluru. You can see that this geographer has chosen one key inquiry question to focus on, and made some notes about how they might begin to find answers.

Source 2 A guide for planning the direction of a geographical inquiry into Uluru.

Key inquiry question	Data needed	Possible sources of data
Is it a good thing that so many tourists visit Uluru?	• Information on the importance and significance of Uluru to the Anangu, who are the Aboriginal people in the area • Information on the management and maintenance of the park • Conduct fieldwork into visitor numbers	• Conduct fieldwork into visitor numbers • Create surveys and questionnaires for visitors to complete • Contact Parks Australia and Uluru-Kata Tjuta National Park for information on how the park is managed • Download resources from the Parks Australia website; for example, podcasts, maps, visitor guides, geological reports, audio tours and images

Check your learning 1.3

Lesson 1.4
Collecting information

Collecting data

Geographers use a wide variety of tools to collect information. In any geographical inquiry, you will collect data that helps you answer your key question.

▶ **Key content video:** Types of data

Primary and secondary data

Geographers find answers to their questions in many places. They may collect information themselves by interviewing people, taking photographs, making sketches out in the field or conducting surveys and questionnaires. This kind of information will generally only be relevant to a particular inquiry and is called **primary data**.

Often a geographer collects information that supports their inquiry but has not been specifically collected or designed by the geographer for the inquiry. This type of information is called **secondary data**.

Source 2 shows some examples of primary and secondary data.

primary data data for a geographical inquiry that was collected in the field by a geographer conducting the inquiry (e.g. survey data, hand-drawn maps or photographs)

secondary data data used for a geographical inquiry that was not collected by the geographer conducting the inquiry (e.g. textbooks, atlases and government websites)

Source 1
This elevation model, made after processing aerial pictures taken from a drone, is an example of a primary resource.
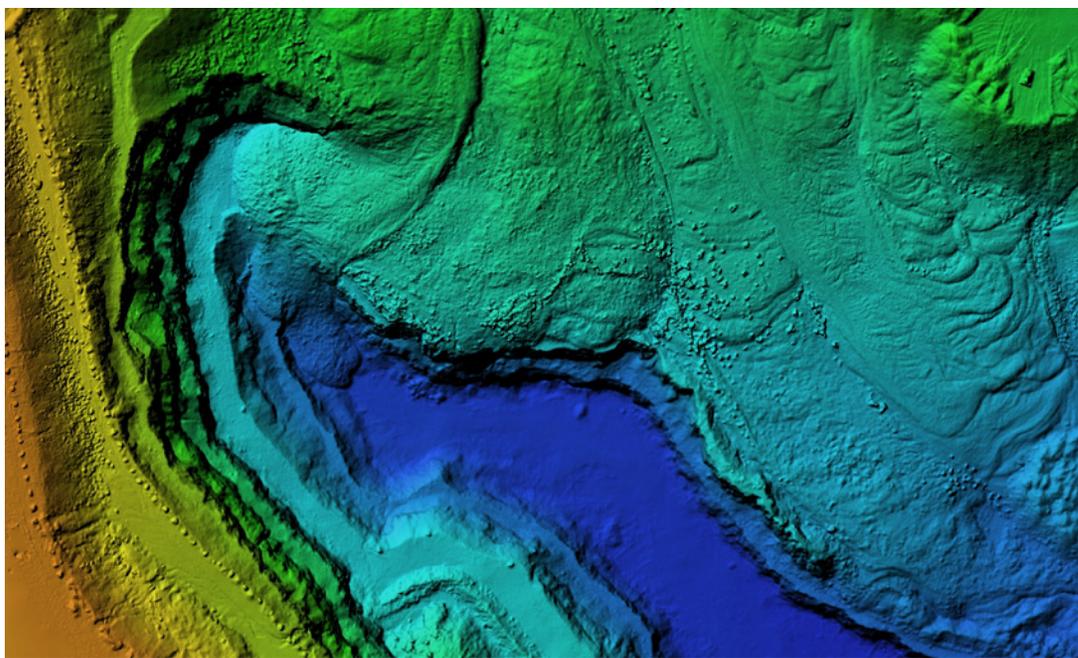
Source 2 Examples of primary and secondary data.

Some examples of primary data	Some examples of secondary data
• Hand-drawn maps and field sketches • Photographs and images taken for the inquiry • Questionnaires and surveys designed and created for the inquiry • Graphs created from data (such as number of visitors, number of cars counted, and temperature and wind statistics) gathered by the geographer for the inquiry	• Information from textbooks, atlases, maps, graphs, reports and websites that were not created specifically for the inquiry • Data that was collected by a government department (such as **census** data), the media, companies and other organisations and was not collected specifically for the inquiry

census an official count or survey of something, especially a country's population

Quantitative and qualitative data

Primary and secondary data provide either **quantitative data** or **qualitative data**. Quantitative data includes anything that can be measured and recorded as numbers (for example, Uluru is 3.6 kilometres long and 1.9 kilometres wide and has a circumference of 9.4 kilometres). Qualitative data, on the other hand, includes anything that can be recorded in words (for example, Uluru, one of Australia's best-known natural landmarks, is very large).

Good geographical inquiries will always be based on a combination of primary and secondary data that is both quantitative and qualitative. Even though qualitative data is an important part of any geographical inquiry, quantitative data is considered more valuable because it is less open to personal interpretations and can be more accurately represented in graphs and charts. Before you move to the next stage of your inquiry, it is important to check that you have recorded all your data without errors and that it is balanced and fair. Your data should not reflect your personal opinions, emotions or attitudes; instead it should present the facts in a clear and concise way.

Source 3 shows some examples of quantitative and qualitative data.

quantitative data any information that can be recorded as numbers; e.g. Uluru is 3.6 kilometres long

qualitative data any information that can be recorded in words; e.g. Uluru is very large

Source 3 Examples of quantitative and qualitative data.

Some examples of quantitative data	Some examples of qualtitative data
• Climate and temperature statistics • Tourist numbers • Population figures (including birth and death rates) • Types and amounts of food grown • Plant and animal species and wildlife in certain areas • Forest clearance rates • Numbers of people killed in natural disasters	• Opinions • Points of view • Personal stories • Likes and dislikes • Feelings

Conducting fieldwork

Fieldwork is any geographical study that takes place outside the classroom or, as geographers say, "in the field". It can be conducted at a number of scales – in your school grounds, within your local community, in another state or even in another country. Fieldwork is an essential part of geography because the world outside the classroom is the geographer's "laboratory".

Fieldwork provides the opportunity for firsthand investigation of both natural and built environments, and to develop skills associated with observing, measuring and recording. Different forms of geographical data can be collected and analysed to find relationships between the natural and human environments. The results of a fieldwork investigation are presented and communicated in a fieldwork report. There is a worksheet available on Oxford Digital to learn the steps to writing a basic fieldwork report.

Fieldwork also involves identifying issues or problems and finding possible solutions. It is a way to engage with the real world and make a contribution to developing more sustainable and fair ways to manage the Earth's resources.

fieldwork geographical study that takes place outside the classroom at the site of inquiry

Key skill worksheet: Writing a basic fieldwork report

1.4

Different types of fieldwork

Most topics you learn about in class can also be studied during fieldwork. The types of fieldwork you conduct will differ according to your topic and the places you visit, but all these activities will help you to better understand your world. Source 4 provides examples of fieldwork locations and activities for the range of topics you will be studying in Year 7.

Source 4 Examples of fieldwork locations and activities for a range of topics in Year 7 geography.

Topic	Possible location	Sample fieldwork activity
Water as a resource	Local river or stream, such as Dandenong Creek or Werribee River	Water sampling, mapping areas of erosion and deposition
Valuing and managing water	Water treatment plant, desalination plant or water storage dam, such as a Melbourne Water dam	Taking geographic photographs, field sketching, mapping land use near dam
Living in Australia	Areas of different land use within a city such as the CBD and residential areas	Observing and describing, surveys of residents, land use mapping
Liveable cities	Urban renewal project, local area	Observations of users and management strategies

Ethical fieldwork

Ethics refers to the correct ways of behaving and thinking. It is important to always act in an ethical way when conducting a geographic inquiry. This is particularly important while on a field trip. You must ensure, for example, that you have minimal impact on the environment. Consider carefully where you walk on fragile environments such as sand dunes and steep slopes and always dispose of your litter in the proper way.

Source 5 Students conducting fieldwork at Palm Beach in Queensland.

Source 6
When conducting fieldwork, always be mindful of the environment you are in and avoid trampling on sensitive or fragile areas.

There are also ethical concerns to consider when dealing with other people.

- If you interview or survey members of the public you must inform them of the purpose of your research and allow them to consent or refuse to take part.
- Avoid asking sensitive questions such as a person's age, income or home address.
- Never take photographs of other people without their consent.
- Take a neutral stance when interviewing people rather than stating your own point of view.

Using geographical images

Another way to collect information is to take geographical images that depict and present a place or particular feature of the landscape, for the purpose of demonstrating an aspect that is being studied. Just like maps or graphs, geographers use and interpret types of photographs as sources of data. Whether you take a geographical image during a fieldwork study, or collect them from your research online, you need to be able to interpret them.

Landscapes can be photographed from different angles depending on the position of the camera. Each angle has its own special features. You will hear these terms as you study geography. Look at the images to familarise yourself with the different types of geographical images.

▶ **Key content video:** Interpreting geographical images

1.4

Ground level

The camera is held by someone at the same level as the landscape being photographed.

This angle allows you to clearly see the height of any object and the detail in vertical surfaces.

Source 7 Ground level

Oblique aerial photograph

The camera is positioned above the landscape and angled towards the scene being photographed.

This angle allows you to see both the foreground and the background of the scene. You can also see both the height of an object and its width or area.

Source 8 Oblique aerial photograph

Vertical aerial photograph

The camera is positioned directly above the landscape.

This vertical (or plan) view allows you to see the extent of any feature. However, it is difficult to judge the height of the landscape (e.g. the trees) from this view.
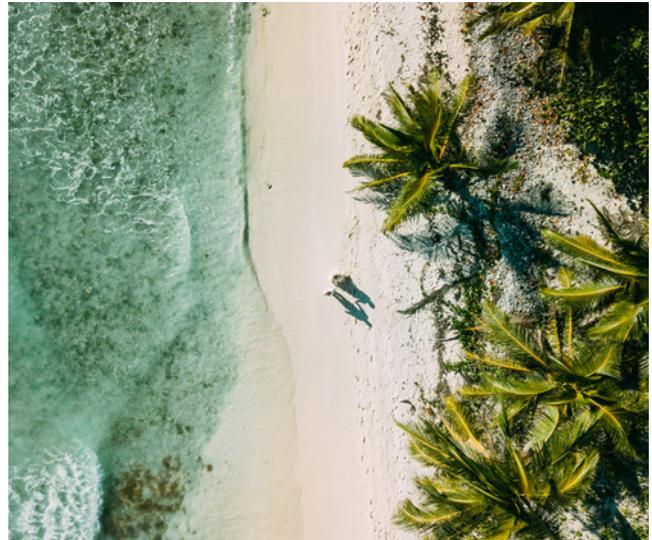
Source 9 Vertical aerial photograph

Satellite images

This image is taken from space. It allows you to see large areas of the Earth's surface.

These images are often used to investigate patterns. It is difficult, however, to see smaller features of the environment.

Source 10 Satellite images

Geographic Information Systems (GIS)

Geographers also use a range of digital tools to collect, process and display information. Many of these are available on your mobile phone and include programs such as Google Earth and the Global Positioning System (GPS) that use satellites to determine the location of objects on the Earth.

Geographic Information Systems (GIS) are a way of creating, viewing, organising and analysing geographical information with the use of a software application. GIS allow geographers to access and share an incredible amount of data and look at the world in new ways. GIS are made up of three elements:

1 digital base maps
2 data that is layered over the base map (such as a chart, overlay or table)
3 a software application or platform that links these elements together and allows the user to interact with all this information.

Geographic Information Systems combine satellite images, graphs and databases to allow you to identify patterns and trends so that you can gain a better understanding of the world around you. They allow you to turn different layers of data on and off in order to isolate exactly what you are looking for. You can even create and share your own maps, look at 3D models of areas and record video simulations, known as flyovers.

These systems are already a part of many people's everyday lives. Governments, companies and individuals all around the world use GIS. There are a number of GIS platforms available today, but one of the most commonly used and free GIS is Google Earth.
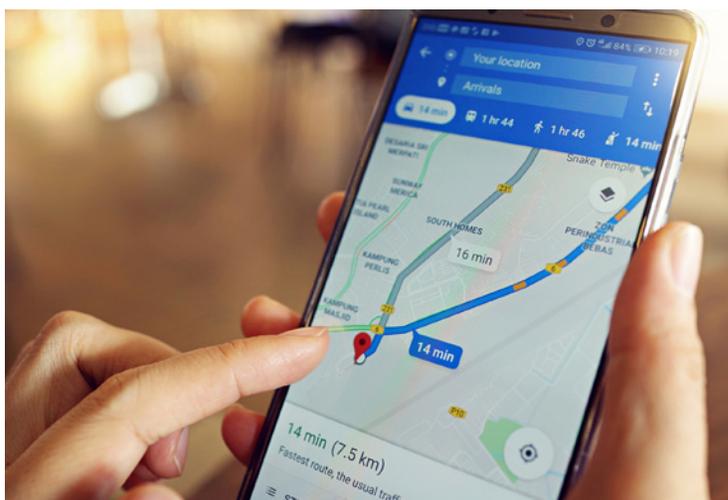
Source 11 Today, a GIS can be found on almost every smartphone, in the form of apps such as Google Maps and Google Earth.

▶ **Key content video:** Geographic Information Systems (GIS)

Check your learning 1.4

Geography

Lesson 1.5
Analysing maps

Introduction

map a simplified plan of an area shown from directly above the area

An important skill in geography is the ability to identify and explain patterns in the world around you. Often these patterns appear on a **map**. In fact, you will also create your own maps to display data you have found during fieldwork or through research.

Before doing so, it is important to develop an understanding of the essential features that appear on maps and how to read them.

Essential features of maps

plan view a way of showing something as if the viewer is looking down on it from above; a bird's-eye view

Maps are drawn in the **plan view** (directly from above) because this ensures the scale will be the same across the entire area. If maps were drawn from an angle some parts of the mapped area would look distorted, and so it would not be an accurate representation of the area. When properly used, maps can reveal a great deal about our planet and the ways in which we use it.

▶ **Key content video:** Essential features of maps

BOLTSS

Regardless of the type of maps you are creating or analysing, all will share some common features. There are six features that ensure every map is drawn in a clear, concise and accurate way. To help you remember these features, you can use a mnemonic (memory aid) that consists of the first letter of each of the features: border, orientation, legend, title, scale and source. Together, these six letters make up the word BOLTSS.

Source 1 These are the six features of BOLTSS.

Map feature	Description
B- Border	An outline or box drawn around the map
O - Orientation	An indication of direction, usually shown with a north arrow or compass rose
L - Legend	An explanation of the symbols, colours and patterns used on the map (also known as a key)
T - Title	A heading that describes the map and what it is showing
S - Scale	A way of indicating what distances on the map represent in the real world. Scale can be shown in three different ways: as a written scale, a line scale or a ratio. Source 4 represents the three ways a scale can be represented on a map.
S- Source	Where the information used to create the map came from. If these details are not known, simply write "Source: unknown". If you have created the map from your own data, simply write "Source: own map" or "Source: [add your name]".

Australia: Irrigated land
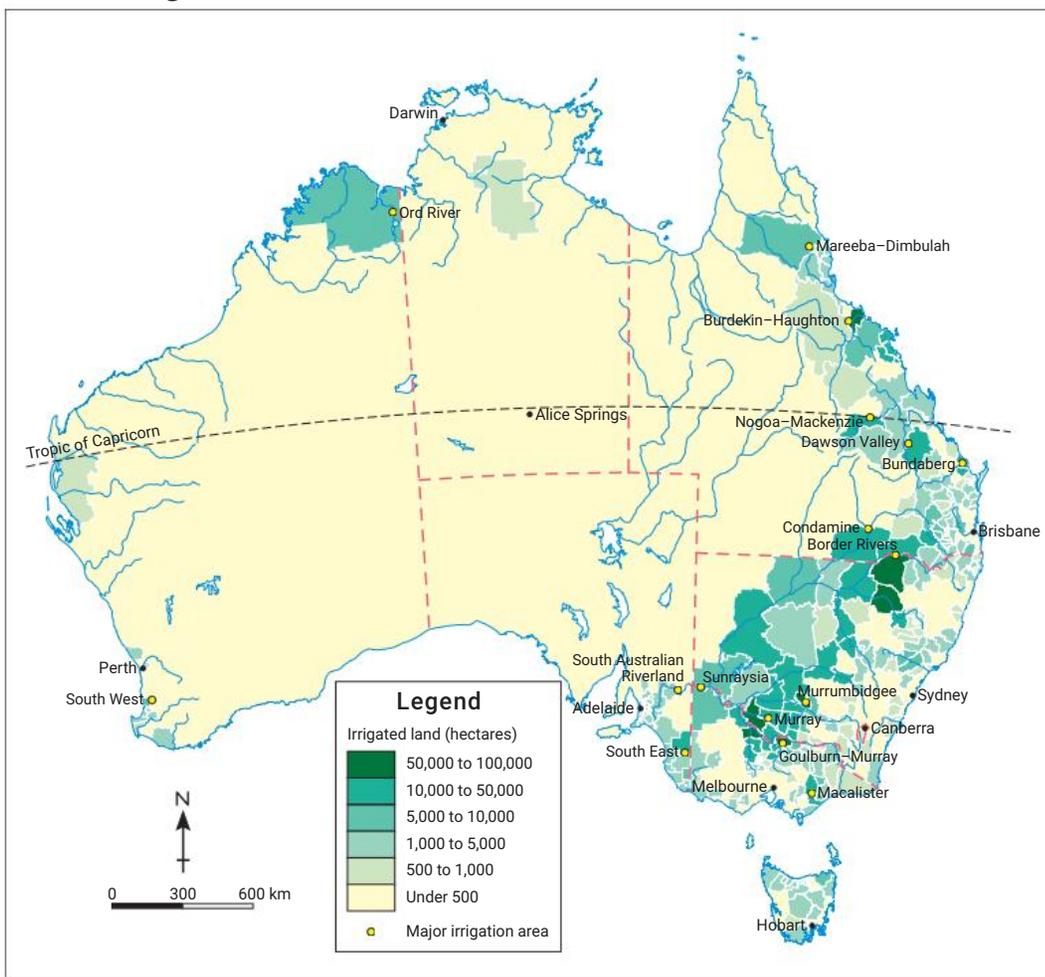
Source: Oxford University Press

Source 2 A map of Australia showing all the features of BOLTSS.

Enlarged map: Australia: Irrigated land

Direction

Direction must always be shown on maps because it enables the user to work out the location of features shown. Direction is shown on maps using compass points. A **compass** is an instrument with a magnetised needle that will always point to the Earth's magnetic field near the North Pole (known as magnetic north). The face of a compass shows a circle made up of 360 degrees (see Source 3).

compass
an instrument with a magnetic needle that points to the north; used for navigation

Source 3 A compass face showing cardinal points and compass bearings.

1.5

cardinal points
the four main directions: north, south, east and west

compass bearing a precise way of giving compass directions, such as 135° south-east

The four main directions on a compass are north, south, east and west. These are known as **cardinal points**. Most maps are oriented to north. Once north has been established, you can find the other points of the compass. Using compass points is an accurate way of giving directions because the compass always points to magnetic north, no matter which direction you are facing.

Compass bearings provide an even more precise way to give directions. A bearing is an angle that is measured clockwise from magnetic north. The bearing of magnetic north can be either 0 degrees or 360 degrees, the bearing of south is 180 degrees, the bearing of east is 90 degrees and the bearing of west is 270 degrees. These bearings are also shown in Source 3.

▶ **Key content video:** Direction

Scale

Maps are scaled representations of real areas. These representations have been designed to fit on a piece of paper or on a computer screen. Maps look the same as the real areas they are representing, just reduced to a size you can work with. Scale on maps allows you to work out the **distances** in the real world.

distance
the amount of space between two objects or places, generally measured by using the scale on a map

Look at Source 4. It shows the three types of scale that can be used on maps and how they work.

```
0          30          60          90 km

SCALE 1 : 3,000,000
One centimetre on the map measures
30 kilometres on the ground.
```
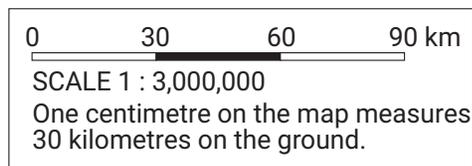
Source 4 An example of the different types of map scales.

- Written scale – a written scale tells you how much a distance on the map represents on the ground. The written scale on Source 4 is "One centimetre on the map measures 30 kilometres on the ground". Using this information we can easily work out that 5 centimetres on the map would be equal to 150 kilometres on the ground, and so on.
- Line scale – a line scale is a numbered line that acts like a ruler. You can use it to measure distances on the map. The Source 4 line scale shows that 1 centimetre is equal to 30 kilometres.
- Ratio scale – a ratio scale shows scale in numbers. The ratio scale for Source 4 is 1:3 000 000, so 1 unit (that is, 1 centimetre) on the map represents 3,000,000 centimetres on the ground. Of course, 3,000,000 centimetres is equal to 30 kilometres.

▶ **Key content video:** Scale

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1.5

Comparing map scales

Maps are often shown at different scales depending on the amount of detail they need to show. Source 5 shows three maps at different scales.

- Map 1 is a large-scale map. It shows a large amount of detail but only a small area. You can see the city area (in pink) and Lake Burley Griffin.
- Map 2 is a medium-scale map. It shows a medium amount of detail and a medium area. You can see the whole of the Australian Capital Territory (ACT).
- Map 3 is a small-scale map. It shows a small amount of detail but a large area. You can only just see the border of the ACT.

ACT and Eastern Australia
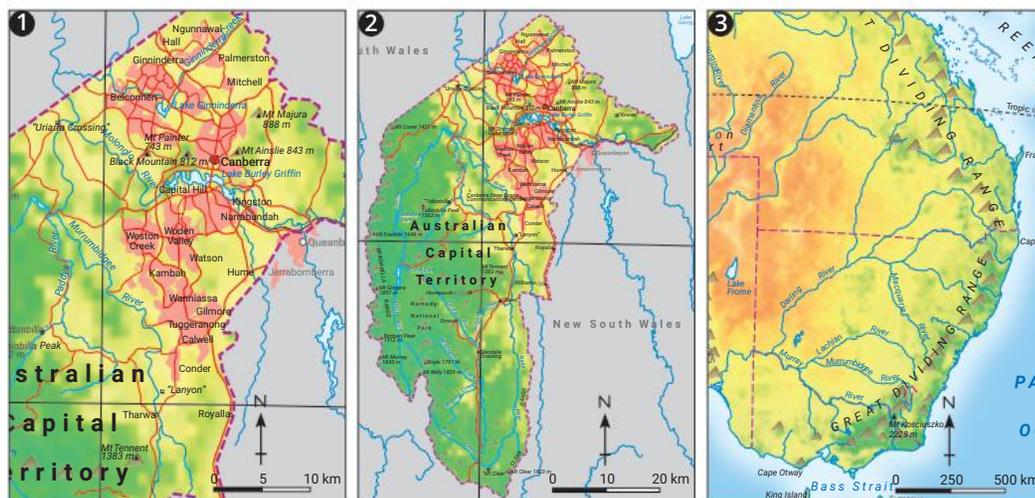
Large-scale maps show detailed information about a small area.

Small-scale maps show general information about a large area.

Source: Oxford University Press

Source 5

Locating places on maps

Maps are used for many different purposes, but the most commonly used maps help us to find things we are looking for. These maps are often overlaid with a set of lines that form a grid. These gridlines divide the map into smaller areas and help us find places more easily. There are several ways in which you can locate things on maps and methods you can use to help other people find these places. Some of these methods will give you a general idea of where something is, while others can help you pinpoint the exact location of something.

▶ **Key content video:** Locating places on maps

1.5

Grid and area referencing

alphanumeric grid a coordinate system on a grid in which each cell is identified by a combination of a letter and number; using this system makes it easy to locate a specific position on a map

Alphanumeric grid referencing

In maps that use **alphanumeric grid** referencing, the spaces between gridlines are labelled with letters and numbers. The letters appear along the bottom (or top and bottom) of the map, while the numbers appear down the left-hand side (or both sides) of the map. For example, in Source 6 the grid reference for the Paradise Centre is J6.

Surfers Paradise street map
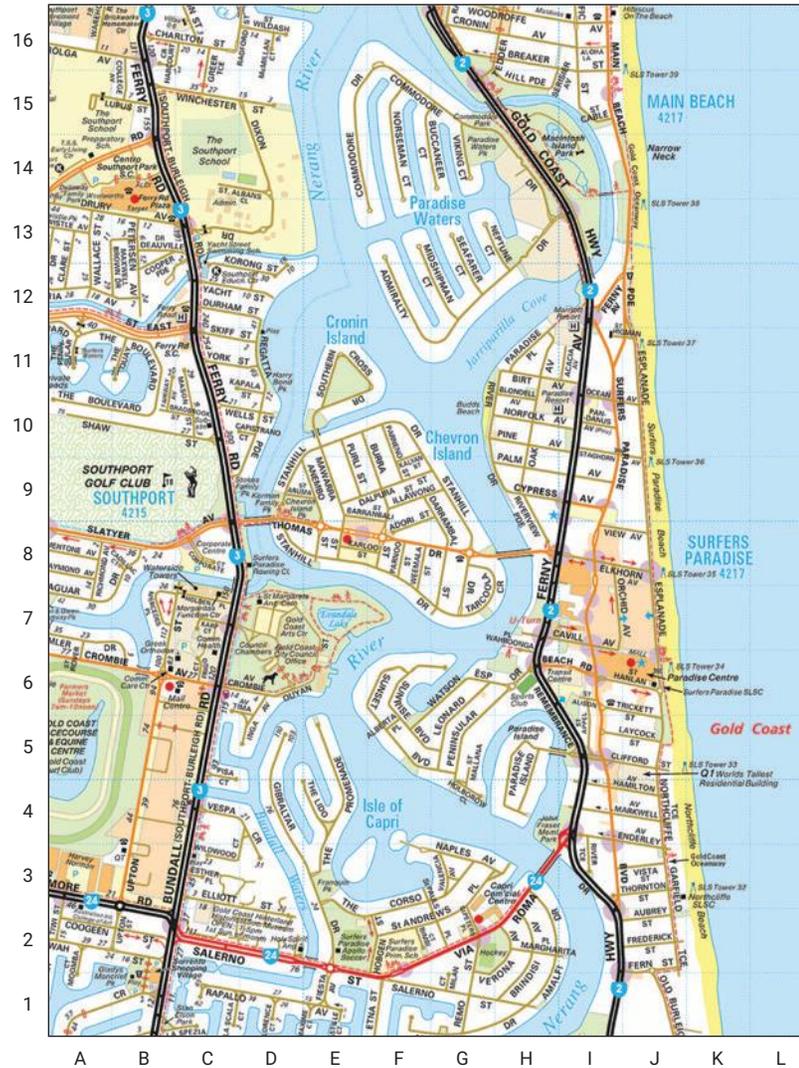
Source: *Brisway*

Source 6

Area referencing (AR)

eastings the gridlines that run vertically on a topographical map

northings the gridlines that run horizontally on a topographical map

The area referencing (AR) method is used on topographic maps that have gridlines. Each line is given a two-digit number. The lines that run up and down the map are known as **eastings** (because the numbers increase as you move east). The lines that run across the map are known as **northings** (because the numbers increase as you move north). A four-figure area reference will pinpoint the bottom left-hand corner of the grid square in which you will find the feature. The eastings are given first, then the northings. For example, in Source 7 the park is located in AR2813.

Six-figure grid referencing (GR)

Six-figure grid references (GR) help locate exact points on a topographic map. The area between each easting is divided into ten further parts (tenths), as is the area between each northing. This is just like adding a finer set of gridlines over the existing gridlines, allowing you to be very specific about where things are within each grid square. As with area referencing, the eastings are given first then the northings. The difference is that one more figure is added to the easting and one more figure is added to the northing. This makes six figures in total. For example, in Source 7 the hospital is located in GR297156.

Topographic map extract showing AR and GR
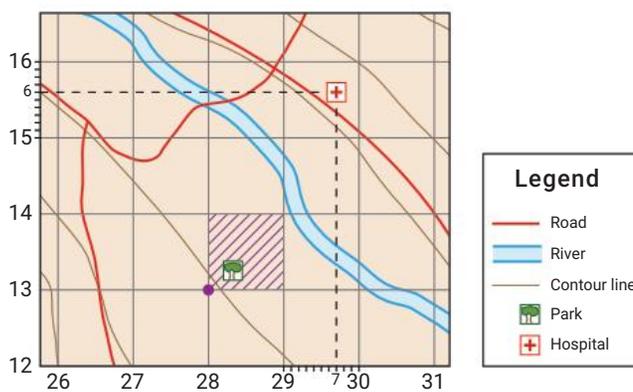
Source: Oxford University Press

Source 7

Latitude and longitude

Maps that show large areas of the Earth's surface (such as world maps) use a set of imaginary lines that form a grid. These gridlines, known as **latitude** and **longitude**, help us to locate places accurately.

Lines that run from east to west are known as lines (or parallels) of latitude. Lines that run from north to south are known as lines (or meridians) of longitude. Each of the lines is separated by degrees rather than distance because the world is round, not flat.

The line of latitude midway between the North Pole (90 degrees north) and South Pole (90 degrees south) is known as the **Equator** (see Source 8), which is located at 0 degrees latitude. It divides the Earth into the northern hemisphere and southern hemisphere.

Lines of latitude are measured in degrees north and south of the Equator.

Lines of longitude are measured east and west of the Greenwich meridian (also known as the **Prime Meridian**), which is located at 0 degrees longitude (see Source 9).

▶ **Key content video:** Latitude and longitude
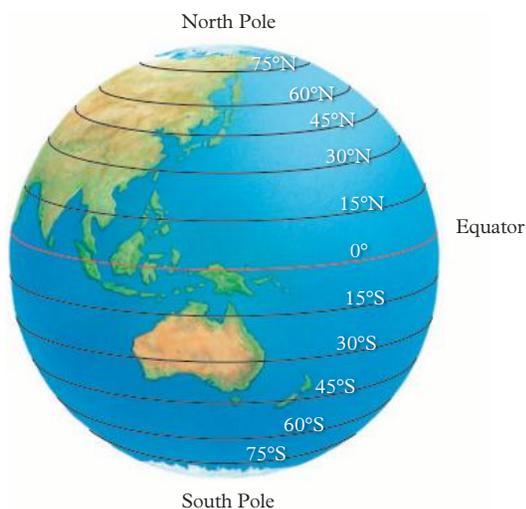
Source 8 Lines (or parallels) of latitude

Source 9 Lines (or meridians) of longitude

latitude imaginary lines running east–west around the Earth's surface, parallel to the Equator, used to work out location and direction

longitude imaginary lines running north–south around the Earth's surface, from the North Pole to the South Pole, used to work out location and direction

equator an imaginary line that runs around the middle of the Earth separating the Northern Hemisphere from the Southern Hemisphere

Prime Meridian an imaginary line of longitude that runs from the North Pole to the South Pole; longitude is defined as 0° at the Prime Meridian

1.5

Simple maps

Geographers use different types of maps to show a whole range of different natural and built features, and to analyse the connections between them.

Physical maps

Physical maps show the locations and names of natural features of the Earth. These may include deserts, mountains, rivers, plains, oceans, reefs, volcanoes and lakes.

Physical map of Australia showing oceans and major mountain ranges, rivers, lakes and deserts
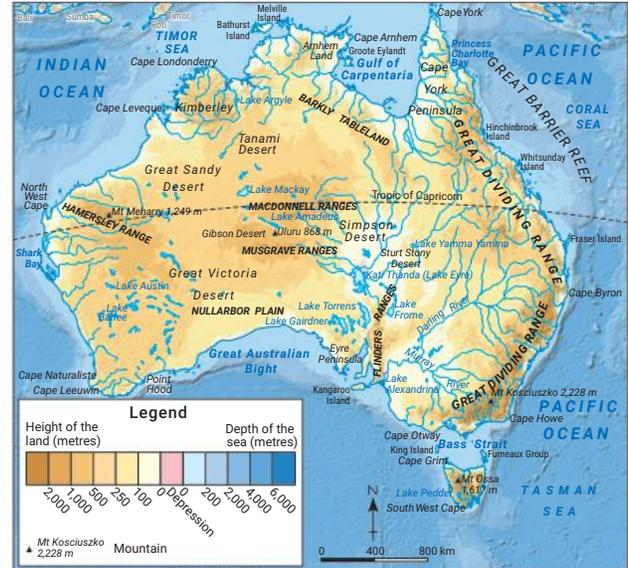
Source 10

Source: Oxford University Press

Enlarged map: Physical map of Australia

Key content video: Physical and political maps

Political maps

Political maps show the locations and names of built features of the Earth. These may include country borders, state and territory borders, cities and towns.

Political map of Australia showing state and territory borders, cities and towns

Source 11

Source: Oxford University Press

Enlarged map: Political map of Australia

Oxford University Press

Dot distribution maps

Dot distribution maps use dots (or shapes) to represent (and sometimes compare) a range of different features. The dots show the location of the chosen feature. The size and colour of the dots on the map can show different characteristics of that feature. For example, in Source 12, small towns are shown as small green dots and big cities are shown as big purple squares. Other dot distribution maps show the location of a single feature, such as litter. Dot distribution maps help to show patterns and links between features – geographers refer to this as spatial distribution.

Dot distribution map of Australia showing population

Source 12
Source: Oxford University Press

Enlarged map: Dot distribution map of Australia

Key content video: Dot distribution maps

Flow maps

Flow maps show movement from one place to another. Arrows of different thicknesses or colours are used to show where different things (such as people or goods) are moving to and from, and compare the numbers involved in the movement.

Flow map showing the flow of tourists worldwide
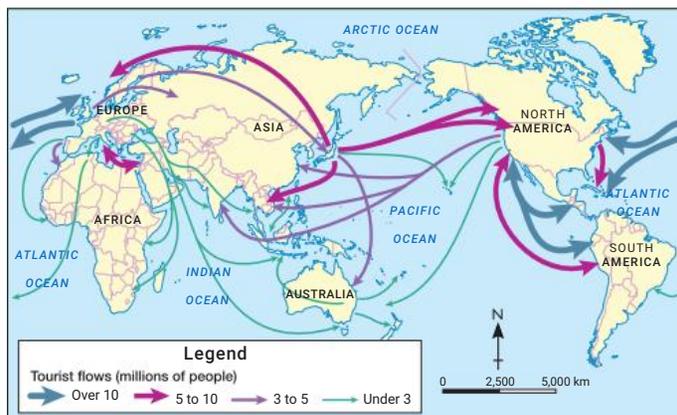
Source 13
Source: Oxford University Press

Enlarged map: Flow map

Key content video: Flow maps

1.5

Choropleth maps

Choropleth maps use different shades of the same colour to give a quick impression of the pattern formed by the data being shown. Darker shades show the highest values or the greatest amounts, while lighter shades show the lowest values or the least amounts.

Choropleth map showing international tourist arrivals worldwide prior to 2020
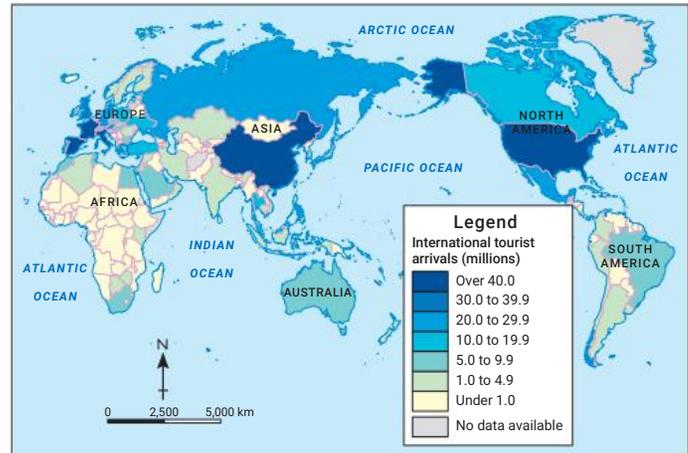
Source 14

Source: Oxford University Press

Enlarged map: Choropleth map

Key content video: Choropleth maps

Overlay maps

Overlay maps show how features on the Earth's surface may be related to each other. To create an overlay map, you first need to produce a base map showing one feature (such as the location of Australian rainforests) and then place a piece of tracing paper or plastic sheet over this base map showing the other feature you are investigating (such as areas with a moist tropical climate).
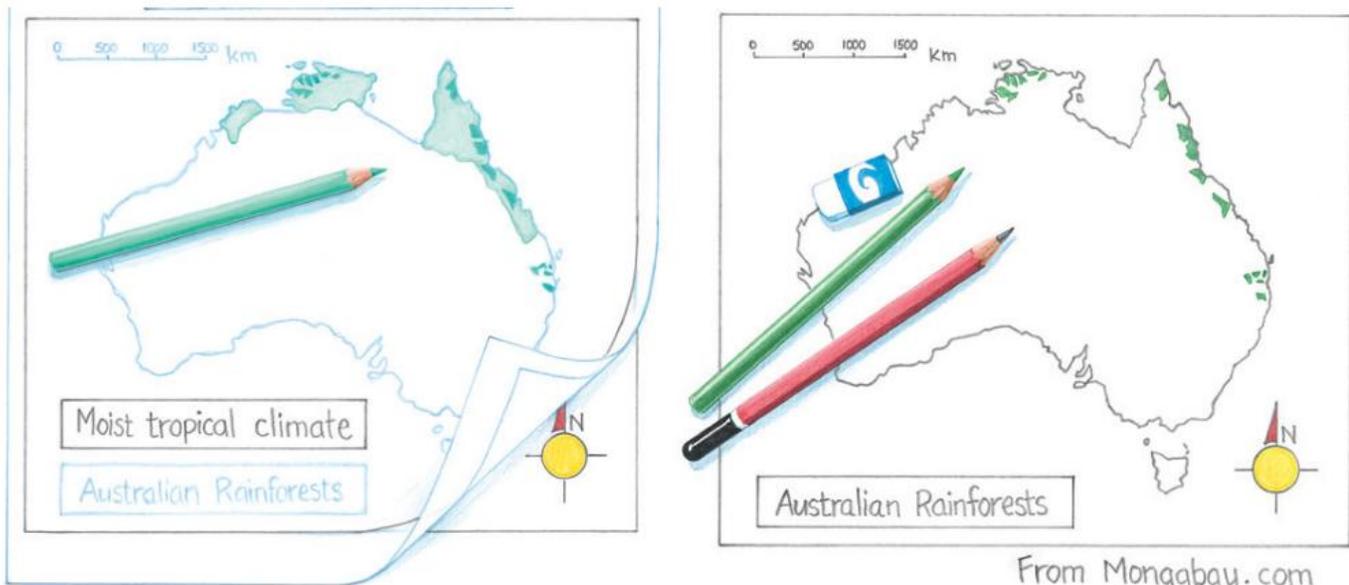
Source 15 An overlay map showing the location of Australian rainforests on a base map (top) and areas with a moist tropical climate on an overlay (bottom).

Key content video: Overlay maps

More complex maps

Geographers also use a number of more complex maps to represent information.

Topographic maps

Topographic maps show the shape of the land (such as the shapes formed by valleys, hills and ridges) by using **contour lines**. Numbers on some of the contour lines show the height of the land above sea level. The closer together the contour lines are, the steeper the land. Symbols and colours are also used on topographic maps to show other natural features (such as forests, rivers and lakes) and built features (such as towns, roads and mines). The contour patterns of three common features are shown below the topographic map in Source 16 and Source 17.

Key content video: Topographic maps

Topographic map showing a round hill, a valley and a ridge
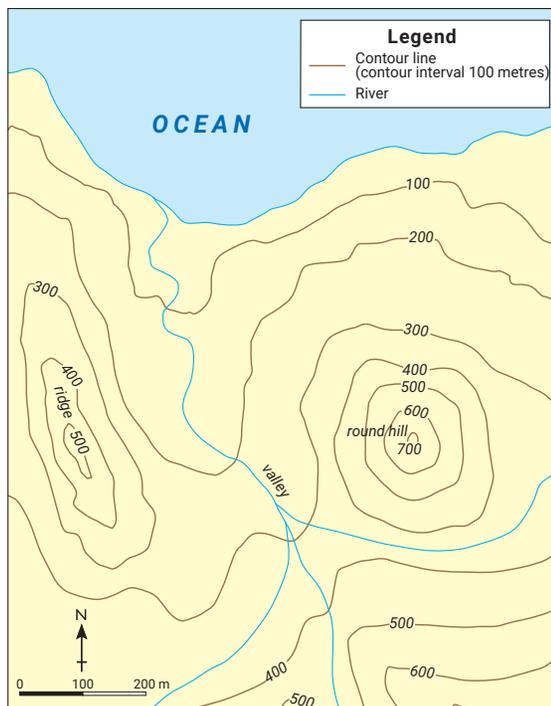
Source: Oxford University Press

Source 16

contour lines
lines drawn on a map that connect points at the same height to show the height and steepness of land

A round hill
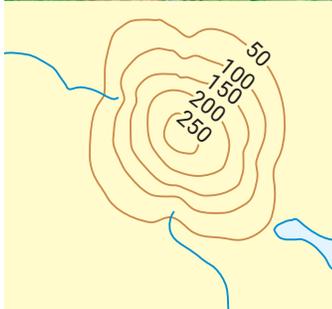
A valley

A ridge

Source 17

1.5
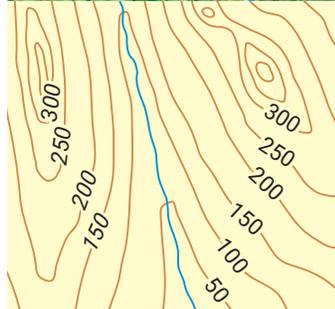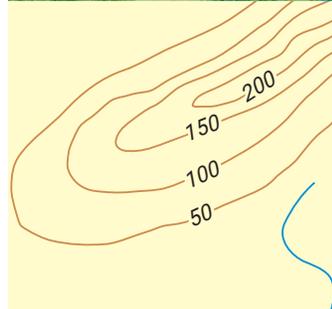
Weather maps

Weather maps show conditions in the atmosphere, such as air pressure, wind speed and wind direction. They also show the size and location of warm and cold fronts. Weather maps are also known as synoptic charts. They are most commonly seen on the nightly news.

▶ **Key content video:** Weather maps

Source 18
Weather maps feature in the nightly news on television.

Digital maps

Most geographic data is collected and stored digitally. Geographers then access this data to create their own maps. This allows them to select particular features of the natural or human landscapes to focus on. In Source 19, for example, the data for height above sea level has been added to a base map showing towns and roads. This allows the geographer to explore the possible effects of a flood or a rise in sea level.

State of Louisiana, highlighting low-lying areas derived from USGS digital elevation data
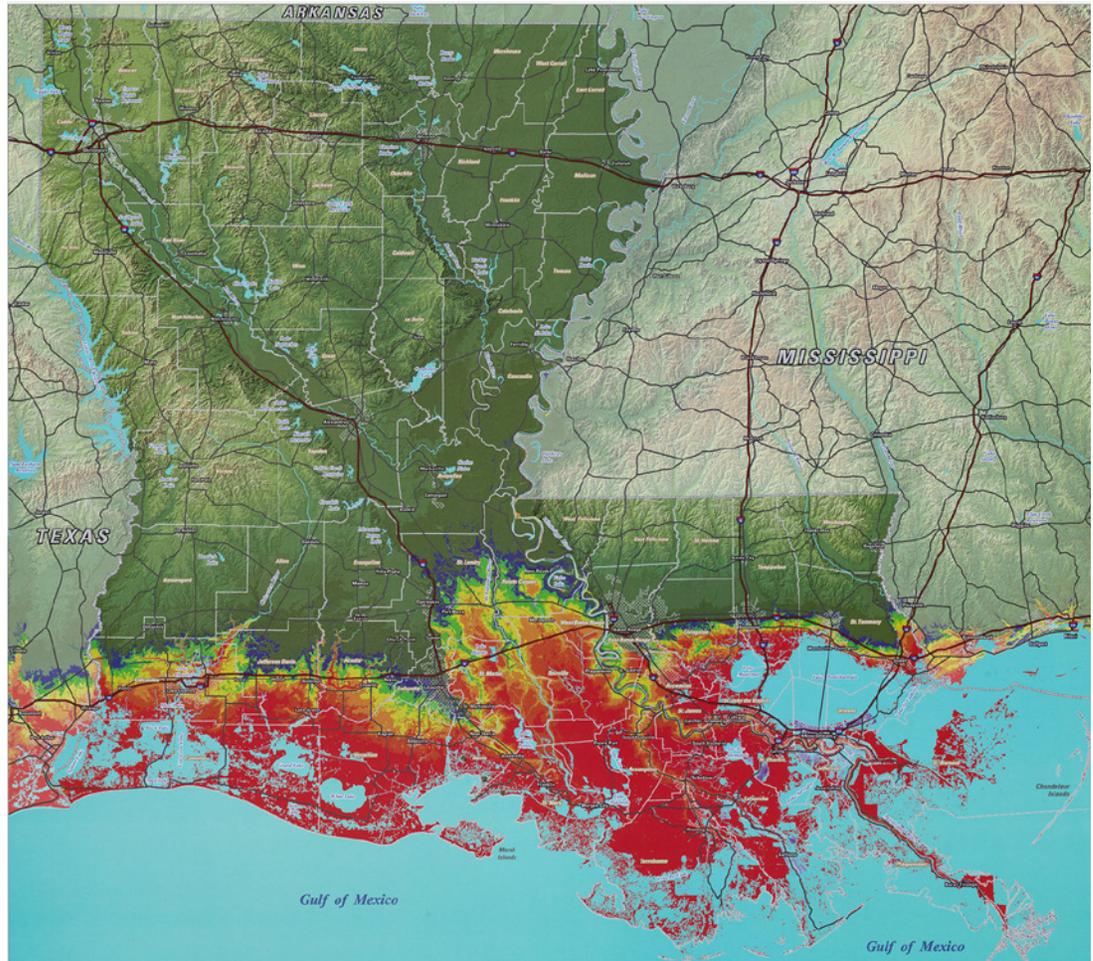
Source 19 Data from the United States Geological Survey (USGS) added to a digital base map allows geographers to see what the effects of a flood or a rise in sea level might be on low-lying areas. The red areas are the lowest-lying areas and are 0 to 5 metres above sea level.

☑ **Check your learning 1.5**

Lesson 1.6
Representing data

Introduction

In addition to maps, geographers use a range of other visual representations to communicate information they have collected.

- Tables allow geographers to present and compare data by organising it under different headings (see Source 1).
- Graphs allow geographers to compare data and present it in an interesting and attractive way. There are a number of different types of graphs used by geographers for different purposes. The most common of these are explained in this lesson.
- Diagrams allow geographers to show the features or characteristics of some places or things much more effectively than describing them in words. A concept map is a handy tool that you might use to show a complex idea, such as strategies for sustainability (see Source 9).

Source 1 A table showing the populations of Australian states and territories in 2023.

State/Territory	Population (2023)	Percentage of Australia's population
New South Wales	8,434,800	31.2%
Victoria	6,906,000	25.6%
Queensland	5,528,300	20.4%
Western Australia	2,927,900	10.8%
South Australia	1,866,300	6.9%
Tasmania	541,100	2.1%
Australian Capital Territory	470,200	1.7%
Northern Territory	253,600	0.9%
Australia	26,966,800	100.0%

Simple graphs

Graphs are among the most effective visual representations when it comes to showing numerical (or quantitative) data. Some graphs are simple, while others are more complex. This year, you will be learning how to create different types of graphs and interpreting the information that they provide. Some of these graphs are described below.

▶ **Key content video:** Simple graphs

1.6

Line graphs

Line graphs show information as a series of points that are joined up to form a line. The line shows a trend or change over time. The horizontal axis (*x*) will usually show units of time and the vertical axis (*y*) will usually show amounts.
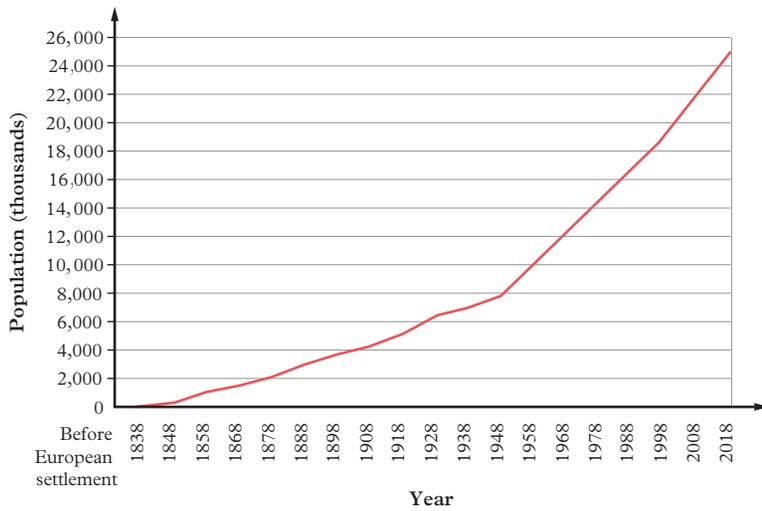
Source 2 A line graph showing the increase in Australia's population, 1838–2018.

Bar graphs

Bar graphs show information as a series of bars that run in a horizontal direction and are stacked one on top of the other. They are usually used to compare quantities.
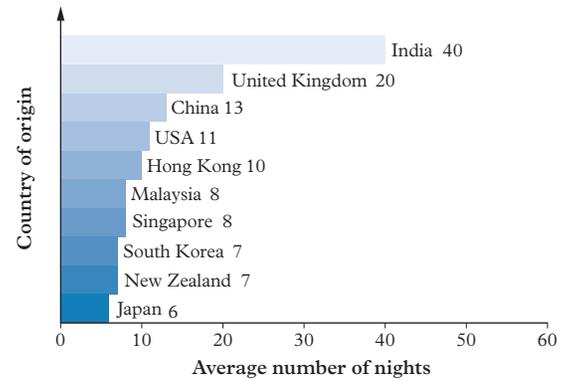
Source 3 A bar graph showing average number of nights spent in Australia by tourists from different countries, 2018–2019.

Column graphs

Column graphs are similar to bar graphs, but they show information as a series of vertical columns arranged side by side. They are also usually used to compare quantities.
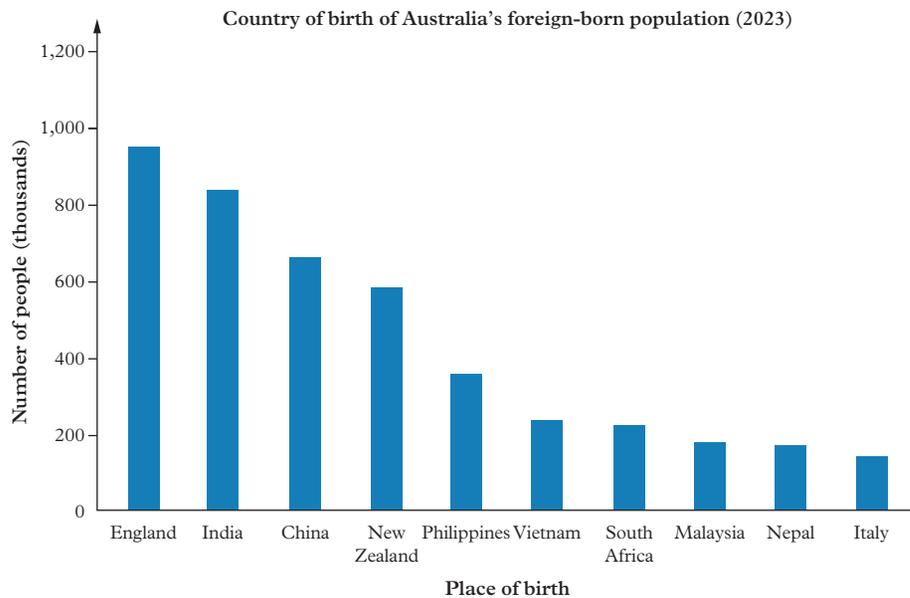
Source 4 A column graph showing the top ten countries of birth for Australia's foreign-born population in 2023.

Pie graphs

Pie graphs are shaped like a circle and are divided up so that the information being shown represents the slices of a pie. The circle of 360 degrees represents 100% and each of the slices is a percentage of that total. The slices of the pie are organised from largest to smallest in a clockwise direction starting from 12 o'clock.
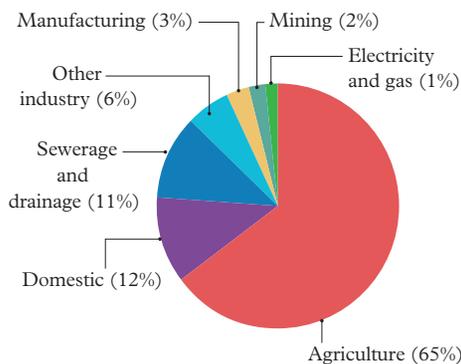
Source 5 A pie graph showing the different uses for water throughout Australia.

More complex graphs

Over the course of the year you will also be working with other more complex graphs. You will not necessarily be creating these yourself, but you will be learning how to make sense of the information they provide. Some of these graphs are described below.

Climate graphs

Climate graphs show the average monthly temperature and rainfall for a place over a year. Climate graphs combine line and column graphs. Temperature is recorded as a line graph and rainfall is recorded as a column graph.

▶ **Key content video:** Climate graphs
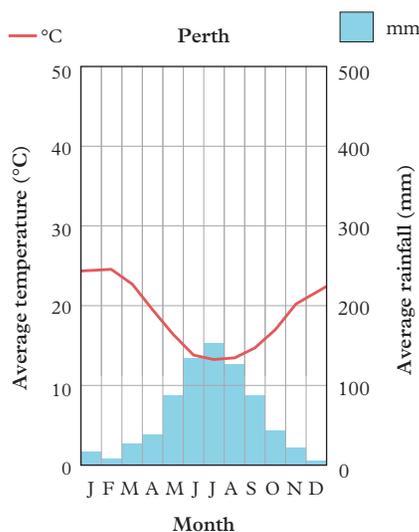
Source 6 A climate graph showing the average monthly temperature and rainfall in Perth.

Compound column graphs

Compound column graphs are a more complex type of column graph in which each column is split into sections so results can be more easily compared.

▶ **Key content video:** Compound column graphs
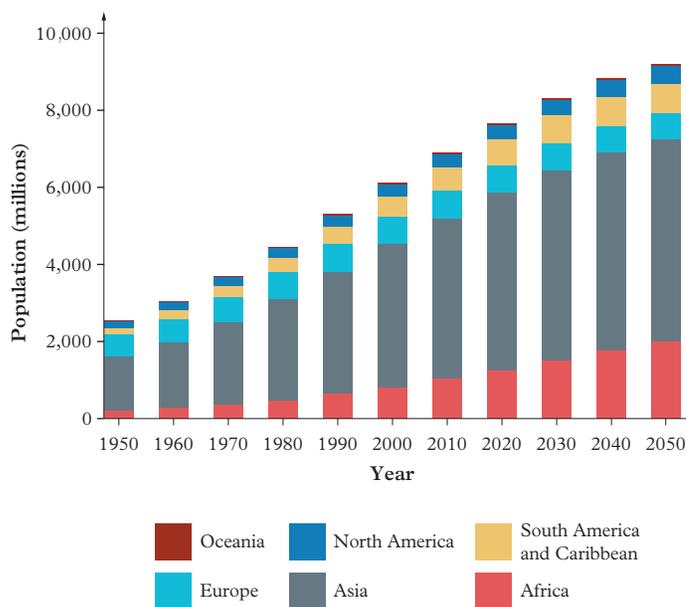
Source 7 A compound column graph showing the increase in world population by region, 1950–2050.

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1.6

Population pyramids

Population pyramids are bar graphs that show the percentage of males and females in different age groups in a population. They help geographers identify trends in population growth in a country. Population pyramids are organised so that younger age groups are at the bottom and older age groups are at the top. Percentages of males are placed on the left-hand side and percentages of females are placed on the right-hand side.
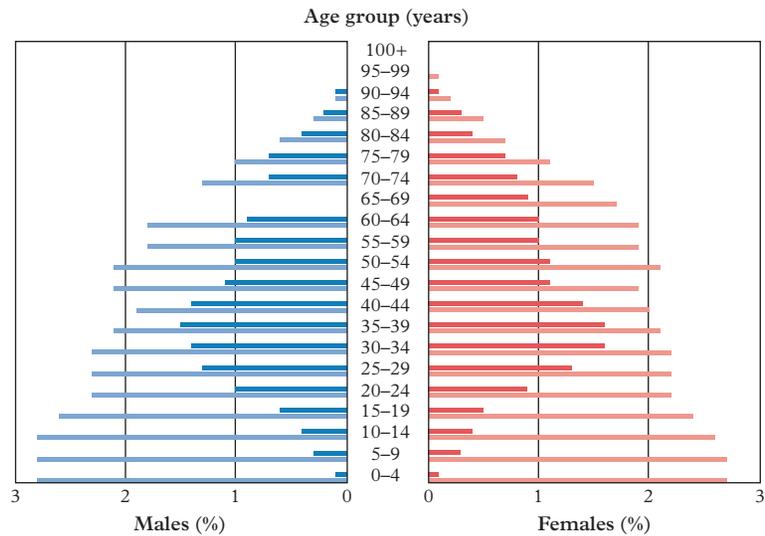
▶ **Key content video:** Population pyramids

Source 8 A population pyramid for Australia in 2023, showing the percentages of Australian-born males and females, and the percentages of overseas-born males and females. For example, in the 10–14 age group, you can see that Australian-born males make up 2.8% of the population and overseas-born males make up 0.4%.

Diagrams and other graphic representations

Geographers create diagrams and other graphic representations to help them look for patterns in the data they have gathered. These tools also help people who were not involved in the inquiry (such as the general public, the government or people in the media) understand the work that has been done.
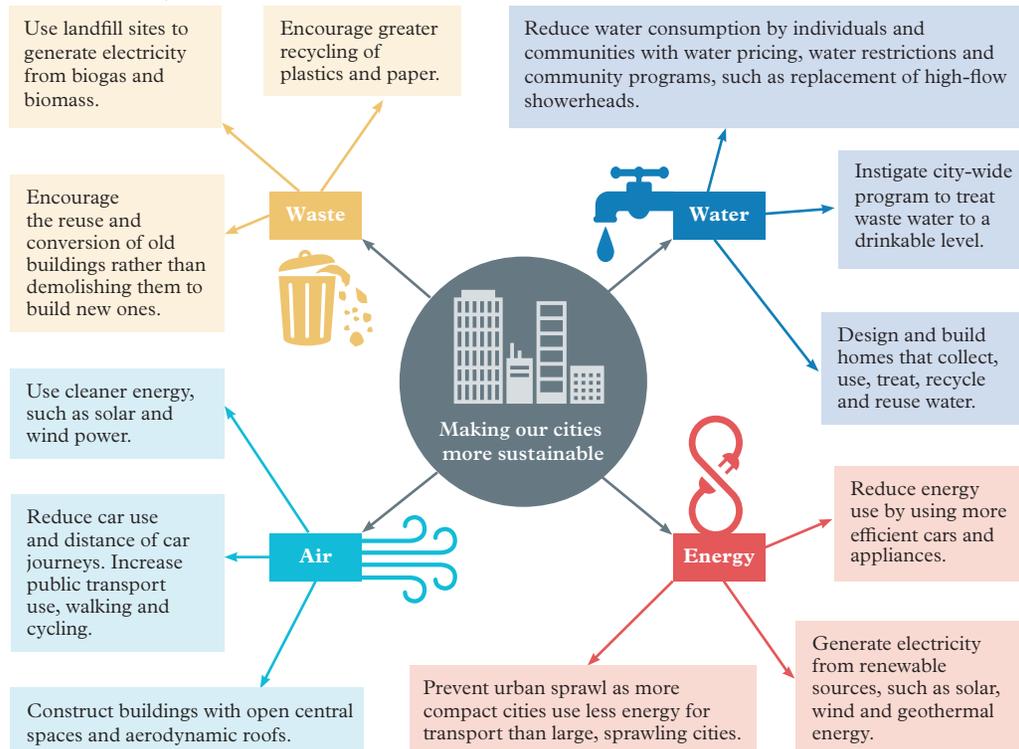
Source 9 A concept map showing strategies for a more sustainable city.

Check your learning 1.6

Lesson 1.7
Identifying patterns and relationships

Introduction

In geography, an important skill to master is that of identifying trends, patterns and relationships in the information you are looking at. You can do this by looking at the information to identify any possible links and relationships and then drawing conclusions. There are two main ways to do this:

1 the SHEEPT method
2 the PQE method.

Using the SHEEPT method

SHEEPT is a tool used by geographers to help them consider the many factors that may contribute to the patterns identified in their data. When you are examining issues related to your inquiry, it is useful to think about them in terms of these six factors and rank them in order of importance. This will help you reach your conclusions. Source 1 explains what the letters SHEEPT stand for.

Source 1 These are the six factors of the SHEEPT method

Factor	Description
S - Social	Factors relating to culture and people
H - Historical	Factors relating to past events
E - Environmental	Factors relating to the natural environment (including climate, landforms and vegetation)
E - Economic	Factors relating to the earning or spending of money (including income earned from industry and tourism, and the cost of building a dam or highway)
P - Political	Factors relating to governments (including laws, regulations and policies)
T - Technological	Factors relating to the availability and use of different types of technology (including the development of greener technologies, alternative energy sources and GIS)

Using the PQE method

PQE is a tool used by geographers to analyse the data they have gathered (such as maps, tables, graphs and diagrams) and reach conclusions. The letters PQE stand for:

- **Pattern (P)** – when looking at data, you look for things that stand out or form patterns. A pattern may be a group of similar features on a diagram, a concentration of a particular feature on a map, or a particular shape that is created by data on a column graph.
- **Quantify (Q)** – in this step, read the map closely to try and quantify (i.e. measure) statistics, amounts, sizes and locations to find a pattern (or patterns).
- **Exceptions (E)** – often you may find that there are things in your data that do not fit into a pattern you have identified. These are called **exceptions**. They also need to be identified and quantified.

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1.7

PQE sample

Source 3 is a sample response that has been written using the PQE method to describe the **distribution** of lakes in the physical map of Australia (Source 2). Read the highlighted sections closely. These are sentence starters that can be used to structure your response whenever using the PQE method.

distribution
the way in which things are arranged on the Earth's surface; the pattern formed by the way objects or places are distributed across a space

Physical map of Australia showing oceans and major mountain ranges, rivers, lakes and deserts
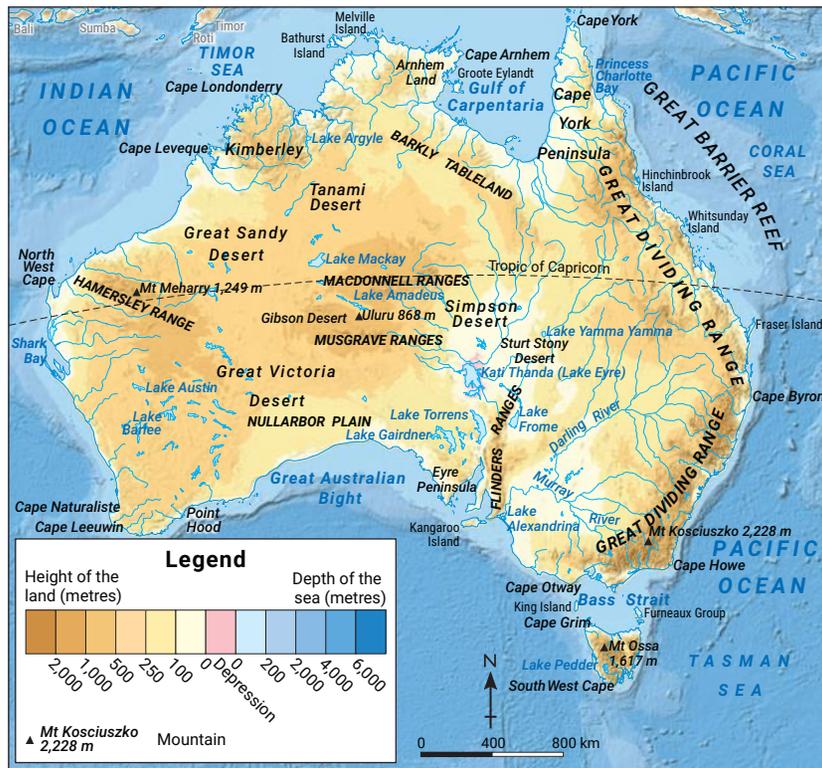
Source: Oxford University Press

Source 2

Enlarged map: Physical map of Australia

If you can identify the type of map that you are looking at, make sure that you name it. Refer to Lesson 1.5 for an overview of different types of maps.

The uneven pattern of this physical map shows Australia's largest lakes are situated in central and south-central Australia.

The evidence that quantifies this pattern is the location of the lakes on the continent. They stretch from the McDonnell Ranges in the north (near the Tropic of Capricorn) to the Flinders Ranges in the south. These lakes include Lake Amadeus, Lake Mackay, Lake Eyre, Lake Frome, Lake Torrens and Lake Gairdner.

The exception to this pattern is a few smaller lakes located in Western Australia, including Lake Argyle near the Kimberly region and many scattered lakes, near Lake Austin and Lake Barlee in the south.

Pattern – in this step, you need to give a general overview of any patterns you may identify.

Quantify – in this step, you need to add specific and accurate information to define and explain the patterns.

Exception – in this step, you need to identify anything that does not fit your patterns.

Check your learning 1.7

Source 3 This sample PQE method analysis includes sentence starters you can use to structure your response.

Lesson 1.8
Concluding and decision making

Drawing conclusions

As you have learnt, geographers undertake inquiries into issues and challenges. They begin by asking questions and then collecting data. The data is then described, analysed and evaluated so that a conclusion can be reached. You can think of reaching a conclusion as making a judgment.

Valid conclusions share similar characteristics:

- **They are based on evidence.** While it might be fine to decide on the colour of a new hoodie based on a whim or vibe, it is not fine to draw conclusions in geography in the same way. You need to be able to defend your conclusions by referring to the evidence you used to reach that conclusion. In the same way, you and others can test your conclusion by using opposing evidence.

- **They consider ethics.** This means that your conclusion needs to be fair, just and unbiased. You also need to be open and transparent when you share your conclusions. This might mean revealing any uncertainties or biases you could have. For example, if you conclude that your local council needs to provide a new bus route to make it more liveable and you happen to live on your proposed route, you should disclose that information.

- **They use geographical concepts.**
  The best way to do this is to consider concepts such as space, change, interconnection and environment as organisers to respond to a geographic question. For example, use the concept of space to reach a conclusion about the distribution of water resources in drought-prone regions. In the same way, you could use the concept of interconnection to reach a conclusion about liveability in a new suburb.

▶ **Key content video:** Concluding and decision making

Source 1
A geographer might use the concepts of space and interconnection to reach a conclusion about the location of services in this new suburb. They would be interested in the impacts of these services on the liveability of this region.

1.8

Taking action

After reflecting on what you have learnt, you may discover that action is needed to respond to the issue you have been investigating. For example, you may have concluded that water is being wasted in a particular place or that some people are being denied access to important services in your local area. While it may be tempting to propose a simple solution, you must also take into account the potential impacts of your strategy. There are many examples around the world where a response to one issue has created other issues.

It is important to always consider the ethics of your recommended response. This means taking into account the fairness of your proposal on those affected and respecting the range of views that others may have.

There are a number of different ways that geographers can take action to make a change. These include:

- creating a fact sheet or multimedia presentation to inform your school or community about the actions they can take in response to a particular issue. For example, you might propose a series of steps that people could take to reduce the amount of water they use
- emailing your local government representative or Member of Parliament about the issue
- developing a management plan for a particular place that proposes both individual and collective actions. For example, the geographical inquiry into Uluru (see Key skill Asking questions in Lesson 1.3 Asking questions, page 13) based around the key inquiry question "Is it a good thing that so many tourists visit Uluru?" may lead you to actively campaign for tourism at Uluru to be managed in a more sustainable way so that this important landmark can be enjoyed by future generations.

Check your learning 1.8

Lesson 1.9
Communicating

Use correct geographical terminology

The ability to put your thoughts and findings into words is an important skill that you will develop as you study geography.

An important part of communicating your findings in geography is using geographical terminology. Source 1 lists and defines some commonly used geographical terms. Additional geographical terms can also be found in the glossary at the end of this book.

Source 1 Some useful geographical terms

Term	Definition
BOLTSS	The six essential features that should be included on every map: border, orientation, legend, title, scale and source
direction	A way of orienting a map, usually shown by compass points, such as north
distance	The amount of space between two objects or places, generally measured by using the scale on a map
distribution	The way in which things are arranged on the Earth's surface; the pattern formed by the way objects or places are distributed across a space
exception	A feature that falls outside a usual pattern or does not follow an observed pattern
geographical inquiry	The stages that geographers follow to guide their investigations
key inquiry question	A question that helps geographers to plan and focus their geographical inquiries
primary data	Data collected for a geographical inquiry by a person conducting an inquiry, such as survey data, hand-drawn maps or photographs
region	An area of the Earth's surface with a feature that makes it different from surrounding areas
scale	A line that indicates the distances on a map as represented in the real world
secondary data	Data collected for a geographical inquiry from another source, such as textbooks, atlases and government websites
spatial pattern	The distribution of features on the Earth's surface that may form particular patterns, such as linear (in lines), clustered or radial (like spokes on a wheel)
trend	A general direction in which something is developing or changing (e.g. the trend in population in Australia is positive because the population is growing)

1.9

Present findings using a range of communication forms and digital technologies

Geographers use a wide range of methods to inform other people about what they have found over the course of a geographical inquiry.

Some of the methods that geographers use to communicate their findings include:

- written methods, such as essays or reports
- oral forms, such as oral reports, presentations, discussions and debates
- graphic forms, such as maps, graphs and diagrams
- visual forms, such as **annotated visual displays (AVDs)**, photographs, sketches, satellite images and posters
- digital forms, such as Wikis, Geographic Information Systems (GIS), databases, story maps, 3D models and simulations, and multimedia presentations.

▶ **Key content video:** Communicating in Geography

annotated visual display (AVD)
a way of presenting the final results of a research project, incorporating images, graphs, notes and explanations in a poster-style format

Story maps

Story maps are becoming one of a geographer's most useful communication tools. They combine a range of communication tools such as maps, videos, written content and sketches into a single digital presentation that invites the audience to interact with the content. There are many steps to creating a story map and these are outlined in the ArcGIS StoryMaps link.

🔗 **Weblink:** ArcGIS StoryMaps | Access the ArcGIS StoryMaps website.
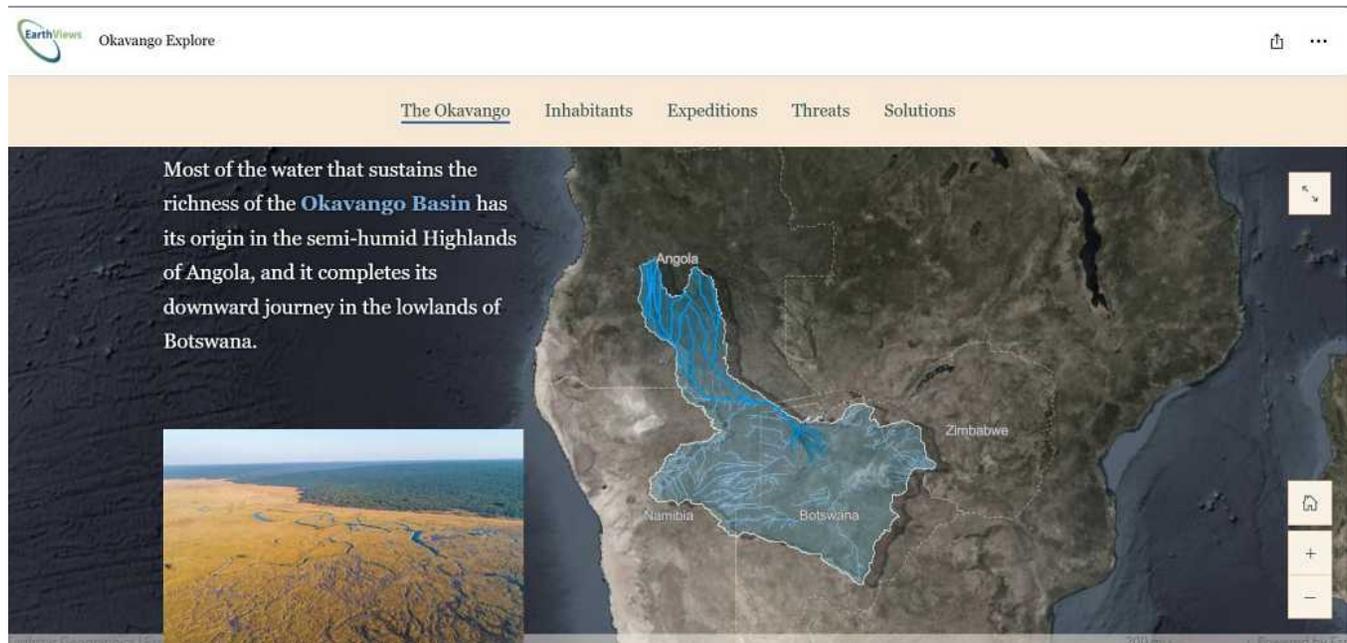
Source 2 A screenshot of a story map focusing on Africa's Okavango Delta. You can see a satellite image overlaid with a transparent map along with an image and some text. With practice, you will be able to create your own story map with all of these elements.

Reflect on what you have learnt

An important geographical skill is the ability to reflect on what you have learnt and decide whether any action needs to be taken. Reflecting involves not only looking at what you have learnt but also at how it has been learnt. It involves asking critical questions about the way in which your geographical inquiry was conducted and your role in it. One of the best ways to reflect on your progress is to complete a self-evaluation checklist, rating your performance at each stage and adding comments.

Source 3 A self-evaluation checklist

The title of my geographical inquiry is:		
My geographical inquiry set out to investigate:		
GENERAL POINTS	**MY RATING**	**COMMENTS**
I was able to complete all stages of my geographical inquiry.	1 2 3 4 5	
I was able to answer all my key inquiry questions.	1 2 3 4 5	
I was able to plan my inquiry effectively.	1 2 3 4 5	
My maps, graphs, tables and diagrams were clear and accurate.	1 2 3 4 5	
I was able to analyse my data and reach a conclusion.	1 2 3 4 5	
I was able to communicate my findings in an interesting and appropriate way.	1 2 3 4 5	
AREAS OF STRENGTH	**COMMENTS**	
My areas of strength are:		
I'm getting much better at:		
AREAS NEEDING IMPROVEMENT	**COMMENTS**	
The part I found most difficult was:		
I need the most help with:		

Check your learning 1.9

Module

2

Water as a resource

Sub-strand: Water in the world

Overview

The things we use to satisfy our needs and wants are known as resources. The resources we use from the natural world are called environmental resources. All life on Earth, including humans, depends on these environmental resources to survive. The water we drink, the sun we depend on for light and warmth, the soil we use to grow our crops, and the trees we rely on to produce the oxygen we breathe are all environmental resources.

As the world's population grows, we continue to put more and more pressure on these resources. The availability of many of these environmental resources (including oil, forests and, of course, fresh water) is becoming increasingly uncertain.

Source 1 An aerial image of the Kuna Settlement in the San Blas Islands of Panama, Central America. There are a total of 11 Kuna communities in the coastal parts of Panama, and two more communities located on the mainland.
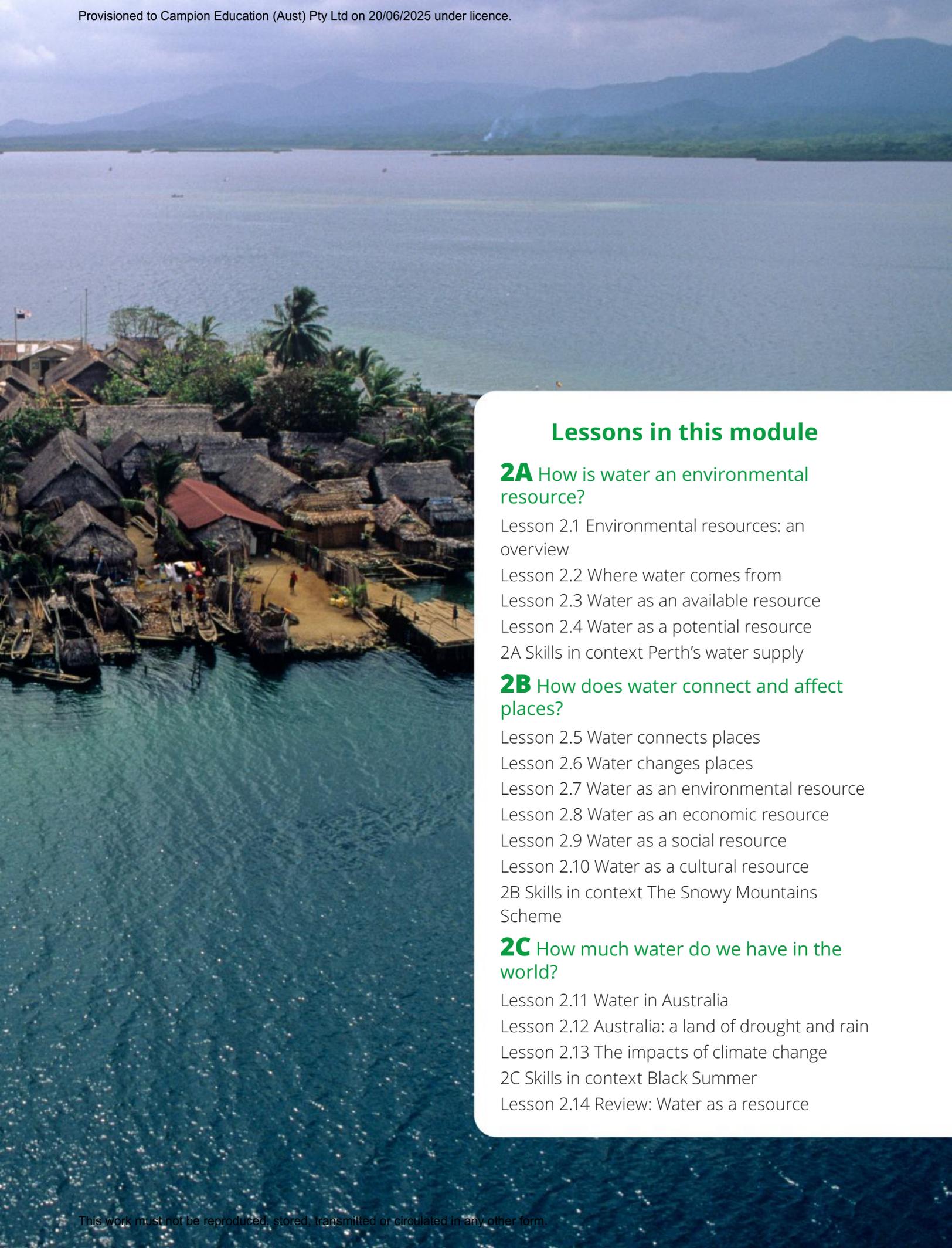
Lessons in this module

2A How is water an environmental resource?

2B How does water connect and affect places?

2C How much water do we have in the world?

Lesson 2.1
Environmental resources: an overview

environmental resource anything human or natural that can be used by people to satisfy a need

Introduction

Over thousands of years, humans have developed ways of life that depend on the **environmental resources** found on Earth. We have found and used resources in almost every corner of the Earth. Water from rainfall, minerals from rocks, and food from forests and oceans have allowed us to build homes, farms, cities and highways all over the world. Oil is drilled from beneath polar ice caps and water is drilled from far below barren deserts. Deep in the rainforests we have found plants that can cure illnesses and we have even worked out how to generate electricity from the waters flowing in our rivers.

Types of environmental resources

Geographers divide all the environmental resources on Earth into three types:

1 renewable resources
2 non-renewable resources
3 continuous resources.

▶ **Key content video:** Environmental resources

Renewable resources

renewable resource
a resource that can regenerate or be regrown (such as trees) as opposed to one that cannot be regenerated (such as coal)

Renewable resources will replenish themselves naturally over time if we do not use them too quickly. The trees in a forest are a good example of a renewable resource. We can cut them down for wood, but they will grow back in time. We just need to manage them carefully. In countries such as Australia, fresh water is considered a renewable resource but it needs to be carefully managed to ensure there is enough for everybody.

Non-renewable resources

non-renewable resource
a resource that cannot be regenerated once it is used up (such as oil or coal)

Non-renewable resources are only available in limited (finite) amounts. If we overuse them, they will one day run out. Minerals such as coal, oil, diamonds and uranium are examples of non-renewable resources.

Continuous resources

continuous resource
a resource, such as the Sun, that will never run out no matter how much it is used

Continuous resources are available in unlimited (infinite) amounts. No matter how much or how often we use them, they will never run out. Energy from the Sun and wind are both examples of continuous resources.

▢ **Quiz me!** Environmental resources

Geography
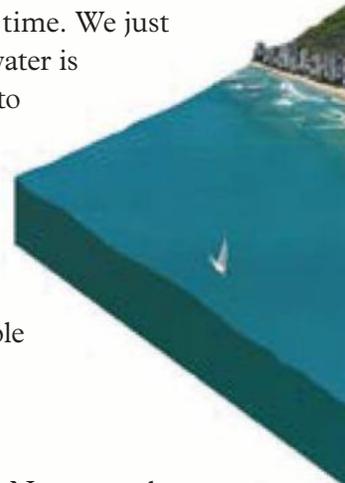
Source 1 An overview of many types of environmental resources

a Soil is formed when rocks break down. It is used to grow the crops we eat. The animals we farm for food also rely on the soil for the grass they eat.

b Plants are renewable sources because they produce seeds in order to reproduce themselves.

c Humans are unique in that our use of the Earth's resources is disrupting the Earth's natural systems.

d Electricity is generated from heat within the Earth. This is known as geothermal energy.

e Wind is used to power ships and windmills and to produce electricity.

f The amount of oxygen in the atmosphere stays about the same because it is constantly recycled through plants, animals and oceans.

g The Sun provides the energy for plants and animals to grow, and forms the basis of everything we eat. It also evaporates water, setting the water cycle in motion.

h Many rivers are dammed and the water used for watering crops or providing drinking water for towns and cities.

i Forests are a renewable resource that is under serious threat. Most of the world's natural forest cover has been cleared or logged.

j Most of Australia's electricity comes from the burning of coal. Coal is an important energy resource in many countries.

k Minerals are used as a resource in many ways. Uranium is just one of thousands of minerals mined around the world. It is being used at this nuclear power station to produce electricity.

l Fresh water is vital for all life forms on Earth, including plants, animals and humans.

m Oil is the world's most commonly used source of energy. It is also used to make many important goods, such as plastics, petrol and fertiliser for farms.

● Renewable resources
● Non-renewable resources
● Continuous resources

Check your learning 2.1

Check your learning 2.1

Review and understand

1 **Identify** the three main types of environmental resources and give an example of each type.

2 Why is it important to look after renewable resources like fresh water?

3 **Describe** how you may have used a non-renewable resource in the last hour.

2.1

◀ **Apply and analyse**

4 What problems might societies around the world face if people continue to rely heavily on non-renewable resources?

5 Two of the environmental resources shown in Source 1 have not been classified using the legend. How would you classify each of these? **Explain** your answer in a few short sentences.

Evaluate and create

6 Looking at Source 1, rank the top three environmental resources that you think are the most important. **Justify** (give reasons for) your answer in a few short sentences and be prepared to discuss this with the class.

Lesson 2.2
Where water comes from

Learning intentions and success criteria

water cycle the continuous cycle by which water evaporates from lakes and oceans, condenses into clouds, falls on land as rain, finds its way into rivers (often after human use) and returns to the oceans

condensation the process that takes place when a gas cools and forms a liquid; for example, water vapour becoming water droplets

Introduction

Water is one of our most precious environmental resources. Nothing can survive without it. It is an essential, renewable resource that occurs naturally on Earth. It can exist as a solid (such as ice in a glacier), a liquid (such as water in a river) or a gas (such as steam). Fresh water is an available resource when in liquid form and a potential resource as a gas or a solid. Liquid water is constantly being recycled through the atmosphere, rivers and oceans in a natural system known as the **water cycle** (see Source 1).

In the water cycle, water from the oceans and lakes is heated and evaporated by the Sun. The evaporated water vapour, which is like steam, then rises until it reaches the cooler parts of the atmosphere. Cold air cannot hold as much moisture as warm air, so the water vapour turns back into liquid water in a process known as **condensation**. These drops of water then form into clouds, which may be carried onto land by winds and forced to rise. The colder air can no longer hold the condensed droplets and they fall as rain. The rainwater finds its way back to the world's lakes and oceans through rivers and streams and the process begins again.

As you can see in Source 1, rain falls when wet air masses are forced to rise. There are several reasons that air masses rise. Each of these will produce different types of rainfall at different places on the Earth's surface. One of the reasons that air masses rise is the heating of the ground in tropical areas. This creates heavy rainfall and thunderstorms. The other two reasons are shown in Source 2 and Source 3.

▶ **Key content video:** Where water comes from

Source 1 The stages of the water cycle

a Condensation

b Precipitation

e Evaporation

d Runoff

c Infiltration

a Condensation is water vapour in the air that cools down and changes to tiny drops of water. When these drops gather together, we see them as clouds. A cloud is a large collection of water drops or ice crystals. The drops are so small and light that they can float in the air.

b When wet air is forced to rise into the cooler parts of the atmosphere, the tiny water drops in clouds join together and become heavier. They then fall as precipitation (rain, snow, hail) onto the land or into the ocean, rivers and lakes.

c When water on the ground soaks into the soil (infiltration), plants then take it in through the roots.

d Some of the precipitation that falls onto land returns to the rivers, lakes and oceans as runoff.

e The Sun heats the water in oceans, lakes and rivers and turns it into a gas called water vapour. The water vapour rises into the air. This process is known as evaporation.

Key concept Interconnection

Are we drinking the same water as Ned Kelly?

Due to the endless water cycle on Earth, we could be drinking the same water that Ned Kelly did back in the 1860s! The water cycle is a constant process that joins the world's land, oceans and atmosphere together. For example, the same water that evaporates from the ocean ends up back in the ocean after going through the cycle and falling as rain. While the water molecules in the cycle are constantly changing states, they are never fully used. The ability of water to replenish itself is invaluable, as water is essential to the survival of all living things on Earth.

For more information on interconnection, see Interconnection in Lesson 1.1 Geographical concepts (page 6).

Source 2 When air crosses a barrier (such as a mountain range) it rises and cools, producing rain. As a result, one side of a mountain range is often wetter than the other side. This is known as orographic rainfall.

Source 3 When two air masses meet, one is forced upwards. The air then cools, the water droplets condense and a line of rain occurs. This line is known as frontal rain.

Quiz me! Where water comes from

Check your learning 2.2

Check your learning 2.2

Review and understand

1 In your own words, **define** the water cycle.
2 What causes water to fall as rain?

Apply and analyse

3 **Classify** (organise) these words into the correct order within the water cycle: precipitation, condensation and evaporation. Write a definition for each in your own words.
4 **Compare** frontal rainfall and orographic rainfall. How are they different? How are they similar?
5 **Suggest** one place in Australia that is likely to receive orographic rainfall. Give reasons for your answer.

6 Why is the water cycle a good example of the geographical concept of interconnection?
7 Look closely at Source 2. Using your knowledge of the water cycle, **explain** how you think the rivers shown here have impacted this landscape.

Evaluate and create

8 Imagine that you are a water droplet in a cloud. **Describe** your journey through the water cycle in language that a young child would find interesting. Here is a start: "Floating along with billions of my closest friends, I thought nothing would ever change …".

Lesson 2.3
Water as an available resource

Introduction

Although most of the surface of the Earth is covered with water, only a tiny percentage of that water is fresh and readily available for human consumption. This water, known as **available water**, includes the **surface water** in dams, rivers and lakes as well as underground water held in soils and rocks. Most of the world's water is not immediately available as a resource and can be thought of as **potential water** (explored further in Lesson 2.4 Water as a potential resource (page 51).

▶ **Key content video:** Water as an available resource

Available water

Our most available form of water is surface water, such as lakes and rivers. This is sometimes called blue water. Most of the world's large cities and towns use surface water to supply the needs of its residents. As such, these settlements are almost always built close to a river, lake or stream. To make it easier to capture flowing water in a river, a dam or weir is usually built across it. Water can be piped from the lake that builds up behind the dam to supply the needs of towns and farms.

Surface water has been used as a resource by humans for thousands of years but as populations grow and more water is needed, people are also using other forms of water. One of the largest sources is groundwater locked away in underground **aquifers**. When it rains, water seeps into the soil to provide moisture for plants to survive (sometimes called green water). As water passes through the spaces between soil and rock it becomes groundwater.

Groundwater is fed by surface water from rainfall and rivers, and naturally comes to the surface at springs or at oases in dry areas. Groundwater can also be pumped to the surface by bores drilled into the ground.

▶ **Video:** Freshwater resources

Learning intentions and success criteria

available water fresh water that is accessible for use by humans without treatment

surface water any body of water above ground, including oceans, rivers, lakes, wetlands, reservoirs, streams and creeks

potential water water that needs to be treated in some way to make it ready for use

aquifer a layer of rock or soil in the ground that hold water or that water can pass through

Source 1 Warragamba Dam supplies water to about 5 million residents in Sydney and is one of the largest in the world built for this purpose.

2.3

Source 2 In many places of low rainfall, water is pumped from underground aquifers to irrigate crops, such as in the Midwest of the United States.

Quiz me! Water as an available resource

Check your learning 2.3

Check your learning 2.3

Review and understand

1 In your own words, **define** an "aquifer".
2 **Identify** two available water resources.

Apply and analyse

3 **Explain** why towns and cities are usually built near rivers and lakes.
4 **Distinguish between** surface water and groundwater. When you distinguish between two things, you should talk about how they are different.
5 Source 1 is an aerial photograph of the Warragamba Dam. **Examine** Source 1 to answer the following questions. Refer to Lesson 1.4 Collecting information (page 14) for help if you get stuck.
   a Create a T-chart in your notebook, with one column titled, "What this image tells me about dams" and the other, "What this image does not tell me about dams". Brainstorm your responses in each column.
   b Why are oblique aerial photographs like this one helpful for geographers?
   c **Identify** the scale at which this aerial photograph has been taken (local, regional or national).

6 Can you think of reasons why the supply of surface water is lower in certain areas and higher in others?

Evaluate and create

7 Pumping water from aquifers and damming rivers are two ways humans make fresh water available, but both methods can create other problems.
   a Use the internet to **research** two of these problems.
   b **Propose** one solution for each of these problems. Your solution should offer help as to how the problem could be managed better and improve sustainability.
8 Launch Google Earth and complete the following exercises.
   a **Identify** the exact location (latitude and longitude) of Warragamba Dam.
   b Measure and record the straight-line distance from Warragamba Dam to Warragamba Recreation Reserve.
   c **Identify** the relative location of Warragamba Dam to another place close by, such as the dam lookout, public school or Visitor Centre.

Lesson 2.4
Water as a potential resource

Introduction

Most of the water on Earth is not immediately available for human use. About 97.5% of the Earth's water is found in the oceans and is too salty for drinking or **irrigating** crops. Much of the remaining 2.5% of the Earth's water is locked in the polar ice caps and in flowing rivers of ice, known as glaciers. Other potential water resources include water vapour in the atmosphere and **wastewater**.

Learning intentions and success criteria

irrigation the watering of crops in some way other than by precipitation

wastewater water that has been used by people in domestic or industrial settings for washing, cleaning or flushing that contains waste products

Key content video: Water as a potential resource
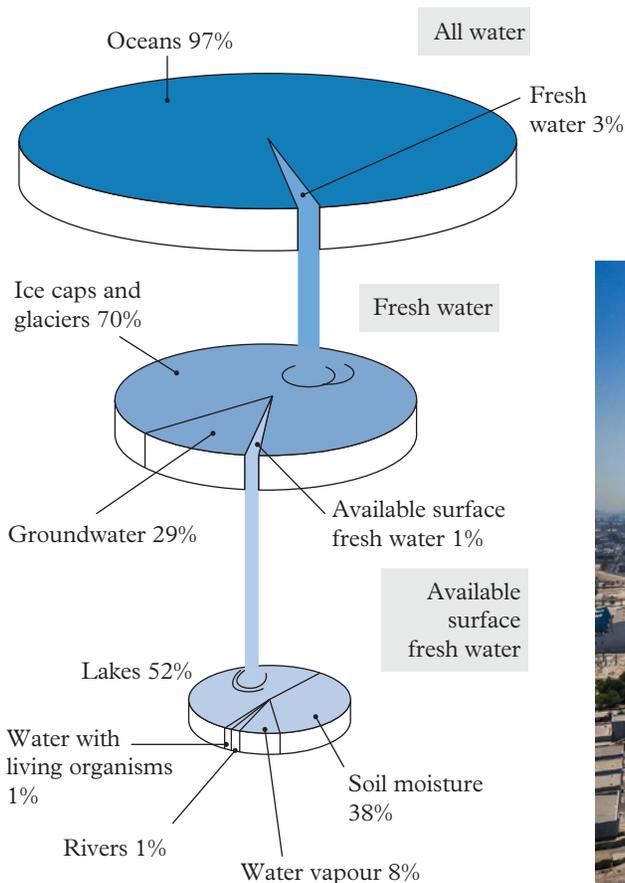
Source 1 The distribution of water on Earth.

Source 2 Dubai Electricity and Water Authority at Jebel Ali. This massive desalination plant supplies much of Dubai's fresh water.

Desalination

In order to make ocean water an available resource, the salt usually needs to be removed. This process is known as **desalination**. Desalination plants now supply fresh water to several Australian cities including Perth, Sydney and Adelaide. As of 2024, there are approximately 16 000 desalination plants across the world.

desalination the process of removing salt from seawater

2.4

Frozen water

Antarctica contains nearly 70% of the world's fresh water as ice in an ice sheet that covers large sections of bedrock (solid ground) in Antarctica. This ice sheet has an average thickness of greater than 2 kilometres, with some areas that scientists have found to be twice this thickness. If this ice were to melt, sea levels around the world would rise by up to 60 metres.

The world's freshwater resources

Available fresh water is not evenly distributed across the planet. Some areas of the world have much more than they need, while other areas do not have enough.

Countries with large rivers, such as the Amazon River in Brazil, and those with high rainfall, such as Indonesia and Papua New Guinea, can be thought of as being "water rich". Other countries, including Australia, can be considered to be "water poor".

I used to think, now I think

Reflect on your learning about water as a potential resource and complete the following sentences.
· I used to think …
· Now I think …
What has changed in your understanding?

Interactive map: World: Freshwater resources

Explore it! A virtual field trip to the Victorian Desalination Plant in Wonthaggi

Source 3 The ice sheet that covers Antarctica contains almost 70% of the Earth's fresh water.

World: Freshwater resources available per person per year

ARCTIC OCEAN

Arctic Circle

EUROPE

ASIA

NORTH
AMERICA

ATLANTIC
OCEAN

Tropic of Cancer

PACIFIC OCEAN

AFRICA

Legend
**Freshwater availability
(cubic metres per person
per year)**

Equator

ATLANTIC
OCEAN

INDIAN OCEAN

SOUTH
AMERICA

Over 70,000
15,000 to 70,000
6,000 to 15,000
2,500 to 6,000
1,700 to 2,500
1,000 to 1,700
Under 1,000
No data available

Tropic of Capricorn

AUSTRALIA

N

0   1,500   3,000 km
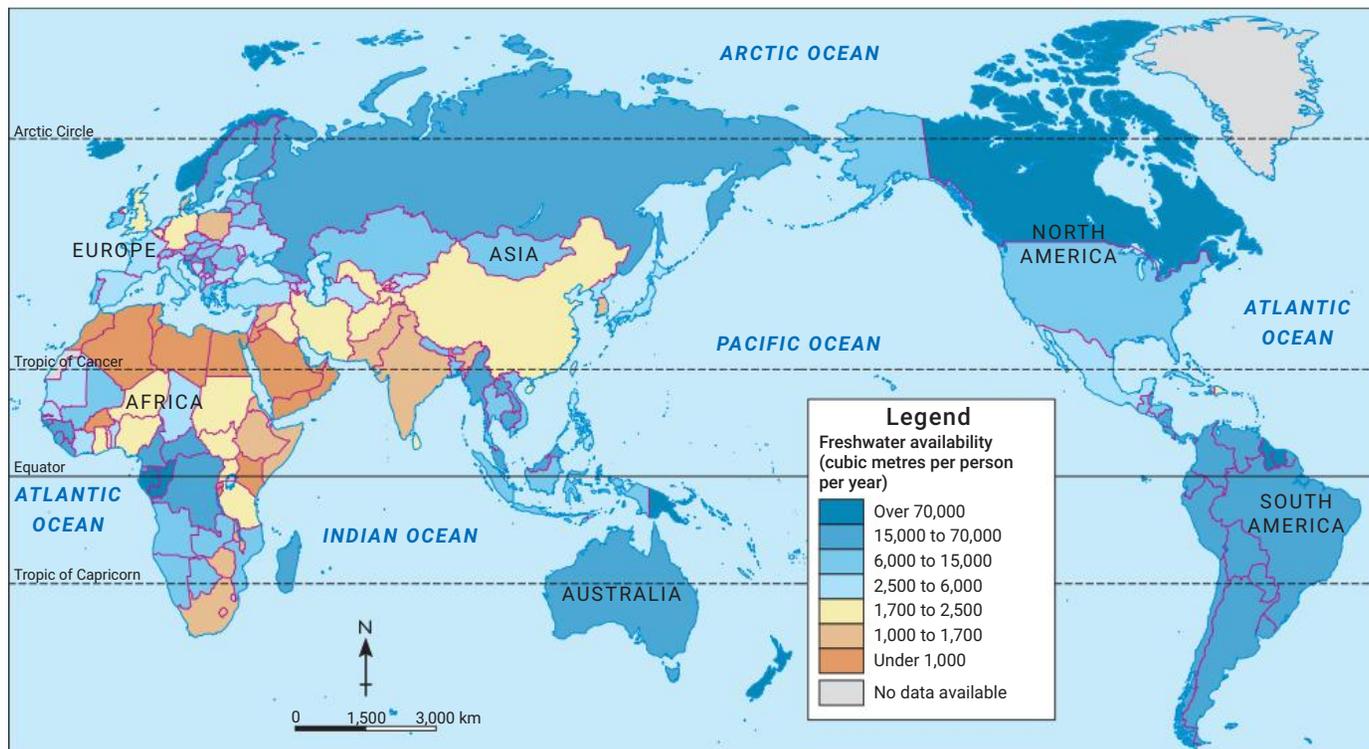
Source: Oxford University Press

Source 4

Check your learning 2.4

Check your learning 2.4

Review and understand

1. In your own words, **define** "desalination".
2. Why do some countries use potential water to supply their needs?

Apply and analyse

3. What is the difference between available water and potential water?
4. Use the data from Source 4 and a world map, such as the one at the back of the Student Book, to answer the following questions:
   a. **Identify** a water-rich continent. Find one country within this continent and record how much freshwater availability it has.
   b. **Identify** a water-poor continent. Find one country within this continent and record how much freshwater availability it has.
   c. Can you think of two reasons why there may be an uneven distribution of freshwater availability around the world?

d. **Compare** the freshwater resources of Australia, New Zealand and Papua New Guinea. Copy the following table into your book and fill it out to help make the comparison.

Similarities	Differences

Evaluate and create

5. Australia is often described as the "driest inhabited continent on Earth". Does Source 4 support this description? Why do you think this is the case?
6. Treating seawater to remove salt makes it available for human use but it may also create some environmental issues. Working in a small group, **propose** (put forward) two issues that may be created and strategies that could be used to avoid these issues.

2A Skills in context
Perth's water supply

Introduction

Perth faces challenges in supplying its rapidly growing population with enough fresh water. A decline in rainfall over the past 100 years has meant that Perth residents can no longer rely on rivers, lakes and dams to supply all their water needs. About 40% of Perth's water now comes from the ground.

North of the city are large aquifers that have collected rainwater for thousands of years and stored it within sand or limestone layers. Wells are dug to access the water, which is then treated, mixed with rainwater and used by Perth residents in their homes and farms. About one-third of Perth's water now comes from two large desalination plants. In recent years, wastewater has been treated and pumped back into aquifers for storage.

Source 1 North Dandalup Dam is one of Perth's largest water reservoirs.

Perth's water supply - 2000s

Perth's water supply - 2024
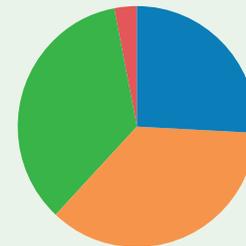
Perth's water supply - 2035 (predicted)

■ Dams ■ Groundwater ■ Desalination
■ Groundwater replacement
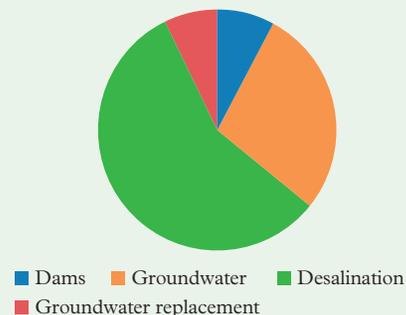
Source 2 A visual representation of Perth's water supply from the 2000s to 2024, and projected into 2035.

Key skill Analysing maps

Using a map legend and scale

Various symbols and colours are used on maps to show the features clearly. To help us unlock the information on the map these symbols are explained in a legend (or key). There are three main types of map symbols:

- point symbols – show features in one particular place (such as a railway station or desalination plant)
- line symbols – show features that connect places on the map (such as roads and rivers)
- area symbols – use colours or patterns to represent large areas (such as lakes and cities).

Maps also include a scale. Scales indicate what distances on the map represent in the real world.

Scale can be shown in three different ways: as a written scale, a line scale or a ratio.

For more information on using map legends and scales, see Lesson 1.5 Analysing maps (page 20).

Practise the skill

Use Source 3 to answer the following questions.

1 Study Source 3.

a **Identify** the symbol that has been used for desalination plants on this map.

b Locate one example of where this symbol is used on the map.

c **Identify** how many groundwater sources supply water to Perth.

d What do you notice about the location of the dams?

2 Look at the scale on Source 3.

a **Identify** the type of scale used on the map.

b Using the scale, find the distance between:

i Bunbury and Neerabup

ii North Dandalup and Northam

iii the two desalination plants.

Extend your understanding

1 What type of graph has been used in Source 2? How does this method of representing data help you interpret it?

2 Look carefully at Source 2.

a **Describe** how Perth's supply of water resources changed over time.

b Using information from this topic, **explain** why this change has occurred.

3 Copy the following table into your book and complete it.

Water resources in Perth	Is this a potential or available water source?	Why is it this type of water source?

4 Do you think it is possible to drought-proof a city? **Justify** (give reasons for) your answer.

5 What do you think will happen to the water in an aquifer if water continues to be pumped out of it for use in a city such as Perth?

6 Complete these tasks.

a Use your research skills to explore some of the strategies being used to address water problems in other parts of Australia.

b Pick one strategy from your research. How effective is this strategy? What are its strengths and weaknesses?

Perth, Western Australia: Water resources

Source: Oxford University Press

Source 3

Enlarged map: Perth, Western Australia: Water resources

Lesson 2.5
Water connects places

Introduction

Water connects places in many ways as it moves through the atmosphere, across the Earth's surface and beneath the ground. Many people around the world are connected to each other through the ways they use these sources of water.

▶ **Key content video:** Water connects places

Connecting people through trade and transport

Rivers have historically acted as the freeways of the world as they enable transport and trade between places. Rivers are used as transport networks to carry people and the goods they need across vast distances.

Rivers are not the only bodies of water that connect people through trade and transport – from tiny canoes carrying families to riverside markets in places such as Papua New Guinea and Brazil, to huge ocean-going container ships crossing the world's oceans, water connects communities across the world.

Moving water

Towns and cities have often developed along rivers and near lakes and other freshwater sources. People are drawn to freshwater supplies and will adapt their way of life to the features of the local environment. For example, in the high mountains of Pakistan and Afghanistan, communities depend on the seasonal melting of the snow and glaciers to provide them with fresh water. The snow melt also feeds the region's great rivers (the Indus and the Ganges) that supply water to the many cities and communities established along their banks.

The movement of water in rivers can also connect places together in negative ways. Flooded rivers can affect many settlements along their banks. Floods are among the world's deadliest natural disasters. If pollution or toxic chemicals enter the water at one location on the river, they quickly affect other parts of the river downstream, and the people who use it.

Moving soil

mouth the end of a river where it enters a lake or ocean

fertile soils that have the nutrients and minerals to support the growing of plants

silt small sediment particles that travel downstream through rain, water flow and eroding riverbanks

The place where a river meets a lake, larger river or ocean is known as the **mouth**. The soil at the mouth of the river is rich and **fertile** from the deposits of **silt** that have travelled down the river from the mountains. Over time, this silt builds up to large flat areas with rich soil, which are perfect for farming.

The mouths of rivers around the world support some of Earth's largest and most productive farming areas (for example, the Mekong River as seen in Source 1).

Many major port cities have also been built at river mouths, including Rotterdam at the mouth of the Rhine River in the Netherlands, and Rome at the mouth of the Tiber River in Italy.

Quiz me! Water connects places

Source 1 The water that flows through the river systems around the world connects people and places in many ways.

a Communities in the Himalayas (a mountain range in Asia) depend on annual glacial melts to replenish their water supplies. Once replenished, excess water flows into rivers, connecting these communities with others downstream.

b Large cities and towns around the world are connected by rivers. River waters allow people to travel and goods to be transported and traded. This barge on the Rhine river is carrying coal from the city of Cologne south to Switzerland.

c Farming communities along the Mekong Delta in Vietnam plant their rice crops in the rich soil of the floodplains.

a Water supply

b River trade

c Farming

2.5

Check your learning 2.5

Review and understand

1 **Identify** one way in which water connects people.

2 **Create** a table with three columns: environmental factors, social factors and economic factors. Add one example of water connecting places in each column.

Apply and analyse

3 Why can pollution from one part of a river affect places further downstream?

4 **Examine** Source 1.

  a How do you think the choice of crop grown in label c has been determined by the local environment?

  b What crops do you think would be grown in the location shown in label a?

  c Write a short paragraph comparing the access to water that farmers or food growers have in these two areas.

Evaluate and create

5 Using Google Earth, explore the Nile River in Egypt. Based on your observations, predict how the river has affected where people choose to live in Egypt. **Justify** your response using specific examples from what you can see, and what you have learnt about how water connects places.

Lesson 2.6
Water changes places

Learning intentions and success criteria

Introduction

Water can change places in both positive and negative ways. On the positive side, water from rain and rivers is used to irrigate the crops and farm the livestock that we eat. This water has a positive effect on the places in which we live. Without it, no life could exist. On the other hand, water can cause serious damage and problems in different places. For example, snowstorms can shut down cities for days and heavy rainfall can cause widespread flooding.

▶ **Key content video:** Water changes places

Source 1 The Grand Canyon has been eroded by the Colorado River over millions of years.

Erosion

As water flows across the Earth's surface, it gradually wears away that surface. This process is called **erosion** and it is particularly obvious on the banks of rivers. Fast-flowing rivers that carry large volumes of water erode more than slower, smaller rivers. The rate of erosion also depends on how big and hard the rocks are that the river flows over. For example, hard rocks will erode much more slowly than softer rocks. Some of the world's most spectacular landforms, such as the Grand Canyon in the United States, have been formed through this process.

Explore it! A virtual field trip to the Grand Canyon

The eroded materials (such as rocks, sand and silt) are carried by the river towards the sea

River flow

Light particles are carried on the water's surface

Large rocks and debris are moved along the riverbed

Heavier particles sink to the riverbed

erosion the wearing away of the Earth's surface by forces such as river, wind and ice
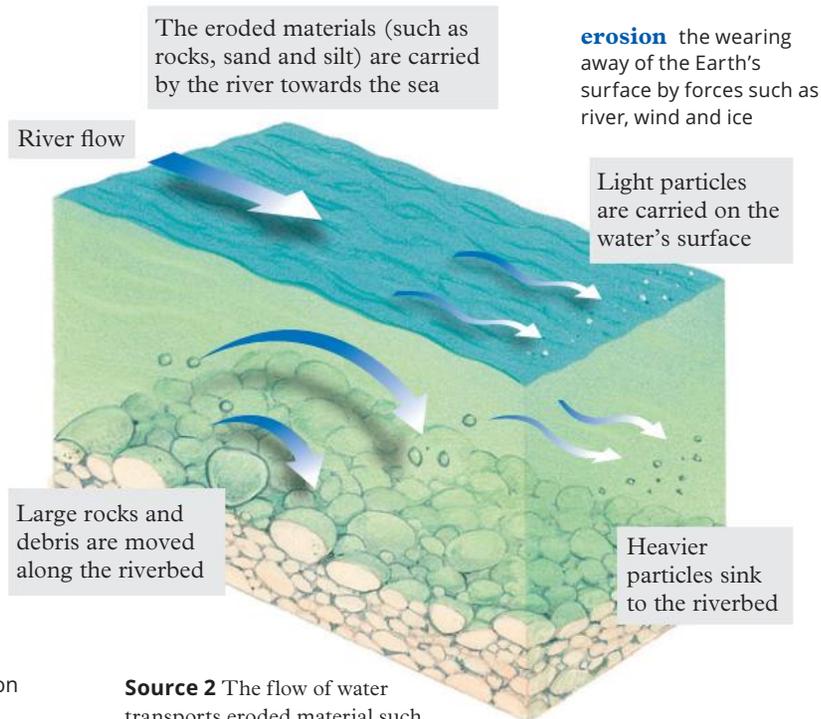
Source 2 The flow of water transports eroded material such as rocks, stones and sand.

Case study Tham Luang cave rescue

In 2018, twelve members of a junior football team and their coach made world headlines when they became trapped in an underground cave in Northern Thailand.

On 23 June 2018, the team was exploring the cave. Heavy rainfall in the area had created an abundance of surface water, which flowed through the rocks above the cave and caused the naturally occurring groundwater in the cave to flood. To escape the rising water, the group travelled deeper into the cave where they awaited rescue in total darkness on a muddy bank, 4 kilometres from the cave's entrance.

Pumps were used to reduce water levels in the cave and specialist divers from around the world were brought in to navigate the narrow, twisting cave to reach the group. The boys and their coach were sedated, strapped to these expert divers, and escorted to safety through the narrow cave system. The whole ordeal lasted 18 days.

Team found

Entrance

4,000 metres
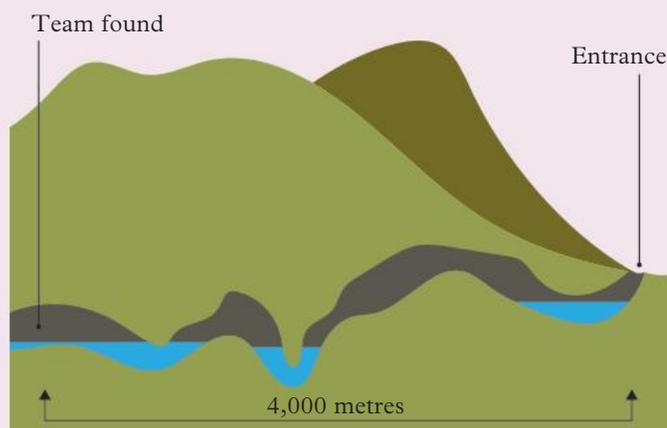
Source 3 An illustration showing the Tham Luang cave, including sections full of water.

Source 4 Rainfall data for Chiang Rai, Thailand, near the cave. The group went missing when they entered the cave on 23 June. On that day, there was 5.7 millimetres of rainfall in the area.

June 2018								July 2018									
23rd	24th	25th	26th	27th	28th	29th	30th	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
5.7 mm	1.4 mm	14.0 mm	16.2 mm	16.5 mm	1.8 mm	0 mm	0 mm	13.7 mm	0 mm	0 mm	0 mm	0 mm	2 mm	2 mm	4 mm	11 mm

2.6

Check your learning 2.6

Check your learning 2.6

Review and understand

1   How can rivers change natural landscapes?
2   What caused the football team and their coach to become trapped in the cave at Tham Luang?
3   Expert divers were used to help rescue the boys and their coach.
   a   **Outline** the dangers faced by the rescuers.
   b   **Identify** the strategies used to overcome these dangers.

Apply and analyse

4   **Explain** why fast-flowing rivers erode more than slow-moving rivers.
5   Does the Tham Luang cave rescue demonstrate the interconnection between rainfall and groundwater? How?

Evaluate and create

6   **Examine** Source 4.
   a   In your notebook, **create** a column graph using the data. Plot the rainfall on the *y* axis (vertical) and the days on the *x* axis (horizontal). For more information on graphs, refer to Lesson 1.6 Representing data (page 31).
   b   Look at your graph closely and **describe** the pattern of rainfall in Chiang Rai during this time.
   c   One of the first proposals for the rescue in Tham Luang was to wait until the water level fell. Use evidence from your graph to **explain** why this proposal was not carried out.
7   Using Google Earth, find the Tham Luang cave. Next, find the relative location of the cave from one other place of your choice and record the answer.

Lesson 2.7
Water as an environmental resource

Learning intentions and success criteria

Introduction

Fresh water is not just an essential resource for people, it is also a vital element in the natural world. All life forms on planet Earth – from microscopic bacteria, to large animals, to entire forests – rely on a supply of clean, fresh water.

However, human activities can have devastating impacts on the natural environment and even bring about the extinction of individual species. For example, the Yangtze River dolphin was once found throughout this Chinese river but due to a combination of factors, including dam building and fishing, it is now considered extinct.

▶ **Key content video:** Water as an environmental resource

Rivers

Rivers are a vital part of the natural world for many reasons. They transport water and nutrients to different ecosystems, supporting millions of species of plants and animals. Birds and animals not only drink from the world's rivers but often feed from them too. Many species, including the platypus, also nest in riverbanks. In places where land has been cleared for farming and other human uses, rivers provide corridors for the movement of animal species.

Rivers also drain surface water and carry it into oceans and lakes, linking together the land and sea. In Australia, large rivers such as the Murray and Darling Rivers occasionally flood onto the surrounding land. While floods can cause a hazard for humans, they provide a vital source of water and nutrients to **floodplains**. Crops that rely heavily on water, such as rice, are grown on floodplains.

floodplains low-lying land next to a river or stream that is regularly flooded

Source 1 A) The Barmah-Millewa floodplain is fed by Australia's largest river, the Murray River. B) The Sundarbans in Bangladesh and India are home to the world's largest tiger population. Unlike most cats, tigers like the water and are regularly seen swimming from island to island in the Sundarbans. C) A satellite image of the very eastern part of the Sundarbans. This image was taken by a European Space Agency satellite, located nearly 88 kilometres above the Earth's surface.

Wetlands

A wetland is an area that is covered in water for all, or part of the year. A floodplain is an example of a wetland. Like rivers, wetlands are a vital part of the natural environment. They are sometimes referred to as the "nursery of life" as species of animals, including crabs and fish, spend the early part of their life cycle in a wetland area. Wetlands along coasts protect the land from erosion by waves and reduce the impacts of storms. They also filter water, absorbing pollutants and capturing vital nutrients.

The world's largest coastal wetland is the Sundarbans mangrove forest in Bangladesh and India. Located at the mouths of several rivers, including the Ganges and Brahmaputra Rivers, it is one of the most **biodiverse** places on Earth. Home to an estimated 260 different bird species, the Sundarbans mangrove forest also supports populations of threatened species including crocodiles and pythons. It also acts as a storm barrier from typhoons in the Bay of Bengal.

See, think, wonder

Look at the image of the tiger in Source 1.
- What do you see?
- What do you think?
- What do you wonder?

biodiverse a term used to describe an ecosystem containing a large range of different types of plants and animals

More than 4.5 million people live in the region, farming the rich soils and harvesting trees for timber. Concerned about the long-term future of the area, the United Nations has placed the Sundarbans forest on the World Heritage List. This is in recognition of its "outstanding value to humanity" and should help to conserve and protect it for the future.

Quiz me! Water as an environmental resource

Check your learning 2.7

Check your learning 2.7

Review and understand

1 **Identify** three different functions of rivers.

2 In your own words, **define** the following terms:
- **a** wetlands
- **b** floodplains.

3 **Outline** some negative impacts that human activity might have on water.

Apply and analyse

4 **Explain** why healthy rivers and wetlands are important environmental resources for human beings.

5 Source 1 label c) is a satellite image of the very eastern part of the Sundarbans. In this image, dark green areas represent areas of natural forest whereas the lighter coloured green and brown areas represent areas that have been cleared by people.
- **a** Based on the image, how much of this area do you think has been cleared?
- **b** Why do you think these areas have been cleared?
- **c** Do you think the clearing of these areas has affected the natural ecosystems there? **Explain** your answer.

Evaluate and create

6 There are 20 World Heritage sites in Australia. In small groups, brainstorm as many as you can.
- **a** **Research** these World Heritage sites online.
- **b** **Identify** how many of these 20 sites have been listed to protect rivers or wetlands.
- **c** As a group, decide whether you think it is important to protect rivers and wetlands or not. Give reasons for your answers and discuss these with the rest of the class.

7 Locate some rivers, streams and wetlands in your local area. You may use Google Maps, Google Earth or a street directory to help you. Once you have found them, complete the following:
- **a** In a short paragraph, **describe** what you know about these ecosystems.
- **b** **Identify** whether these are natural places, or if they have been altered by humans.
- **c** In a short paragraph, **summarise** your thoughts on the access to or amount of fresh water in your local area.

Lesson 2.8
Water as an economic resource

▶ **Key content video:** Water as an economic resource

Water for food

Farmers are by far the biggest users of water in Australia. Approximately 70% of the fresh water used each year in Australia is used for agriculture. This water is used to produce an enormous range of products, many of which you consume every day.

In places with reliable rainfall, farmers capture rainwater in dams and tanks. In drier places they use bores to access water from aquifers beneath their land. In many parts of Australia, water is taken from rivers and carried in pipes and channels to individual farms. Farmers are allowed to use a certain amount of water from rivers each year and in some cases they pay for the amount of water they use.

Water is used to water crops and to raise animals such as cows, sheep and pigs. For example, it takes up to 50,000 litres of water to produce 1 kilogram of beef.

Learning intentions and success criteria

Source 1 The amount of water needed to produce typical breakfast foods.

Apricots	Bread	Milk and butter	Raspberry jam	Rice Bubbles
Apricots are grown and processed in northern Victoria and southern New South Wales. They are processed in various plants centred around Shepparton, Victoria.	The main ingredient in bread is wheat. New South Wales produces the most wheat in Australia; most of this in the east of the Murray-Darling Basin.	More than 60% of Australia's milk and milk products comes from Victoria. Leongatha in Victoria is home to a huge dairy factory.	The main ingredient in raspberry jam is sugar. Virtually all of Australia's sugar is grown in Queensland. Raspberries grown in the Goulburn Valley make up 40% of the jam.	Rice Bubbles are made from 89% whole white rice, which is grown in the Murrumbidgee Irrigation Area (part of the Murray-Darling Basin). Much of the rice industry is centred around Deniliquin in southern New South Wales.
Estimated water needed to produce 1 kilogram of apricots: 1,391 litres	Estimated water needed to produce 1 kilogram of wheat: 750 litres	Estimated water needed to produce 1 kilogram of butter: 18,070 litres	Estimated water needed to produce 1 kilogram of raspberries: 713 litres	Estimated water needed to produce 1 kilogram of rice: 1,550 litres

2.8

Water for energy

Electricity can be generated using the force of flowing water in rivers. A dam is built across a river, creating a large reservoir of water. This water is then released through turbines, causing them to turn. The spinning turbines rotate giant magnets around a huge coil of copper wire to create electricity. The faster the water flows, the more electricity is created. This type of electricity is known as **hydroelectricity**.

There are currently 124 hydroelectric plants in Australia. Together, they can produce enough electricity to supply 6.5% of the total electricity needs of the country, which is about 2.8 million homes.

Hydroelectricity is the largest source of renewable, non-polluting energy in the world. The main negative impact of building a hydroelectric plant is that the natural flow of the river is stopped and the land behind the dam is flooded. The flooding of valleys behind the dam can destroy natural habitats and human features such as houses, fences and roads.

In Australia, hydroelectricity is the largest source of renewable energy. Other sources include non-renewable resources such as coal and gas.

hydroelectricity
a form of energy that harnesses the power of water in motion to generate electricity

I used to think, now I think

Look at Source 2. Reflect on your learning about hydroelectricity and how water could create power. Complete the following sentences.
· I used to think ...
· Now I think ...
What has changed your understanding?
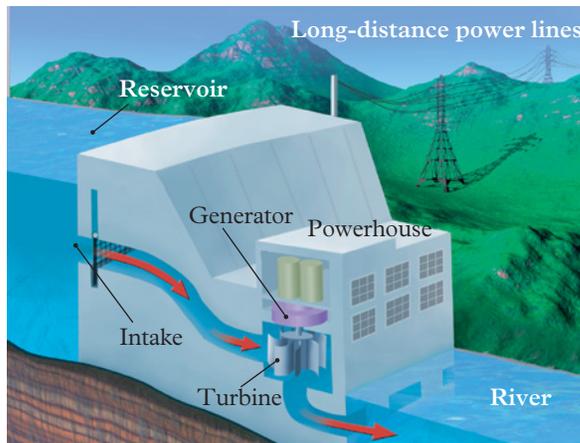
Source 2 How a hydroelectric power station works.

Graph it! Water for energy

Case study The Snowy Mountains Scheme

Australia's largest engineering project is the Snowy Mountains Scheme. Built between 1949 and 1974, the Scheme diverts the Snowy River into dams and tunnels through the Great Dividing Range to flow into the Murray and Murrumbidgee rivers.

The Scheme consists of nine power stations, 16 major dams, 80 kilometres of aqueducts and 145 kilometres of interconnected tunnels. It has been described as one of the civil engineering wonders of the modern world. In 2019 work began on Snowy 2.0, which will add one new underground power station.

Source 3 Tumut 3 is one of the many power stations in the Snowy Mountain Scheme

The Scheme contains Australia's three largest hydroelectricity plants. The diverted water is used to irrigate large areas of farmland throughout New South Wales and Victoria, and the hydroelectric energy created supplies power to New South Wales, Victoria and the ACT.

The Snowy Mountains Scheme changed the natural environment in many ways. Water flows into the Snowy River were reduced to about 1% of their natural flows. Before the scheme was built, the river experienced periods of high flows at times and low flows at others. This has now changed dramatically. The changes have greatly impacted the plants, animals and water quality of the river.

Check your learning 2.8

Check your learning 2.8

Review and understand

1 What type of environmental resource is hydroelectricity?

2 **Identify** one advantage and one disadvantage of building a dam.

Apply and analyse

3 Look at Source 1.

  a **Rank** the foods from requiring the most water for production to requiring the least.

  b **Summarise** what you have learned.

Evaluate and create

4 It can take up to 50,000 litres of water to produce 1 kilogram of beef. In a short paragraph, **suggest** two reasons why you think it takes so much water to do so.

5 A new component of the Snowy Mountains Scheme is currently being built. Known as Snowy 2.0, it is expected to increase the amount of electricity being produced by more than 50%. **Research** Snowy 2.0 and respond to these questions.

  a How is Snowy 2.0 different to the original Snowy Mountains Scheme?

  b What will some of the positive and negatives effects be of this scheme for people and the environment?

Lesson 2.9
Water as a social resource

Introduction

Drinking water, sometimes called potable water, is water that is safe to drink and use for cooking and washing. In Australia, most water undergoes some form of treatment to make it safe to drink. Water treatment removes sediments, pollutants and microorganisms that can make us sick.

Australians are among the world's biggest water users, using almost 500 litres of water per person per day. This figure is for all water use, including water used in agriculture and industry. While this amount has declined in recent years, it still ranks among the highest in the world. Experts estimate that each Australian will need to use 12% less water by 2030 to stay within the limits imposed by our rainfall. Some households use strategies to save water, while many others continue to waste large amounts.

▶ **Key content video:** Water as a social resource

Learning intentions and success criteria

	Women	Girls
South Sudan		90
Mozambique		84
Burkina Faso		81
Malawi		84
Guinea-Bissau		72
Central African Republic		76
Zambia		69
DR Congo		75
Chad		71
Ethiopia		76

Source 1 The gender of those who collect water in countries where more than 10% of households do not have a water supply in their home.

2.9
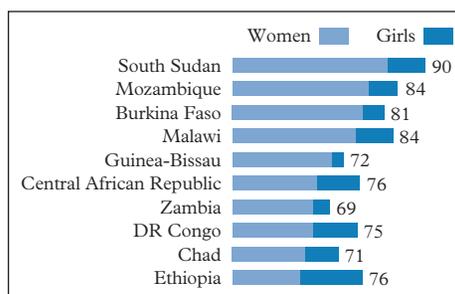
Access to safe drinking water

In Australia we take for granted that we have flushing toilets, running water from taps, and clean, safe drinking water. However, millions of people around the world get sick or die each year from drinking contaminated water.

The United Nations estimates that more than 703 million people do not have access to safe drinking water, and two billion people do not have basic sanitation, such as running water to clean their hands or flush their toilets. Most of these people live in rural areas rather than in cities.

Each year, millions of people die from diseases carried in their water. Millions of women and children around the world, particularly in Africa, spend several hours a day collecting and carrying enough water to keep their families alive for another day.

Interactive map: World: Access to safe drinking water

Quiz me! Water as a social resource

Key concept Environment

Aysha's story

The world we live in is made up of many different environments, both natural and human-made. In Australia we have vast infrastructure to ensure that all our towns and cities have access to clean water. However, the environment and lack of infrastructure in other parts of the world mean that this is not the same for everyone.

Thirteen-year-old Aysha lives in the region of Afar in Ethiopia. This region receives little rainfall throughout the year and often faces drought. Aysha's day begins at 6:30 am when she wakes on the dirt floor of her home. She ties plastic water containers to the family camel and sets off alone to the river. This is a 4-hour walk across barren, rocky ground. Reaching the river, she fills the containers with the muddy water, takes a drink and washes herself and her clothes. She is finally able to have a meal after arriving back at her village in the late afternoon, and then there is time for some reading lessons with her brother. She is expected to clean the dishes and prepare a drink of tea for the family before falling asleep. Tomorrow, her day will be just the same.

For more information on environment, see Environment in Lesson 1.1 Geographical concepts (page 6).

Source 2 In South Sudan many women and girls spend hours each day collecting and carrying water.

World: Access to safe drinking water, 2022
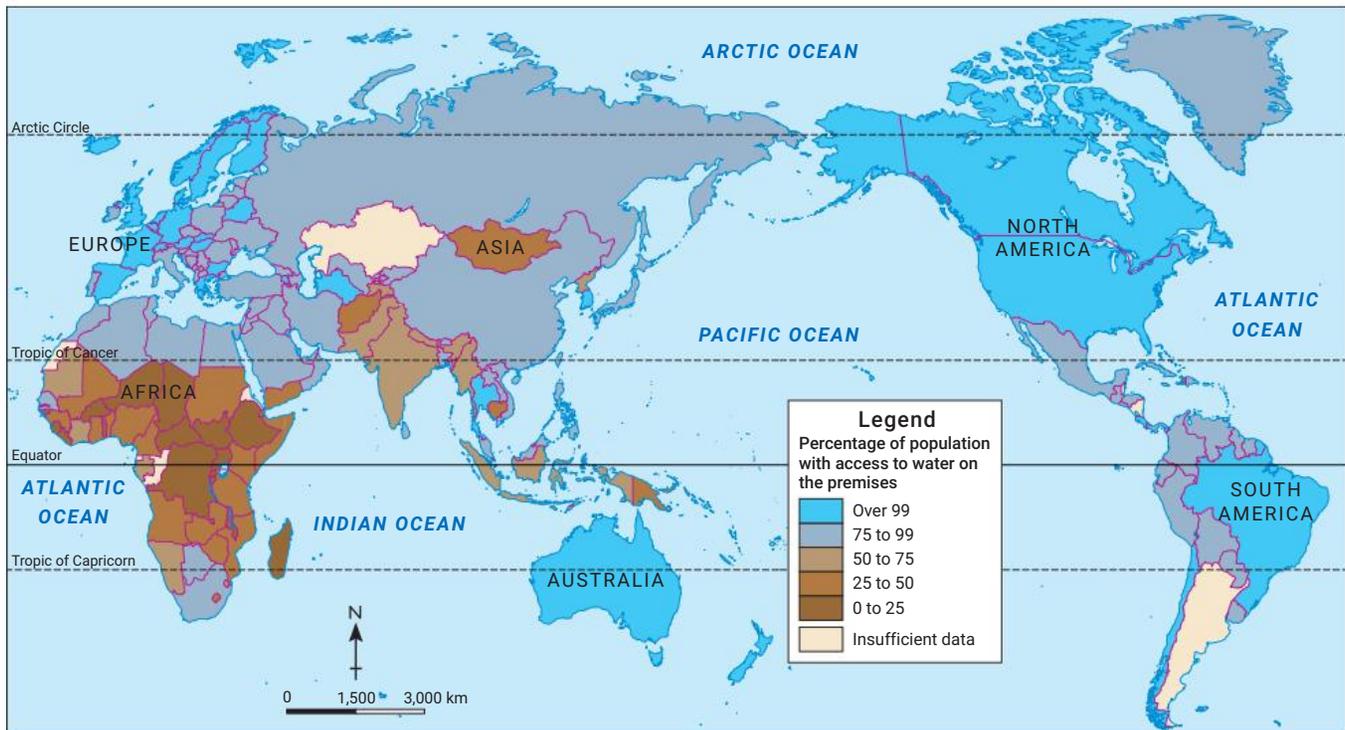
Source: Oxford University Press

Source 3

Check your learning 2.9

Check your learning 2.9

Review and understand

1 In your own words, **define** "potable water".
2 How many people do not have access to safe drinking water, according to the United Nations?
3 **Describe** some of the natural features of Aysha's environment in Ethiopia.

Apply and analyse

4 Use Source 3 and a world map, such as the one at the back of the Student Book, to answer the following questions.
    a **Identify** two countries with the best access to safe water and two countries with poor access.
    b Using the PQE method, **describe** access to safe drinking water at a global scale. See Using the PQE method in Lesson 1.7 Identifying patterns and relationships (page 35) for a reminder on how to use the PQE method.

5 Read Aysha's story
    a The average toilet in Australia uses 8 litres per flush. **Compare** water usage between Australia and Ethiopia, using examples from this lesson.
    b **Explain** how Aysha's daily routine would affect her education.

Evaluate and create

6 In small groups, complete the following tasks.
    a **Propose** (put forward) solutions for Aysha's access to water.
    b **Discuss** why changes to infrastructure, such as installing a pipe from the river to the village, have not been made in Aysha's community.
    c Search online to find one strategy to combat water scarcity that is currently being used in Africa. **Discuss** whether or not this is a good strategy, and how you might improve it.

Lesson 2.10
Water as a cultural resource

Learning intentions
and success criteria

Introduction

Water is a vital resource valued by all Australians. It holds an important spiritual and cultural value for Aboriginal and Torres Strait Islander peoples, who regard the rivers and waterholes as an inseparable part of their land.

▶ **Key content video:** Water as a cultural resource

A spiritual connection with water

Prior to European colonisation, most Aboriginal peoples lived in well-watered coastal areas and along the rivers of the Murray–Darling Basin. They mapped the location of water in their artwork. In these maps, spirals often identified the location of pools and wells while wavy lines usually showed the location of running water.

Water features are often the location of important Creation stories. At the base of Uluru in central Australia, for example, is the beautiful and peaceful Mutitjulu Waterhole. It is a popular site for visitors, but for the Anangu people, this waterhole is also the site of a battle between Kuniya, a python, and Liru, a brown snake. You can read about the Kuniya and Liru story on the Uluṟu-Kata Tjuṯa National Park website.

Aboriginal water management today

In Australia today, Aboriginal and Torres Strait Islander peoples have been largely left out of the decision-making process when it comes to managing water sources. In some remote areas of Australia, many traditional water sources have become unreliable or unusable because landowners have given their cattle access to these areas without consulting local Aboriginal peoples.

In northern Victoria, however, the Yorta Yorta people work together with Parks Victoria to manage flooding in the Barmah Forest. The forest relies on annual flooding to maintain its health, and the flow of water onto the floodplain supports native flora and fauna that are of significance to the Yorta Yorta people.

There is hope that Aboriginal and Torres Strait Islander peoples will be more included in decisions about water use and management. An agreement between the federal and state governments in 2004 stated that Aboriginal and Torres Strait Islander peoples should be included in water planning wherever possible, however this is yet to be put into action in many regions.

🖥 **Explore it!** A virtual field trip to Budj Bim Cultural Landscape
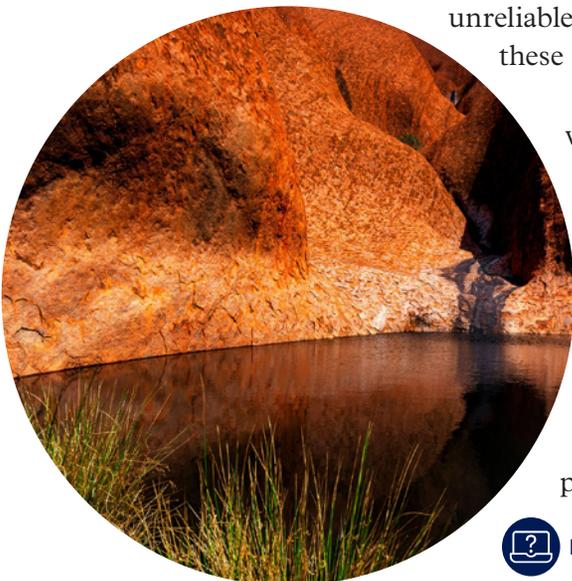
Source 1 Mutitjulu
Waterhole, Uluru

Case study Budj Bim Cultural Landscape, Western Victoria

Western Victoria is home to one of the world's most extensive and oldest **aquaculture** systems. It was created by the Gunditjmara people, who are the traditional owners of the areas that now include Warrnambool, Port Fairy, Woolsthorpe and Portland.

On the shores of Tae Rak (Lake Condah), the Gunditjmara people used volcanic rock to build a series of canals, walls and stone traps. The structures, thought to be more than 6,000 years old, joined a series of natural pools and swamps. This allowed the local people to control the flow of water throughout the year, helped to ensure a reliable supply of water in hot months, and control the movement of fish and eels for food.

Historians have uncovered evidence of many permanent homes at the site, suggesting that the stone walls and traps supported a reasonably large community. They are one of the earliest known examples of fish farming in the world, and have been listed as a United Nations World Heritage Site.

aquaculture the farming of seafood

Source 2 Some of the channels built by Gunditjimara people at Tae Rak.

Check your learning 2.10

Check your learning 2.10

Review and understand

1 **Identify** the environment where most Aboriginal peoples lived in Australia before Europeans arrived in 1788.

2 Why is the Budj Bim cultural landscape a special place?

3 Why do the Yorta Yorta people work with Parks Victoria?

Apply and analyse

4 Mutitjulu Waterhole is often visited by tourists and photographers, many of whom are unaware of its importance in the Anangu culture. Write a short reflection on how different groups can have different perspectives on the same place.

5 Budj Bim has been included on the World Heritage list, as has the Sundarbans area (see Source 1 in Lesson 2.7 Water as an environmental resource (page 61).

   a Using Google Earth or your atlas, **identify** the absolute location of both these places.

   b **Compare** these two places. How are they similar? How are they different?

Evaluate and create

6 In the past, many non-Indigenous Australians believed that Aboriginal peoples were nomadic, meaning they did not stay in one place. Does the Budj Bim cultural landscape support this belief? **Explain** your answer.

2B Skills in context
The Snowy Mountains Scheme

Introduction

As you have learnt, the Snowy Mountains Scheme in the Australian Alps has changed the natural flow of water. Streams and rivers that once ran freely from the mountains to the sea are now captured and diverted into tunnels and dams. In turn, these dams supply power stations with flowing water to produce electricity. Built between 1949 and 1974 by workers from more than 30 countries, it is sometimes seen as the birthplace of a truly multicultural country. In 2019, work started on an addition to the scheme. Known as "Snowy 2.0", it will allow water to be pumped from a low dam uphill to a higher dam when there is little demand for electricity. When demand increases, the water will be fed back downhill to produce electricity.

Source 1 An oblique aerial view of the Jindabyne Dam at the head of the Snowy River.

Key skill Analysing maps

Using a topographic map

Topographic maps are detailed maps that use several features to show the shape and height of land. These features include:

- **contour lines** – these lines join all places of the same height and are shown on the map as brown lines with the height written on them. The closer together the contour lines are, the steeper the land.
- **grids** – a square grid is overlaid onto topographic maps to help find the general area or location of features on the map. Each line on the grid is given a two-digit number, known as eastings (the horizontal line) and northings (the vertical line). The space between each of these intersecting lines are known as **tenths**.
- **spot height** – a point on a map where the height above mean sea level is recorded, typically by a dot with the number written beside it. The legend will tell you how this height is measured.
- **symbols and colours** – topographic maps show natural features (such as forests and lakes) and human-made features (such as built-up areas and reservoirs).

The town of Talbingo in Source 2 is located at GR618063. This is known as a six-figure **grid reference** (GR), and it works like this:

- The first two numbers in the GR (61) tell us that the town is to the right of the north-south line number 61.
- The third number in the GR (8) represents the number of tenths between the 61 line and the 62 line where Talbingo sits.
- The next two numbers in the GR (06) tell us that the town is located north of the 06 line that run across the map and the last number (3) that the town is three-tenths between the 06 and the 07 line.

It sounds a little complicated, but it is really quite easy. You can think of the third and sixth numbers as being like decimal points: 61.8/06.3.

For more information on analysing maps, see Lesson 1.5 Analysing maps (page 20).

Practise the skill

1 **Identify** the features located at the following grid references:
   a GR646968.
   b GR607988.
   c GR6500400.

2 **Identify** the grid references for the following features:
   a Tumut 2 power station
   b the town of Khancoban
   c the dam shown in Source 1.

3 **Identify** whether Talbingo Reservoir is higher or lower than Tantangara Reservoir.

4 **Explain** what this means in terms of the flow of water through the tunnel that links these two reservoirs.

5 Provide a grid reference for a place on the map that is more than 1.500 metres above sea level.

6 Provide the grid reference for one natural feature and one human-made feature on the map.

Extend your understanding

1 **Explain** how a topographic map such as the one in Source 2 helps geographers to understand the flow of water through the environment.

2 The Snowy Mountains Scheme is not the only hydroelectricity system in Australia. About eighty per cent of Tasmania's energy, for example, is generated in this way. The largest dam and power station in Tasmania is the Gordon station. **Research** this system and make a list of the similarities and differences between the Gordon system and the Snowy Mountains system.

3 Hydroelectricity is the largest source of renewable energy in the world today. **Explain** why it is classified as a renewable resource. **Outline** why hydroelectricity is an important resource in dealing with the causes of climate change.

Topographic map: Snowy Mountains Scheme

Legend

- Main road
- Secondary road
- Other road
- Watercourse
- Water tunnel with direction of flow
- Town
- Hydro power station
- Hydro power station underground
- Contour with value (interval 500 metres) *500*
- Reservoir elevation *(1,205 m)*
- National Park
- Reservoir
- Built-up area

Tumut

Blowering

Batlow

Blowering Reservoir (342 m)

Jounama Small Hydro

Talbingo

Jounama Pondage

Tumut 3

Talbingo Reservoir (547 m)

NSW ACT

Tantangara Reservoir (1,205 m)

Tumbarumba

Snowy 2.0 *(under construction)*

KOSCIUSZKO NATIONAL PARK

Murrumbidgee River

Tumut 2

Tumut Two Pondage

Tumut 1

Cabramurra

Tumut Pond Reservoir

Happy Jacks Pondage

Adaminaby

Tooma Reservoir (1,197 m)

Lake Eucumbene (1,155 m)

Tumut River

Murray River

Eucumbene River

VIC NSW

Khancoban

Murray 2

Murray 1

Khancoban Pondage (298 m)

Geehi Reservoir

Island Bend Pondage

Guthega

Berridale

Guthega Pondage

Lake Jindabyne (903 m)

Scale 1:600,000

0 5 10 15 20 25 km

N

Perisher Village

Jindabyne

Snowy River

Thredbo Village

Source: Oxford University Press

Source 2

Lesson 2.11
Water in Australia

Introduction

Australia's water supplies are not evenly distributed. The northern third of the continent is a water-rich area, as it is located in an area of tropical **climate** and receives heavy rainfall with **monsoons** in the summer. By comparison, vast interior areas of the country receive very little rain.

Virtually all of Australia's large cities and towns are on the coast, especially in the east and south-east. While most of these areas receive reliable rainfall, pressure from water users has put a strain on water resources in these areas.

▶ **Key content video:** Water in Australia

Rainfall distribution in Australia

Much of the Australian continent is dry. It is only the northern, eastern and south-western coastal regions that receive good annual rainfall. The climate of the eastern half of Australia is influenced by the Great Dividing Range, which extends 3,500 kilometres from the northern tip of Cape York into Victoria. Winds from the south-east push warm, moist air over the land. Forced to rise and cool, water droplets fall onto the east coast as rain, but as the air descends to the west, it becomes warmer and drier.

Australia: average annual rainfall (climate graphs for selected locations)
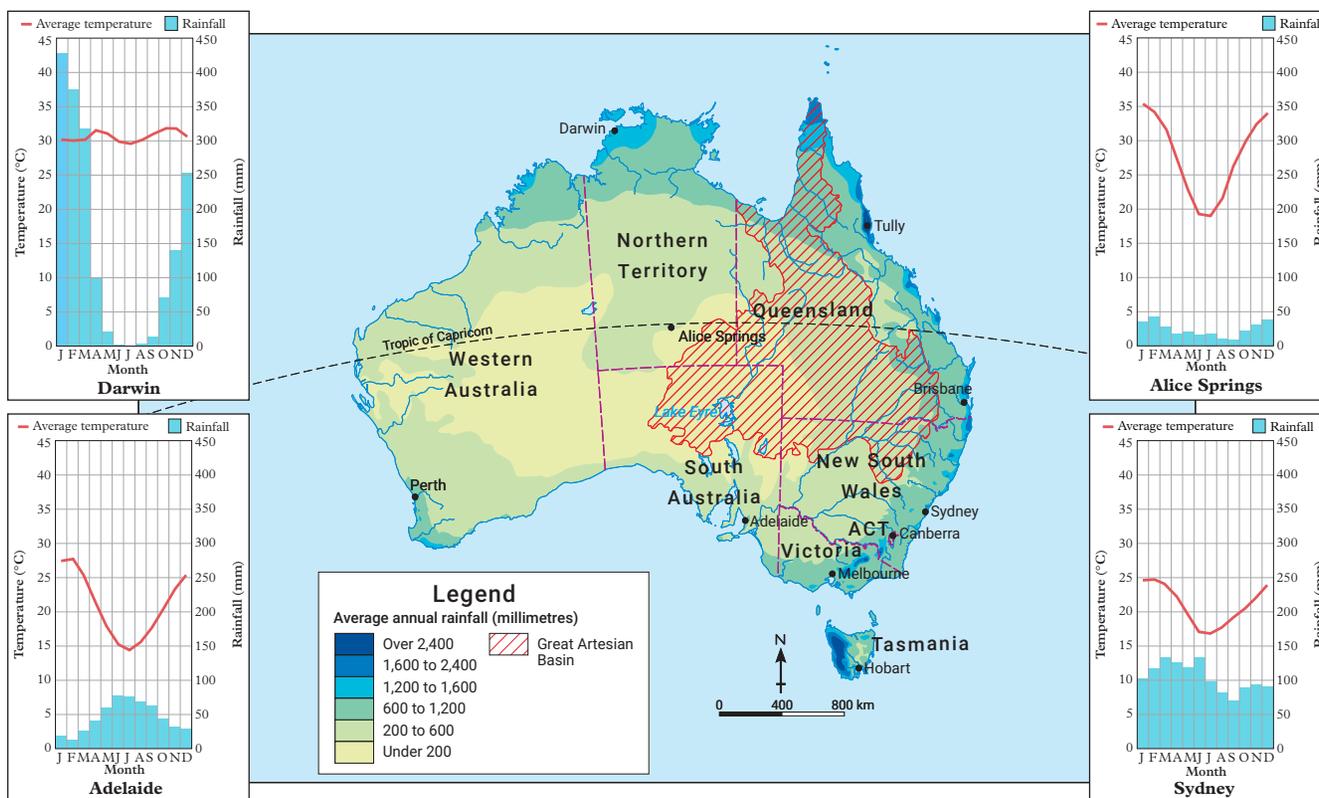
Source: Oxford University Press

Source 1

Oxford University Press

Learning intentions and success criteria

climate the average weather – particularly rainfall and temperature – experienced in a particular area over a period of time (usually 30 years)

monsoon weather or climate produced by major wind systems that change direction seasonally; in northern Australia, the north-western and south-easterly winds that produce the rainy season between December and February

Interactive map: Australia: Average annual rainfall

2.11

Source 2 Australia's heaviest rainfall makes Tully the white-water rafting capital of Australia.

Being such a large country, Australia has a great deal of variation in rainfall. The wettest town in Australia is Tully, near Innisfail in north Queensland, which averages 4083 millimetres of rainfall a year. Tully receives so much rain because of its location within the tropics on the north-eastern slopes of the Great Dividing Range.

The driest place in Australia is on the shores of Kati Thanda (Lake Eyre) in South Australia, which receives little more than 100 millimetres per year. Kati Thanda receives so little rain because it lies far from any supply of moisture. Air masses reaching the interior of the country have generally dropped their rain onto the south-eastern corner of Western Australia, and so they are dry by the time they arrive at Kati Thanda.

Many communities in the interior of Australia rely on underground water as well as the little rain that falls. Lying beneath much of eastern Australia is the world's largest underground water supply, the Great Artesian Basin (see Source 1). It is more than 1.7 million square kilometres in size and covers approximately 22% of Australia. The water is trapped underground in a sandstone layer covered by sedimentary rock, creating an aquifer. Farmers and communities access this water by drilling a well and pumping water to the surface with a windmill.

Source 3 A land of contrasts: a stream feeding Kati Thanda (Lake Eyre) in inland Australia.

discharge the volume of water flowing through a river

Australia's river resources

Rivers are a vital source of fresh water for many people. Australia has the lowest volume of water in rivers and the smallest number of permanent wetlands of any continent except Antarctica. On average, just 12% of Australia's rainfall is collected in rivers; this is referred to as the river **discharge**. The remaining 88% of rainfall is used by plants, held in natural water storages (such as lakes, wetlands and aquifers) or returned to the atmosphere through evaporation. The Darling River, part of Australia's largest river basin (the Murray–Darling Basin), loses enough water every year through evaporation to fill Sydney Harbour four times.

Check your learning 2.11

 Check your learning 2.11

Review and understand

1 Why does the northern part of Australia receive the most rainfall?
2 Why do many Australians live on the southern and eastern coasts?
3 **Identify** the wettest and driest regions of Australia.

Apply and analyse

4 **Examine** Source 1. Estimate how much rainfall is received every year on average where you live.
5 Use the PQE method to **describe** the distribution of Australia's rainfall. See Using the

PQE method in Lesson 1.7 Identifying patterns and relationships (page 35) for a reminder on how to use the PQE method.

6 Four climate graphs are shown in Source 1. Each of these gives us two important pieces of information about the climate at a particular place. Rainfall is shown as a series of blue bars, while average temperatures are shown with a red line. Temperature is shown on the left side, rainfall is shown on the right side, and months along the bottom. For more information on reading a climate graph, refer to Climate graphs in Lesson 1.6 Representing data (page 31).

a **Identify** the most water-poor of the four places shown. Explain why this is the case.

b **Identify** which place has the most even or reliable rainfall throughout the year. Explain reasons for this.

c **Identify** which place has the most seasonal rainfall. Explain reasons for this.

Map it! Australia: Drainage divisions, rivers and water storages

Lesson 2.12
Australia: a land of drought and rain

Introduction

Australia is the world's driest inhabited continent. Seventy per cent of the country receives less than 500 millimetres of rainfall per year, and because of this the supply of water in rivers is also highly variable. In previous lessons, you learnt about where these variations occur, but there is also variability in *when* they occur. Australia passes through cycles of wet periods and dry periods. Scientists are beginning to learn more about the processes that cause these cycles to occur.

2010–11: Australia's wettest years

Taken together, 2010 and 2011 were the wettest 24 months in Australia's recorded history. The wetter conditions in Australia were due to warmer than average temperatures in the Pacific Ocean, leading to increased evaporation and rainfall.

During this time, most of the country received higher than average rainfall, and flooding occurred in many states. Rivers flowed in much of inland Australia for the first time in many years and water storages in dams rose by 20%.

In January 2011, Australia's deadliest floods in more than 70 years struck south-eastern Queensland. More than 78% of Queensland was declared a disaster zone, with more than 2.5 million people affected and 35 people killed.

2019: Australia's driest year

The driest and warmest year ever recorded in Australia was 2019. The country received 40% less rainfall than average, and every capital city received lower rainfall than normal. The amount of water flowing into rivers fell to record lows, and many inland rivers ceased to flow.

Large areas of the country, particularly in New South Wales and Queensland, entered their third year of drought. Scientists believe that the low rainfall in 2019 was due largely to cooler water in the Indian Ocean, which led to less evaporation than usual and therefore less rainfall.

As the country dried out, grasslands and forests became tinder-dry. Several dry lightning storms started a series of fires that became the biggest in the country's recorded history. This is explored further in 2C Skills in context Black Summer (page 79).

Learning intentions and success criteria

Source 1 During the La Nina floods of 2011, the banks of the Brisbane River broke and the surrounding areas were evacuated. One of the bridges built over the river collapsed.

Key content video: Australia: A land of drought and rain

2.12

Why is our rainfall so variable?

Australians have lived with variable rainfall for thousands of years. More than one hundred years ago, Australian poet Dorothea Mackellar described a land of "drought and flooding rain" and the welcome relief of "steady, soaking rain" after a drought.

The reasons for this variability are complex, but are largely due to our location and our size. Most importantly, as an island "girt by sea" (as our national anthem says), we are surrounded by three of the world's great oceans: the Pacific, the Indian and the Southern. Changes in the water temperature and currents in these oceans have a dramatic effect on our rainfall.

To the east lies the massive Pacific Ocean. In some years, the Pacific cools near Australia and so less water is evaporated and eastern Australia becomes drier. This is called the El Nino effect. At other times, changes in winds and currents bring warmer waters and heavy rain. This is La Nina.

Rainfall in Australia's west is influenced more by the Indian Ocean. Warm water in this ocean evaporates and combines with wind and rain from the Southern Ocean to bring rainfall to a vast area from northwest Western Australia to Victoria. In some years, the Indian Ocean is cooler than normal and so less rain is produced.

Differences in Australia's rainfall 1900–2023

Annual mean rainfall anomalies for Australia (as calculated from the 1961–1990 average)

Source: Bureau of Meteorology © Copyright Commonwealth of Australia 2024

Source 2 The changes in Australia's rainfall from 1900–2023. Red lines show years that were drier than average while blue lines were wetter than average.

Quiz me! Australia: A land of drought and rain

Check your learning 2.12

Check your learning 2.12

Review and understand

1 **Identify** three factors that contributed to wet conditions in Australia in 2010–11.
2 What impact does Australia's location have on its rainfall?

Apply and analyse

3 **Summarise** the 2011 Queensland floods, and their impact.
4 Why does Australia's rainfall increase or decrease as a result of ocean temperatures? Use your knowledge of the water cycle to answer this question.
5 **Examine** the graph in Source 2.

a In how many years between 1900 and 2023 did Australia receive more than 150 mm of rainfall above average?
b In how many years between 1900 and 2023 did Australia receive more than 100 mm of rainfall below average?
c Has Australia become wetter or drier in your lifetime? Use evidence from the graph to support your answer.

Evaluate and create

6 **Discuss** how Australians have adapted to living in a country where the availability of water is so variable. You will find some examples earlier in this module.

Source 3 During the El Nino year of 2019 many Australian rivers, such as the Darling River, stopped flowing.

Lesson 2.13
The impacts of climate change

Learning intentions and success criteria

Introduction

For many years scientists have been warning the public that the climate is changing. Much of the focus has been on the way in which temperatures are rising but climate change is also having an impact on our water supplies.

Rainfall

It is difficult to say whether Australia as a whole is becoming drier or wetter because our climate is naturally so variable. What is clear, though, is that some parts of our country are becoming drier while others are becoming wetter. The south-east and south-west are becoming drier, particularly in the cooler months from April to October. These areas are where much of Australia's food is grown and they are home to our largest cities so a decline in rainfall can have serious consequences. On the other hand, parts of northern Australia are becoming wetter.

Source 1 shows the trends in rainfall over the past five decades. The green areas have had an increase in rainfall, while the yellow and brown areas have had a decrease.

Interactive map: Australia: Rainfall trends

Australia: Rainfall trends 1970–2020

Legend
Trend in total rainfall (Annual 1970-2020) mm/decade

Over 100		0 to -10
80 to 100		-10 to -20
60 to 80		-20 to -40
40 to 60		-40 to -60
20 to 40		-60 to -80
10 to 20		-80 to -100
0 to 10		Under -100
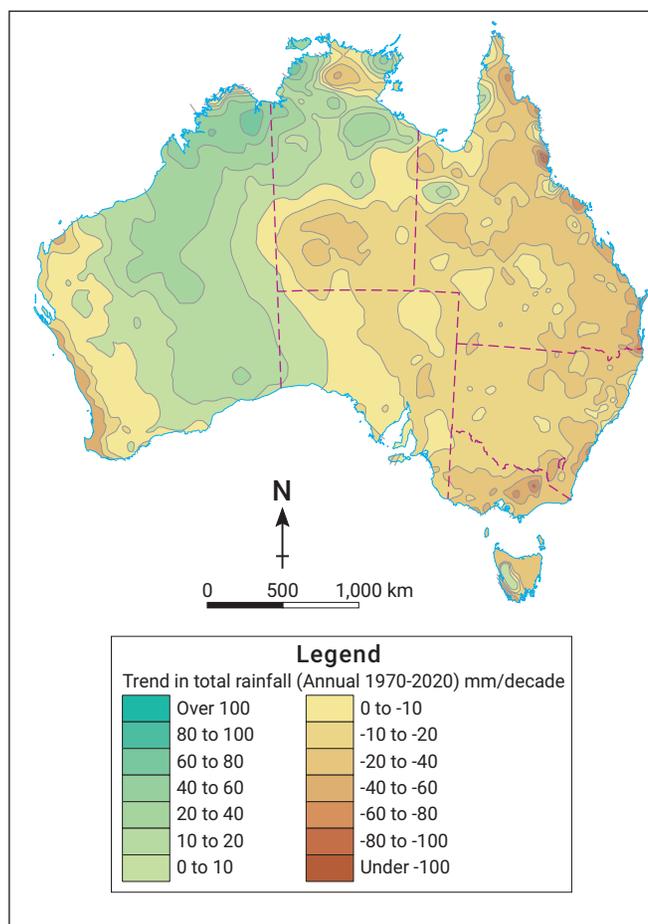
Source Oxford University Press
Source 1

Extreme events

As temperatures increase, more water is evaporated more quickly and this can lead to extreme rainfall events. There has been an increase in extreme thunderstorms, particularly in northern Australia, in the past few decades. Thunderstorms can lead to flash flooding where streams and rivers quickly and dangerously swell in size and speed.

Water supply

Much of the fresh water that Australians use comes from water collected in rivers, lakes and dams. As rainfall patterns change, many of these water resources are becoming less reliable. As temperatures rise, this water evaporates more quickly, meaning that there is less available for use in cities and farming areas.

Planners and citizens need to be aware of the changes that are occurring to our water supplies and put into place suitable responses. The predictions of our climate scientists make it clear that the ways we access, store, use and dispose of water need to change.

Map it! Australia: Rainfall trends

Check your learning 2.13

Review and understand

1 Why do we need to be aware of the changes that are occurring in our water supplies?

2 **Explain** why a warmer climate might lead to less water being available in Australia.

Apply and analyse

3 If the amount of rain falling on Australia is roughly the same as it was 50 years ago, why do we need to be worried about the impacts of climate change on rainfall?

4 **Examine** Source 1.

  a **Identify** which parts of Australia experienced large decreases in rainfall between 1970 and 2020.

  b How would you describe the overall rainfall pattern in Australia when it is different in so many places?

  c **Describe** how rainfall in the place where you live has changed over time. Give one reason for this change.

Evaluate and create

5 Brainstorm this question: What are some of the ways that Australians can best respond to changes in our supply of fresh water? After brainstorming, you may like to **research** some possibilities.

Source 2 A massive thunderstorm approaches Sydney's Bondi Beach.

2C Skills in context
Black Summer

Introduction

The summer of 2019–2020 will be long remembered by Australians because bushfires burnt in every state and territory. The fires followed the hottest and driest year on record, and by the time they finished, more than 240,000 square kilometres had been burnt. That is an area about the size of the United Kingdom. Almost 6,000 buildings were destroyed, and an estimated 3 billion animals were killed or displaced. Thirty-four people died in the fires, and nearly 450 people are estimated to have died from related smoke inhalation.

In mid-February 2020, however, Australians were reminded of the variability of Australia's climate. Parts of New South Wales and Queensland received more rain in a week than they had received in all of 2019. Rivers flooded, homes lost electricity and floodwaters swept away cars, trees and roads. In New South Wales, the rains helped to put out about 30 active fires – but it would be another month before all of the fires were under control.
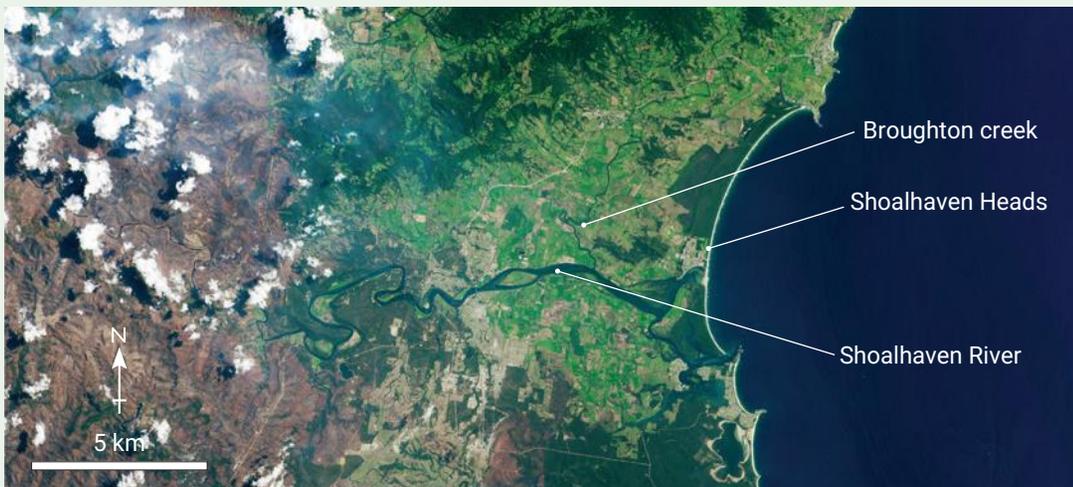
Source 1 Satellite image of the Nowra area on 25 January 2020, while fires raged there.

Source 2 Satellite image of the Nowra area on 10 February 2020, after heavy rainfall there.

Key skill Interpreting geographical images

Using satellite images

Images taken from satellites have become one of the geographer's most useful tools. They can be used to observe large areas of the Earth's surface and are particularly useful when studying how areas change over time. The images in Source 1 and Source 2, for example, are of the same area taken 16 days apart and allow us to see how the heavy rains in early February have affected this landscape. When using images such as these, you should always consult a map of the same region because this helps you to interpret what is shown in the satellite images.

- **Step 1:** Find a key feature, such as a river or main road, as a reference point on both sources.
- **Step 2:** Note the areas of the image where there has been little or no change.
- **Step 3:** List the differences in the later image where there has been change.
- **Step 4:** Look for other information on the image that shows what might have contributed to the change.
- **Step 5:** Describe the type of change – permanent change or seasonal change (such as different stages of crop production or plant growth).

For more information on interpreting geographical images, see Using geographical images in Lesson 1.4 Collecting information (page 14).

Practise the skill

1 Study Source 1 and Source 2.
   a **Identify** and **describe** the purpose of the satellite images used in Source 1 and Source 2.
   b **Describe** the changes that you can see between these two images.
   c **Identify** why these changes occurred.
   d Do you think these changes are permanent or seasonal? **Explain** your answer.

Extend your understanding

1 Locate the Shoalhaven River on the satellite images.
   a **Explain** how the colour of the river changed.
   b What does this tell you about how the river is changing the landscape?
   c Use a ruler and the scale on the satellite image to **determine** how the width of the river has changed.
   d **Explain** the impact of this change on the people who live or farm beside the river.

2 Locate Broughton Creek. How has this creek changed between 25 January and 10 February 2020?

3 Shoalhaven Heads is an important recreation and holiday area. It has a surf living club, golf course, several caravan parks, bird watching areas and a boat ramp. How do you think the two natural disasters in early 2020 affected each of these activities?

Review: Water as a resource

Review activity

Look closely at Source 1 and Source 2 and answer the questions that follow.

1 Look closely at the map in Source 1.

  a **Identify** the letter (A–D) located in the driest region. (1 mark)

  b **Identify** the letter (A–D) located in the wettest region. (1 mark)

  c **Rank** the four locations from driest to wettest. (2 marks)

  d Using the PQE method explained in Lesson 1.7 Identifying patterns and relationships (page 35), **describe** the annual pattern of rainfall in the Murray–Darling Basin. (3 marks)

2 Look closely at the map in Source 2.

  a **Identify** the type of farming that occurs at F. (1 mark)

  b **Identify** the type of farming that occurs at H. (1 mark)

  c **Identify** the letter that is located at the mouth of a river. (1 mark)

  d **Describe** the location of irrigation areas in the Murray–Darling Basin. (2 marks)Use both maps to answer the following questions.

  e **Outline** the main type of farming in areas with 600–900 millimetres of rainfall. (2 marks)

  f **Explain** how much rainfall is needed in "high rainfall grazing" areas. (3 marks)

  g **Explain** how the amount of rainfall influences the type of farming that occurs. Use some of the letters from the maps in your answer. (3 marks)

(Total: 20 marks)

Module checklist: Water as a resource

Module review quiz: Water as a resource

Murray–Darling Basin: Rainfall per year

Legend

Rainfall (mm)
- 1,200 to 1,800
- 900 to 1,200
- 600 to 900
- 400 to 600
- 300 to 400
- 200 to 300
- 100 to 200

0 200 400 km

Source: Oxford University Press
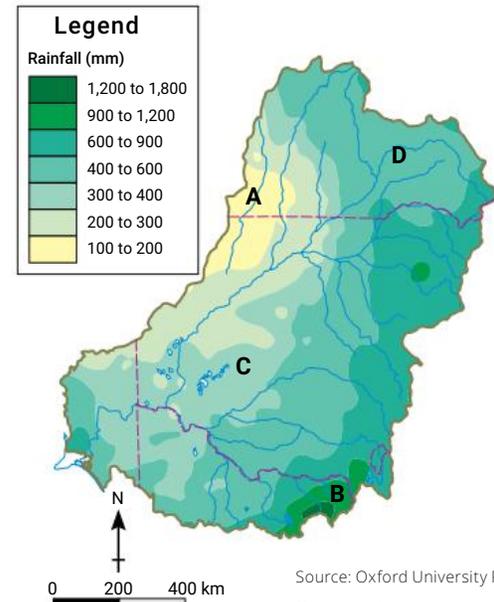
Source 1

Murray–Darling Basin: Farming types

Legend
- High rainfall grazing
- Summer rainfall grazing
- Irrigation areas
- Wheat/sheep belt
- Grasslands used for sheep and cattle

0 200 400 km

Source: Oxford University Press

Source 2

Module

3
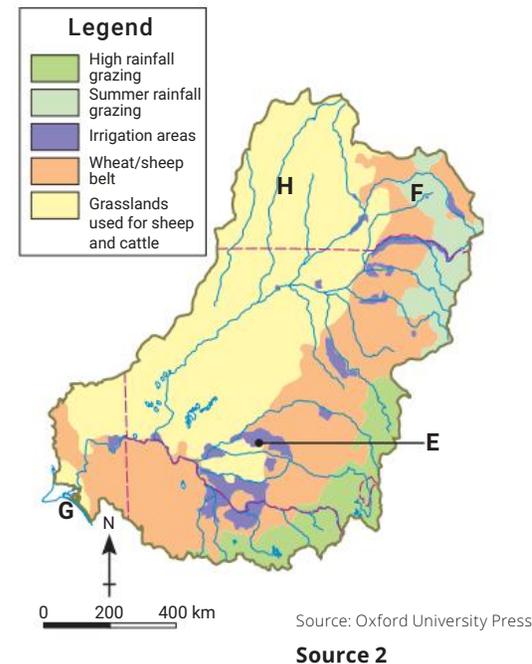
Valuing and managing water

Sub-strand: Water in the world

Overview

Water is one of the most precious resources that the Earth provides. However, it is also one of the most fragile and unpredictable. In some places there is so little clean, fresh water available that people can die from thirst. By contrast, in other places an oversupply of water can cause dangerous hazards that need to be managed carefully. Learning to manage our precious, fragile and unpredictable water resources has become one of our most important challenges.

Source 1 Local women and girls at Gorai village near Mumbai in India draw water from a deep well into buckets to carry back to their homes.

Lessons in this module

Lesson 3.1
The value of water

Introduction

Since the beginning of human history, we have relied on water. We drink it to survive; we wash, cook and clean with it; and we use it to grow our food and produce electricity. In this way, water is arguably our most precious resource. Without water, life on Earth would be impossible. And yet, this vital environmental resource is under threat from overuse and much is becoming unusable due to pollution.

In many countries in the world, most of the water people consume is used as a resource to irrigate farms, including in Australia, where 70% of our water is used for this purpose. This irrigation provides us with much of the food we eat, so it must be included when we think about how much water each of us consumes. When you add this water to the amount used to make other products we use every day, such as shampoo and toothpaste, as well as the water used in our homes and gardens, every Australian is responsible for using more than 1 million litres of water per year! Source 1 outlines the various ways in which we all use water.

a Irrigation of parks, gardens and sporting grounds

c Domestic uses

b Firefighting

k Fishing

m Environmental needs

l Irrigation of crops and pastures

Check your learning 3.1

Check your learning 3.1

Review and understand

1 What activity uses the most water in Australia? How much of our water does it use?

Apply and analyse

2 **Identify** two water uses that compete with one another and so cannot easily exist beside one another. **Explain** your answer.

Evaluate and create

3 Choose five different ways from Source 1 that water is used. **Rank** them in order of importance and give reasons for your ranking.

4 **Create** a diagram of your neighbourhood, including your house, some local shops, recreation areas and parks. Label and annotate your diagram to show how water is used in this area.
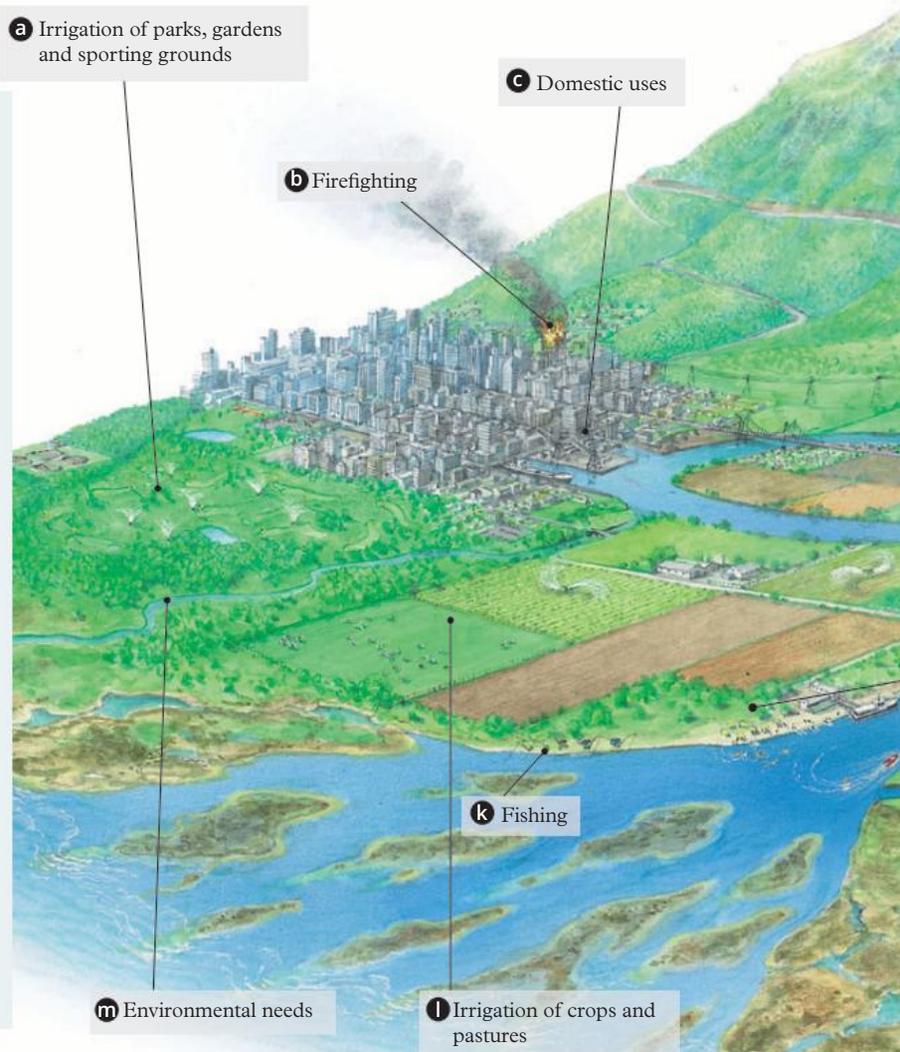
Source 1 In Australia we use large amounts of water in many different ways.

a Irrigation of parks, gardens and sporting grounds
Many parks, gardens and sporting grounds, including football ovals, rely heavily on water in order to survive. In dry areas, water is often taken from drinking storages to keep them green and healthy.

b Firefighting
Firefighters around the world rely heavily on a constant supply of water in order to carry out their work.

c Domestic uses
The average Australian household uses over 350 litres of water a day for drinking, preparing food, washing, cleaning, flushing toilets, cleaning cars, and watering lawns and gardens. Toilets and bathrooms account for about 40% of this domestic water use.

d Spiritual uses
Water holds a special significance for almost all world religions. It often plays a key part in religious ceremonies.

e Power generation: coal-fired and nuclear power
Virtually all power stations use large quantities of water. Coal-fired power stations heat water to produce steam that turn turbines to create electricity. Water is also used to cool the station. Nuclear power plants operate in much the same way.

f Power generation: hydroelectric power
Electricity can be generated from the energy of moving water. Usually, to do this a dam must be constructed across a river and a lake formed behind it. This allows the river's flow to be controlled and released through the dam to produce electricity.

g Construction and industry
The construction industry relies heavily on water in order to make concrete and many building supplies, such as bricks. Many industrial processes use large quantities of water for cooling and cleaning.

d Spiritual uses
e Power generation: coal-fired and nuclear power
f Power generation: hydroelectric power
g Construction and industry
h Navigation and trade
i Recreational activities
j Mining
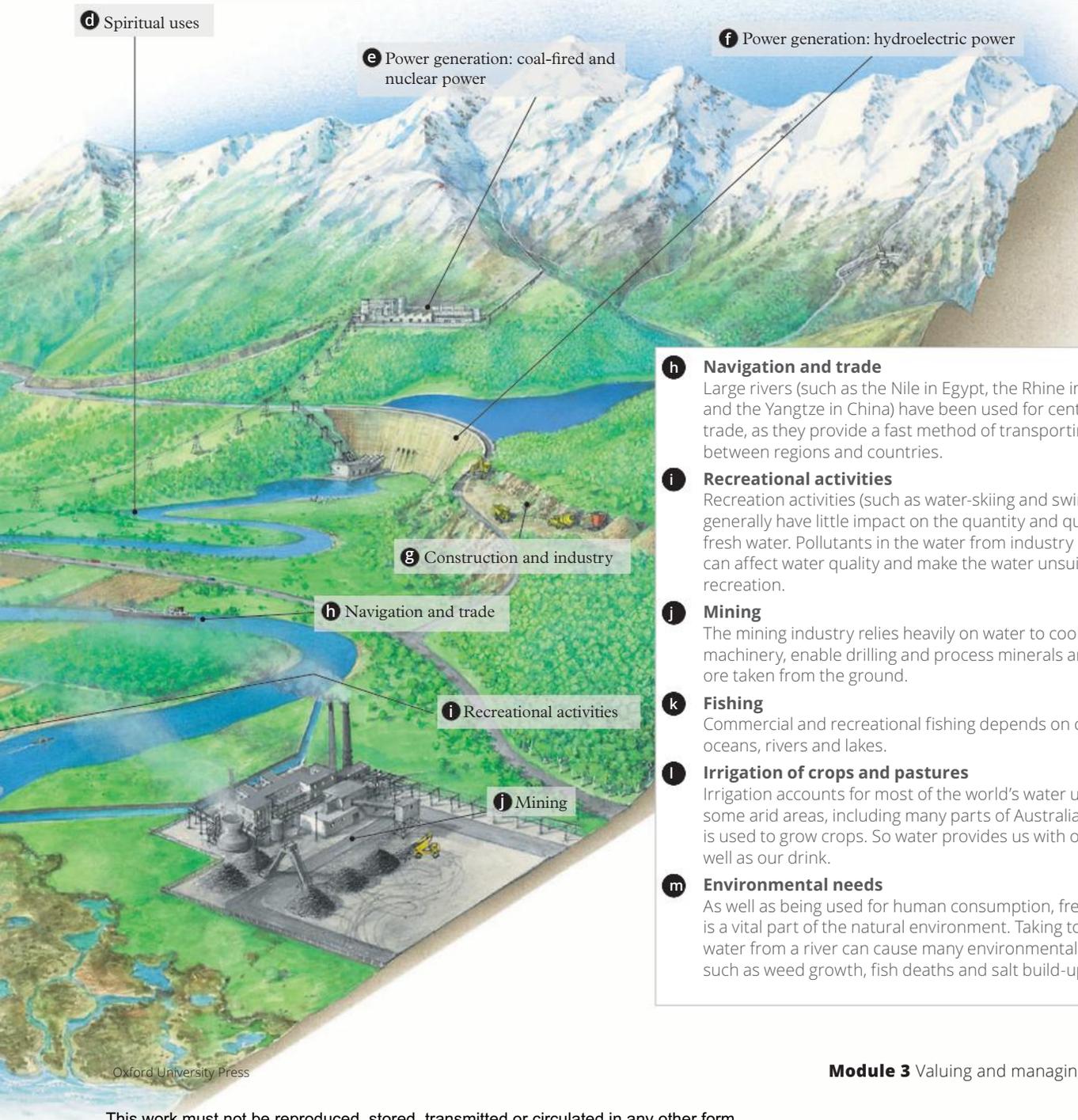
h Navigation and trade
Large rivers (such as the Nile in Egypt, the Rhine in Europe and the Yangtze in China) have been used for centuries for trade, as they provide a fast method of transporting goods between regions and countries.

i Recreational activities
Recreation activities (such as water-skiing and swimming) generally have little impact on the quantity and quality of fresh water. Pollutants in the water from industry upstream can affect water quality and make the water unsuitable for recreation.

j Mining
The mining industry relies heavily on water to cool machinery, enable drilling and process minerals and iron ore taken from the ground.

k Fishing
Commercial and recreational fishing depends on clean oceans, rivers and lakes.

l Irrigation of crops and pastures
Irrigation accounts for most of the world's water use. In some arid areas, including many parts of Australia, irrigation is used to grow crops. So water provides us with our food as well as our drink.

m Environmental needs
As well as being used for human consumption, fresh water is a vital part of the natural environment. Taking too much water from a river can cause many environmental problems, such as weed growth, fish deaths and salt build-up.

Lesson 3.2
The value of water for growing food

Introduction

Because the quantity and reliability of water varies from place to place, the way in which water is used for irrigation also varies. For example, in wet areas rainfall is trapped in dams or taken from rivers, and in drier places it may be pumped from the ground.

▶ **Key content video:** The value of water for growing food

irrigation the watering of crops in some way other than by precipitation

delta a fan-shaped deposit of soil formed where a river enters an ocean or lake

Growing rice

Rice is the world's most important food crop and the main food source for over half of the world's population. Rice production is heavily dependent on water. A semi-aquatic plant, rice is grown in flooded fields. For this reason, rice-growing communities tend to be in regions of the world with high rainfall. About 90% of the world's rice is grown in Asia, with India and China being the largest producers of rice.

In both Australia and Vietnam rice is an important crop that relies on **irrigation**, but there are significant differences in the way that water is sourced and used to grow rice in these two places.

Source 1 Rice seedlings being placed in a rice paddy for planting, Mekong Delta, Vietnam.

Rice farming in Vietnam

Vietnam is home to some of the world's richest agricultural regions. It is the fifth-biggest producer, the second-largest exporter and the seventh-largest consumer of rice. In Vietnam, 75% of people's daily calorie needs are met by rice.

The Mekong **Delta** is called the "rice bowl" of Vietnam, with over half of the country's rice produced there. The delta is formed by sediment (small particles of rock and dirt) deposited by the Mekong River, which provides rich soil for farming. The Mekong Delta region is also prone to flooding, making it perfect for rice production. The rice is grown in flooded fields known as paddies. The water for these paddies comes from the abundant rainfall in the region and from the Mekong River. The region receives over 1,500 millimetres of rainfall a year.

Of the 17 million people in the Mekong Delta region, 80% are employed in rice cultivation. The rice farmers live in houses built on stilts and the roads in the region are located on raised embankments to provide protection from flooding.

Source 2 Aerial image of rice farming in the Mekong Delta in Vietnam. Farming here is dependent on the region's rich soils and plentiful water.

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3.2

Rice farming in Australia

In a dry country such as Australia, rice farmers must use water efficiently for a successful crop yield (see Source 5).

To ensure no water is wasted, the soil on Australian rice farms is checked and approved by experts to ensure that it can hold water and that no water will escape below the soil.

Australian rice growers use 50% less water than the world average to grow 1 kilogram of rice. Australia's rice-growing regions include the Murrumbidgee Valley in south-western New South Wales. This region is suitable for rice cultivation as it has available water, irrigation infrastructure, large areas of flat land and suitable soils. Most of the water used to irrigate the rice fields is taken from the Murrumbidgee River. Farmers are allocated a certain amount of water each year and make decisions on how much rice to plant based on the amount of water allocated to them. In dry years, they will plant less rice and instead grow other crops that require less water. In contrast to Can Tho city in the Mekong Delta (see Source 3), the city of Griffith in the Murrumbidgee Valley receives about 400 millimetres of rainfall a year (see Source 4).

Source 5 Australian farmers are careful to minimise water wastage. They even use lasers to ensure rice fields are level. Raised levees divide fields into individual bays to allow farmers to control the flow of water.

Quiz me! The value of water for growing food

Source 3 Climate graph: Can Tho city in the Mekong Delta
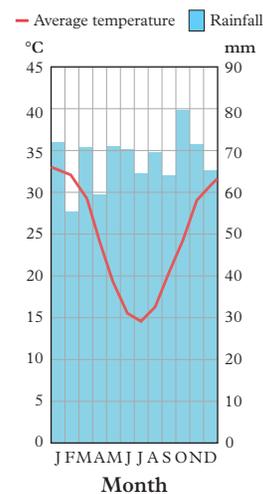
Source 4 Climate graph: Griffith, New South Wales

Check your learning 3.2

Check your learning 3.2

Review and understand

1 **Identify** the continent where most of the world's rice is grown.
2 Why do rice-growing communities tend to be in regions of the world with high rainfall?
3 **Outline** how farmers manage their water use in rice-growing regions across Australia.

Apply and analyse

4 **Compare** rice-growing in Australia and Vietnam. How is it similar? How is it different?
5 **Explain** why irrigation techniques in Griffith and the Mekong Delta are different. The data in Source 3 and Source 4 will help you to answer this question.

Evaluate and create

6 Some people believe that rice should not be grown in a dry country such as Australia, while others believe that rice-growing makes a valuable contribution to the country. **Create** a PMI (plus, minus, interesting) brainstorm of rice growing in Australia and share your thoughts in a class discussion.
7 Locate Griffith on Google Maps.
   a Using Google Maps, **identify** the absolute location (latitude and longitude) of Griffith.
   b Using Google Maps, **identify** the relative location (distance and direction) of Griffith from Sydney.
   c Absolute location and relative location are tied directly to one of the geographical concepts (see Lesson 1.1 Geographical concepts, (page 6)). **Identify** the geographical concept that absolute and relative location are connected to, and give reasons for your answer.

Lesson 3.3
The challenges of managing water

Introduction

Water is an essential environmental resource that is important for the health of humans and the environment. Different values are often placed on water; for example, water used for economic purposes can also have great spiritual and cultural importance for a community. Water management can be difficult because:

- water is an essential resource needed by every person on the planet
- water moves through the environment quickly, so it is difficult to capture and store
- the availability of water is not constant – it changes over time and in different locations
- water is a shared resource with many competing uses
- it is difficult to put a monetary (financial) value on water.

Over the past 50 years the world's population has doubled, and the output from farms and industries has surged to meet increasing demands. The growth in demand and competition for water has put a much greater strain on global water supplies. We need to make good decisions to ensure access to water, and to minimise the impact our water use has on the natural environment.

Key content video: The challenges of managing water

Case study Ganges River, India

The Ganges River begins high in the Himalayan mountains and travels across India before flowing east into Bangladesh and into the Bay of Bengal. In total, the river is 2,525 kilometres long. The Ganges is worshipped by Hindus, who believe bathing and praying in the river purifies them. This sacred river is also used by millions of Indians who live along its banks and depend on it for their daily needs.

In the past 30 years, India's population has grown to more than 1.4 billion people; one-third of these people live along the banks of the Ganges. Huge increases in the size of cities, factories and agriculture have put enormous pressure on the river. Irrigation canals use large amounts of water to grow food for the country's increasing population. Untreated wastewater is dumped into the river from cities and towns

that lack proper sewage-treatment facilities. Around 25% of India's population works in manufacturing and industry. The wastewater and effluent from these industries often contain hazardous chemicals. The Ganges is now one of the most polluted rivers in the world.

Overuse and lack of management mean that India's most sacred river is gradually dying. In Varanasi, a city on the banks of the Ganges in north-eastern India, the bacterial count in the water is 3,000 times higher than the safe levels established by the World Health Organization. Polluted water is the main cause of skin problems, disabilities and infant deaths, but many Hindus refuse to accept that the Ganges is the source of these problems.

Source 3 shows the monitoring stations that have been set up on the banks of the Ganges

River to monitor the water quality. Not a single one of the stations from Uttar Pradesh to West Bengal found that the water quality is fit for drinking as per the standards set by India's Ministry of Environment.

Source 1
The Kumbh Mela festival is the world's largest religious gathering and occurs once every 12 years. Up to 150 million Hindus bathe in the sacred Ganges River during the festival, including here at Allahabad.

Source 2 An Indian father gives his son a holy dip in the polluted water of the River Ganges at Allahabad.

Ganges River: Pollution

Meerut (Kali, tributary of Ganges River)
🌿 150,000
🩸 68

UTTARAKHAND

Raibareli
🌿 5,600
🩸 3.9

Buxar
🌿 7,000
🩸 2.1

Patna
🌿 6,100
🩸 2.2

Bhagalpur
🌿 11,000
🩸 2.2

Ganges River

UTTAR PRADESH

Kannauj
🌿 3,100
🩸 5.0

Highly polluted stream

Varuna River

BIHAR

Tribeni
🌿 11,000
🩸 4.0

Kanpur
🌿 49,000
🩸 8.5

Serampore
🌿 50,000
🩸 10.1

Allahabad (Sangam)
🌿 11,000
🩸 3.8

Varanasi
🌿 33,000
🩸 5.6

N

Varanasi (Varuna before meeting Ganges River)
🌿 180,000
🩸 46.4

JHARKHAND

WEST BENGAL

Dakshineshwar
🌿 240,000
🩸 4.4

Garden Reach
🌿 24,000
🩸 4.5

Legend
• City
🌊 River
🌿 GREEN Bacteria from sewage
Safe level: less than 2,500/100 mL
🩸 RED Organic pollution
Safe level: less than 3 mg/L
(for drinking, less than 2 mg/L)

Beharampore
🌿 280,000
🩸 3.6

Uluberia
🌿 22,000
🩸 3.55

Kolkata
🌿 24,000
🩸 3.75

Source: Oxford University Press

Source 3

📋 **Enlarged map:** Ganges river: Pollution

▶ **Video:** The spirituality of the Ganges

❓ **Map it!** The challenges of managing water

Check your learning 3.3

📝 **Check your learning 3.3**

Review and understand

1 **Identify** three reasons why water is a difficult resource to manage.

2 **Describe** how people living in India use the Ganges River for spiritual purposes.

Apply and analyse

3 **Examine** the map in Source 3.
   a What is causing harm to the Ganges River?
   b Which BOLTSS feature of the map helped you find your answer to question 3a?

4 **Explain** why the pollution of the Ganges River is a much greater problem in Serampore than it is in Kannauj in northern India.

5 Can you think of three reasons why the pollution of the Ganges River is difficult to manage? **Explain** your answer using evidence from this lesson.

6 There are lots of factors that contribute to pollution.
   a Brainstorm a list of factors that contribute to the pollution of the Ganges River.
   b **Classify** the factors from your list into each of these categories: social, economic or environmental.

Evaluate and create

7 There are two obvious solutions to the problem of pollution in the Ganges River: clean up the river or convince Hindus that it is too dangerous to bathe in it. **Evaluate** (consider the strengths and weaknesses of) how effective these strategies are. Discuss your answers as a class.

Lesson 3.4
Competition for water supplies

📄 Learning intentions and success criteria

Introduction

Fresh water from rivers is used by people in cities, farms and factories. Competition for this precious economic resource has seen the introduction of dams all over the world to store the water flowing down rivers and ensure a constant supply of water to the people nearby. Because people living along the entire length of rivers depend on them for water, competition also exists between upstream and downstream users. The flow and quality of water available to downstream users depends on how the river is used upstream.

▶ **Key content video:** Competition for water supplies

Case study The Mekong River

The Mekong River is an excellent example of what happens when water is valued in different ways. The river begins in the high mountains of China and flows through six countries before reaching the sea at the Mekong Delta. Each community that lives beside the river uses its water resources, which means that more than 70 million people rely on this source of water to support their way of life.

For thousands of years life beside the river was controlled by the annual cycle of river flow. The monsoon rains of the wet season flooded the river and sent a great pulse of water down its length for many months. This fed the natural ecosystems of the river and its floodplains with water, which was then used by farmers to irrigate their crops and fill their dams. This pulse of water also carried huge quantities of soil downstream to the Mekong Delta to help keep the area above sea level and supply farmers with the rich soil needed to grow crops (see Source 1 in Lesson 3.2 The value of water for growing food, page 86).

In recent years, however, this flow has been interrupted by building dams on the Mekong River, and the rivers that feed into it. As the demand for cheap, renewable energy has grown, upstream countries such as China and Laos have built hydroelectric dams on the Mekong River and its tributaries to provide electricity for their people. More than 700 dams have already been built on the Mekong River and its tributaries, and more are planned.

Mekong River: Dams, 2024

Legend
- Mekong River
- Existing dam
- Dam under construction
- Country border

Source: Oxford University Press

Source 1

Enlarged map: Mekong River: Dams

3.4

◄   This has changed the flow of the river because the dams now trap the annual pulse of water, releasing it gradually downstream. They also trap the fertile soil, creating concerns for downstream water users that the fertile soil surrounding the Mekong Delta will no longer be as reliable for farming and producing crops. Communities that live in the Mekong Delta region are also worried that the low-lying delta will eventually wash away without the annual supply of new soil from the river. The reduced flow of the river also allows salt water from the ocean to move upstream.

Source 2 The Lower Se San Dam being built in Cambodia. The Se San River is a tributary of the Mekong River.

Key concept Scale

River management

The water in the Mekong River is one of South-East Asia's most precious resources, but it is very difficult to manage. The river flows through more than one country, which makes it an international resource. When one country looks after its own needs without considering the impacts on people in other countries, that country is valuing the water only as a national resource. The water in the Mekong River must be managed at the international scale, not just at the local or national scale, and the needs of all water users and the environment in the entire river basin must be considered.

For more information on scale, see Scale in Lesson 1.1 Geographical concepts (page 6).

Watch it! A video and quiz on competition for water supplies

Check your learning 3.4

Check your learning 3.4

Review and understand

1 **List** the benefits that the Mekong River provided the region and its people before the building of dams.

2 Look at Source 1.
  a Using the scale of the map and a ruler, **estimate** how long the Mekong River is.
  b **Describe** the distribution of constructed dams on the Mekong River.

Apply and analyse

3 Why have these dams been built? Do you think more will be built in the future?

4 **Explain** how this story of the Mekong River illustrates the different ways in which people value water.

5 The Mekong River flows through more than one country. **Explain** why this makes it an important resource to be managed at the international scale.

Evaluate and create

6 **Create** a flowchart that shows the interconnection between upstream and downstream water use.

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3.4

7 While the focus in this topic is on irrigated farming, millions of people on the lower Mekong River also rely on fish from the river for their nutrition. Brainstorm how the upstream dams might affect the supply of fish.

8 Work in small groups to come up with one strategy that could be used to address the negative impacts that people downstream on the Mekong River face. Present your strategy to the class and vote for the best one.

Lesson 3.5
An uneven water supply

Introduction

As you have learnt, water is a difficult resource to manage. Different people value it in different ways and this can lead to competition for the water. It is also difficult to manage because it moves: not only across the land but in the skies and beneath the ground, too.

The supply of water is also variable over space (that is, *where* it is available) and time (that is, *when* it is available).

Therefore, water is not evenly distributed across the world: some places can be thought of as being water-rich (having plenty of water), while others are water-poor. Areas that are water-poor can experience water scarcity.

Source 1 shows the uneven distribution of annual rainfall across the world.

Learning intentions and success criteria

Interactive map:
World: Annual rainfall

World: Annual rainfall

Source: Oxford University Press

Source 1

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3.5
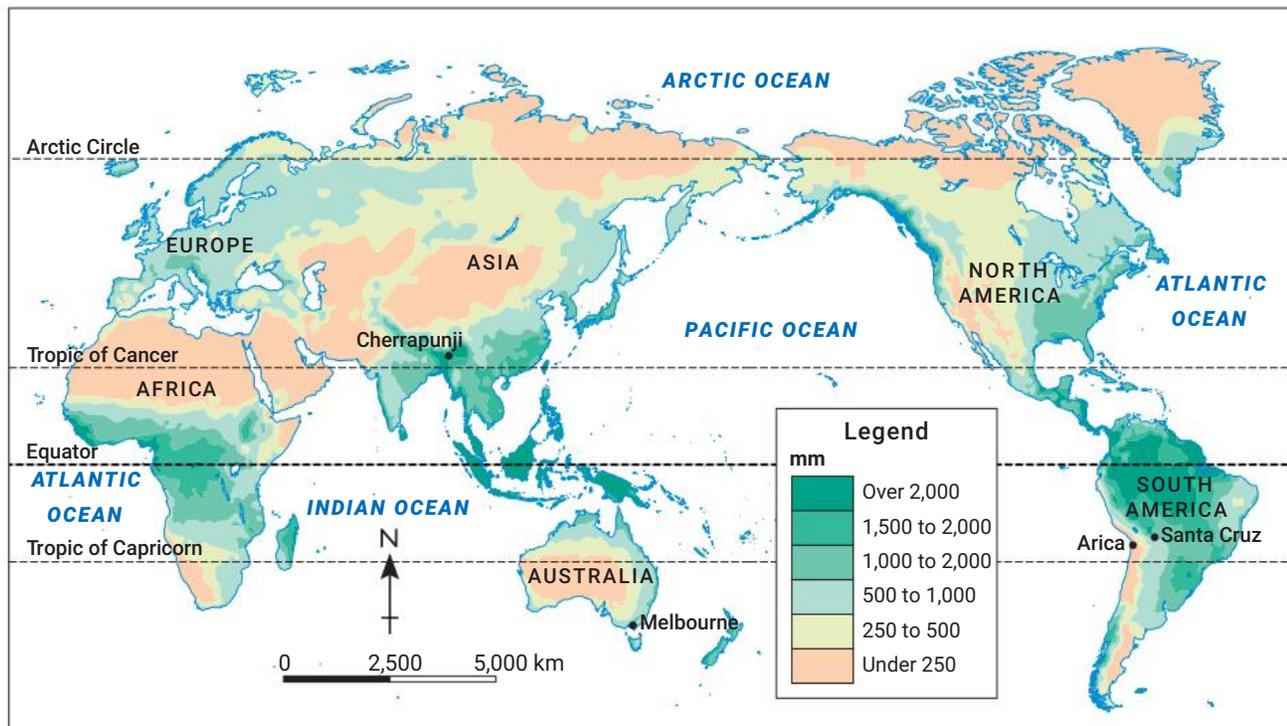
Source 2 The town of Cherrapunji in northern India is considered the wettest on Earth. It receives almost 12 metres of rainfall a year (18 times more than Melbourne). Despite this, the town can experience water shortages in the dry season!

Source 3 The city of Arica in Chile is the driest inhabited place on Earth. It receives less than 1 mm of rainfall a year.

Uneven distribution in space

As we learnt in Lesson 2.2 Where water comes from (page 46), as water moves through the water cycle, it spends some of its time as a vapour travelling through the atmosphere. This means it can move large distances in relatively short periods of time. When an air mass meets an obstacle, such as a mountain range, it rises and rain falls. Places on the "wet" side of mountain ranges are therefore among the wettest on Earth, and those on the "dry" side can be among the most arid.

Uneven distribution in time

In Lesson 2.12 Australia: a land of drought and rain (page 75), we saw that Australia has a highly variable rainfall, with great variation in when it occurs, that is, the time. In fact, a study of rainfall patterns over the past 100 years found that our rainfall is the most variable in the world: twice as variable as New Zealand and India and four times more variable than Russia and the United States of America. This variability makes it challenging to manage, and this is made more difficult because Australia has relatively little tree or cloud cover, meaning that more water is evaporated than in most other places.

Quiz me! An uneven water supply

Check your learning 3.5

Check your learning 3.5

Review and understand

1 Why is rainfall unevenly distributed across the globe?

2 Using Source 1, **identify** some countries in the world that are water rich. How does the map tell you this information?

Apply and analyse

3 **Explain** why the variability of water in time and space make it a difficult resource to manage.

4 **Explain** the role of evaporation in the water cycle.

5 Look at Source 1. Use the PQE method to describe the location of regions in the world that receive more than 2,000 mm of rainfall. See PQE sample in Lesson 1.7 Identifying patterns and relationships (page 35) for more on the PQE method.

Evaluate and create

6 The city of Arica in Chile receives virtually no rainfall. However, the city of Santa Cruz, which lies 750 km to the east of Arica, receives 1,280 mm a year. **Propose** why there is such a difference in rainfall between these two places.

3A Skills in context
The disappearing lake

Introduction

Lake Chad lies at the southern edge of the Saraha Desert in north Africa. It is a large, shallow lake that provides a supply of fresh water for the people, plants and animals in the region.

Once the world's sixth largest lake, Lake Chad has now shrunk by 95%. It is difficult to pinpoint one particular cause for this change. There are several factors that have contributed to the decline of Lake Chad, including a gradual reduction in rainfall, the changing climate, the shallowness of the lake and the different ways in which humans are now using the lake. Some scientists also believe that changes in the size of Lake Chad are part of the natural cycle of this area.

In 1960, 13 million people lived in the surrounding area and used the lake for fishing, cattle farming, watering crops, and domestic uses such as washing and drinking. Today, the estimated population is close to 40 million and

Source 1 As water recedes from Lake Chad, sand dunes take over the dry lake bed.

the increased demand for water is outgrowing what Lake Chad can supply. Geographers have labelled this situation an "ecological disaster". To provide food and water for the growing population, more water is being taken from the rivers that feed the lake. To further complicate matters, communities in the area are often under threat from terrorist groups.

Key skill Identifying patterns & relationships

Using maps to describe change

Maps can be used for many purposes. They can show the location of places and be used to navigate our way through places we have never been. Geographers use maps in many different ways. By using maps that have been drawn of the same place at different times we can see changes that have occurred over time.

A key part of this skill is to use the legend very carefully. The legend describes each of the symbols used on the map. These may be lines, shading or shapes such as stars and boxes. By reading the legend carefully we can find patterns of change and the impacts of these changes on people and places.

For more information on identifying patterns and relationships, see Lesson 1.7 Identifying patterns and relationships (page 35).

Practise the skill

Examine (look closely at) Source 2.

1   How is Lake Chad represented on these maps?
2   How many countries shared Lake Chad in 1963?
3   How many countries shared Lake Chad in 2018?
4   Which countries have been most affected by the decline of Lake Chad? Use evidence from the maps to support your answer.

5 Which BOLTSS feature of the map helped you find your answers to questions 1-4?

6 **List** as many changes as you can between the 1963 map and the 2018 map.

7 What type of scale has been used on these maps?

8 How can we use the scale to help **describe** the change that has occurred in Lake Chad?

9 Using your answers from questions 1–3, write a paragraph to describe change in Lake Chad over time. Be sure to make specific references to the maps.

Extend your understanding

1 In 1963, Lake Chad lay across multiple international borders. Why would this have made the management of the lake particularly difficult?

2 One proposed solution to the decline of Lake Chad is to dam the Ubangi River in the Central African Republic and to divert water from this river through a 2,400 kilometre-long canal to the Chari River, which flows into Lake Chad.

   a Use an atlas to locate these places.

   b How would this affect places downstream from the Ubangi River?

   c Why do you think this dam and canal have never been built?

Lake Chad in 1963 and 2018

Legend

Lake   Swamp   Former extent of lake   Rivers and tributaries   Country borders
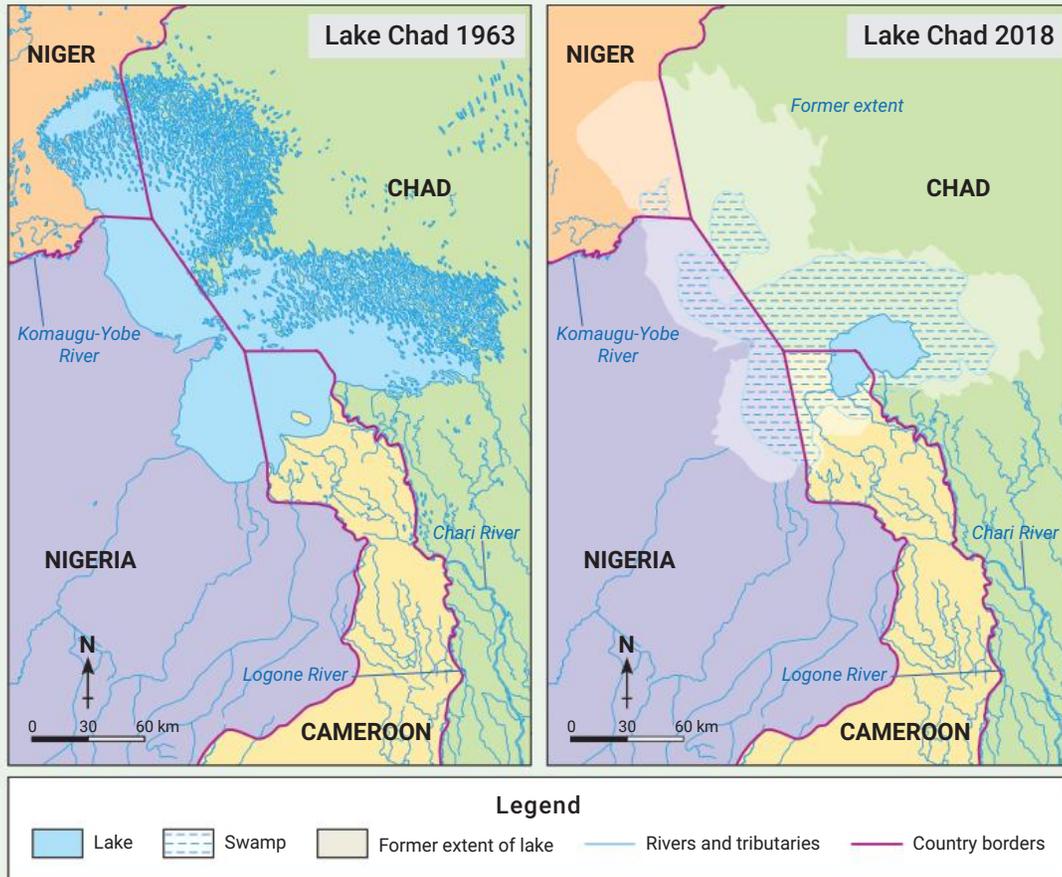
Source: Oxford University Press

Source 2 The extent of Lake Chad in 1963 and 2018. The data for these maps was obtained from satellites.

Enlarged map: Lake Chad

Lesson 3.6
What is water scarcity?

Introduction

Learning intentions and success criteria

Water is most difficult to manage when there is not enough to go around. Water becomes scarce when the demand for clean water exceeds the available supply. As the world's population grows and rainfall patterns change, more people are at risk of suffering from water scarcity (the lack of available water, due to physical shortage or lack of access to local infrastructure).

It is estimated that 703 million people globally lack access to safe drinking water. Additionally, 2.24 billion people do not have access to adequate **sanitation,** such as a toilet that flushes. The United Nations recognises access to clean drinking water and sanitation as an essential human right. Lack of access to clean water and sanitation contributes to the death of many people, including about 1,000 children each day.

sanitation measures designed to ensure good health in a community by preventing human contact with health hazards (such as sewage)

There are two types of water scarcity:
- physical water scarcity
- economic water scarcity.

▶ **Key content video:** What is water scarcity?

Physical water scarcity

Physical water scarcity occurs when the demand for water outgrows the ability of the natural environment to provide the amount of water needed. This is most common in dry regions where there is low rainfall.

Growing populations are a major contributing factor to physical water scarcity. Our towns and cities are growing so much that they are outgrowing natural available water supplies, such as rivers and lakes. This can sometimes lead to an increased demand on other water resources in the region such as **aquifers**.

aquifer a layer of rock or soil in the ground that hold water or that water can pass through

Economic water scarcity

Economic water scarcity occurs in places where the natural supply of water is enough to supply the region, but the region does not have the **infrastructure** to supply this water to its people. For regions suffering from poverty, building the correct infrastructure – such as pipelines, dams and water treatment plants – is very difficult because they are large, expensive projects.

In other places, economic water scarcity can occur when water supplies are diverted for specific purposes and are therefore not easily accessed by people.

infrastructure the facilities and services necessary for any community, city or country to function (e.g. buildings, electricity, roads, airports and water supply)

3.6

Case study Water scarcity in Africa

Of the 1.5 billion people who live in Africa, up to 400 million live in water-scarce areas. The main reasons for water scarcity in Africa are:

- a large and fast-growing population
- large areas with low rainfall
- poor water quality
- lack of water infrastructure.

The most common solution to water scarcity in African villages is digging a well. A water well is created by digging or boring into the ground to reach groundwater in underground aquifers. Clean water from a well stops people catching any water-borne diseases. Providing clean and drinkable water for communities across Africa is a high priority for many **developing countries** and international relief agencies, such as World Vision and AusAID.

developing country less economically developed countries that have some difficulties supporting their own people

Source 1 In Niger, on the southern edge of the Sahara Desert, water is collected from ponds and transported to villages on bullock carts. Surface water such as this is not safe to drink.

World: Physical and economic water scarcity
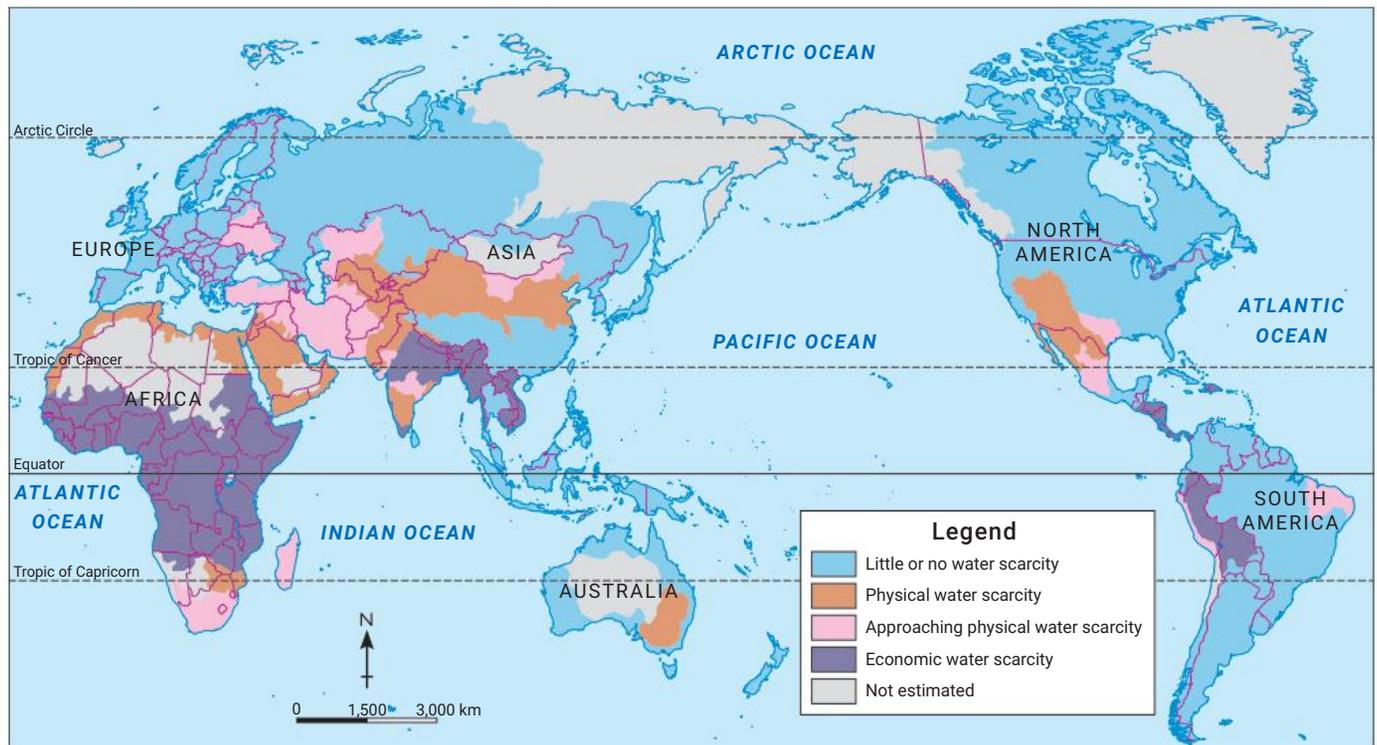
Source: Oxford University Press

Source 2

Enlarged map: World: Physical and economic water scarcity

Map it! Water scarcity

Check your learning 3.6

Check your learning 3.6

Review and understand

1 In your own words, **define** "water scarcity".

2 **Identify** four reasons contributing to water scarcity in Africa.

3 Record three statistics about the number of people affected by water scarcity.

Apply and analyse

4 **Distinguish between** physical water scarcity and economic water scarcity. Remember, to distinguish between two things you should talk about how they are different.

5 **Examine** Source 2.

  a What type of map is this?

  b Describe the area of Africa that suffers most from economic water scarcity.

  c Australia is the driest inhabited continent on Earth. Does it have a water scarcity problem? **Justify** (give reasons for) your answer.

6 **Compare** Source 2 to Source 3 in Lesson 2.9 Water as a social resource (page 65). Do communities with poor access to drinking water mainly live in areas with economic or physical water stress? Give reasons for your answer.

Evaluate and create

7 In Source 2 there are large areas described as "approaching physical water scarcity". **Propose** (put forward) one solution for one of these areas to avoid approaching physical water scarcity.

Lesson 3.7
The causes of water scarcity

Introduction

The total amount of water in the world is constant. As a closed system, water cannot leave or arrive on planet Earth. And yet, water scarcity is an increasingly urgent problem for hundreds of millions of people. This is not due to the amount of water on Earth but to a combination of many other factors. These vary from place to place but all are the result of the way we use and abuse our precious water resources.

Source 1 An overview of the many types of environmental resources.

a As the climate warms there is less water stored in the world's water towers, mountain snows and glaciers. Downstream communities can no longer rely on this supply of water.

b In many areas of the world, natural plant cover, such as forests, have been cleared. This changes rainfall patterns and allows rainwater to wash soil away into rivers, making them unsuitable for human use.

c As populations increase, more water is being taken from aquifers than can be replaced by rainfall and seepage.

d Land and water pollution leaches through the soil and into underground aquifers. This underground water pollution can travel for many kilometres, infecting wells over a large area.

e As prosperity grows, in many places there has been a change in people's diet. People are eating more meat and this requires larger quantities of water.

f Chemicals and fertilisers used on farms wash into the rivers, lakes and streams. This type of pollution affects downstream water users.

g Water needs to be treated and transported, but in many places the equipment needed to do this is broken. An unreliable electricity supply can also make it difficult to treat water.

h The world's population is growing. In the last 50 years it has more than doubled. This places greater pressure on water resources, particularly in developing countries.

i Water pollution from cities in the form of untreated sewage and industrial waste makes the water unsafe for people and the environment.

j Crops needing large amounts of water, such as cotton and rice, are grown in areas of low rainfall. This requires more water to be taken from rivers.

k Most of the world's water resources are used to irrigate farms. In some places, up to two-thirds of this water is wasted as poorly maintained pipes and channels means the water never reaches the farm.

l Conflicts, such as wars, can make it difficult or dangerous to access water. In some conflicts, people are deliberately denied water access.
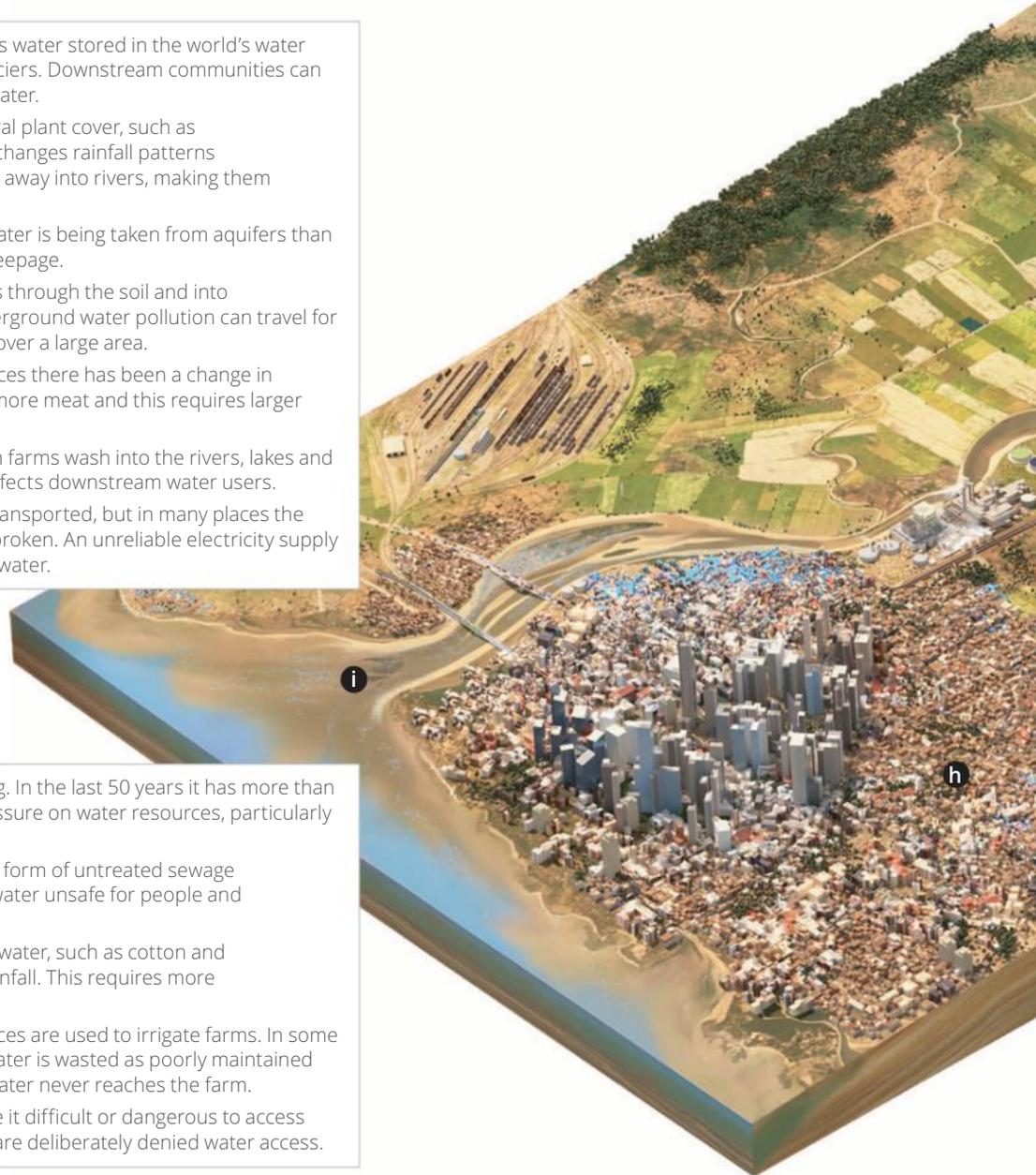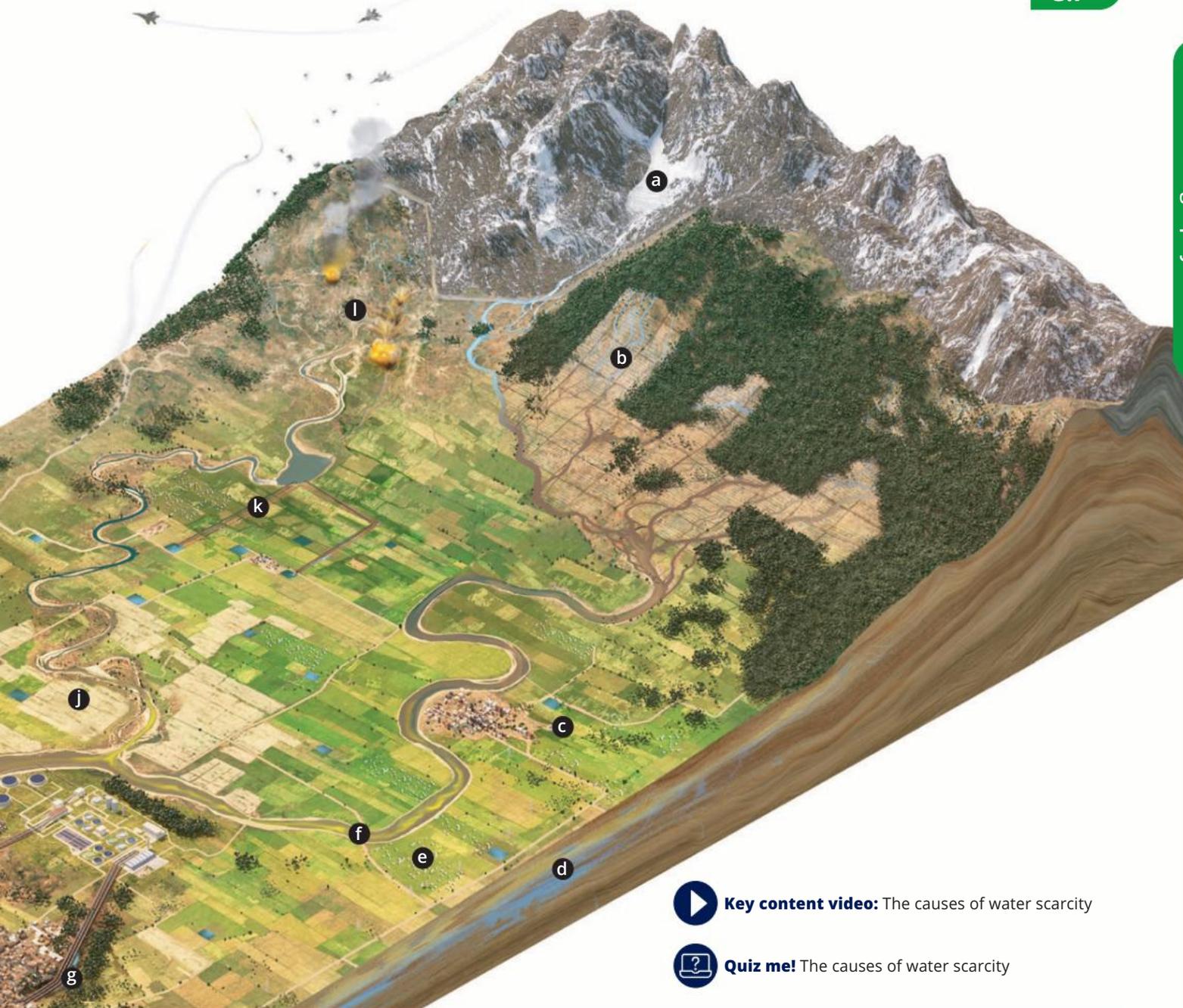
Key content video: The causes of water scarcity

Quiz me! The causes of water scarcity

Check your learning 3.7

Check your learning 3.7

Review and understand

1 Copy this table into your notebook. In each column, **list** three examples from Source 1.

Water pollution	Overuse of water	Population growth

Apply and analyse

2 Use the labels in Source 1 to **explain** why water scarcity is usually the result of a combination of factors rather than just one factor.

3 Which of the factors shown in Source 1 do you believe contributes most to water scarcity? **Justify** (give reasons for) your answer.

Lesson 3.8

Managing water scarcity in Melbourne

catchment an area where water is collected by the natural landscape

Introduction

Like all cities, Melbourne's water supply needs to be carefully managed. Melbourne is one of two cities in the world that collects most of its water from forested areas. These areas are known as **catchments**.

Most of the catchments that supply Melbourne with water are in the Yarra Ranges. The soil in this area captures and naturally filters bacteria from rainwater. The water is then slowly released from the soil into the rivers that feed Melbourne's storage reservoirs. Here, it only requires a small amount of water treatment before being supplied to the public. This gives the city some of the purest water in the world.

The forests in the Yarra Ranges are well protected, but any threats to these forests can affect Melbourne's supply of water.

Melbourne region: Water storage

Source: Oxford University Press

Source 1

Enlarged map: Melbourne region: Water storage

Key content video: Managing water scarcity in Melbourne

Challenges in supply

Melbourne's population is growing quickly. Around 5 million people currently rely on Melbourne's water supply, and this number is predicted to grow to 8 million over the next 30 years.

Like much of south-eastern Australia, the Melbourne region is becoming warmer and drier. Victoria's average temperature has risen by 1°C in the past century and it is predicted to rise even further by 2050. At the same time, rainfall is expected to decrease by 20%.

While this means that less water will flow into Melbourne's dams, an even bigger problem may come from an increase in bushfires. Victoria is predicted to have longer fire seasons and more dangerous fire weather in the future. This is a potential threat to water security in the area, because the rate of water **runoff** in a burnt forest is only half the amount of an unburnt forest. This is because new growth, which takes place in burnt areas, requires a lot of water. Additionally, soot and ash from fires can pollute water.

runoff the flow of water on the ground when excess rainwater can no longer infiltrate the soil

Key skill worksheet: Conducting fieldwork: Water usage at my house

Key concept Meeting the challenges

It is essential that Melbourne's water resources are managed sustainably, so that they continue to provide the city with an adequate supply of clean water. Melbourne Water, the government organisation responsible for managing Melbourne's water supply, uses a range of strategies to increase the sustainability of the city's water supply. Some of these strategies are listed below.

- The government has invested in additional infrastructure, so that Melburnians are not only reliant on rainwater. Examples of this include:
  - building a desalination plant that can supply water during droughts
  - building a pipeline from the Goulburn River across the Yarra Ranges to Melbourne.
- Melbourne Water can defend against fires in several ways, including:
  - employing teams of firefighters in summer
  - using fire spotters in towers to detect fires as soon as they start.

- Melbourne Water works hard to protect and conserve the catchment areas in the Yarra Ranges. Examples of this include:
  - restricting public access to water catchment areas
  - controlling feral pests such as deer and foxes in catchment areas
  - protecting forests by controlling logging.
- The government interacts with the public to make sure that water consumption does not begin to overtake the supply of water. They do this by:
  - encouraging Melburnians to use less water through advertising campaigns
  - restricting access, if necessary, when the dam levels are low.

Quiz me! Managing water scarcity in Melbourne

Source 2 There are 74 fire lookout towers in Victoria that are manned for three months of summer.

Check your learning 3.8

Check your learning 3.8

Review and understand

1 **Identify** where most of Melbourne's water comes from.
2 How do bushfires threaten Melbourne's water supply?

Apply and analyse

3 Copy this table into your notebook. **Classify** each of Melbourne Water's strategies into one of these categories:

Strategies to increase supply	Strategies to protect supply	Strategies to reduce demand

4 **Explain** Melbourne Water's "Target 150" strategy. What is it and how does it help manage water scarcity?
5 **Examine** (look closely at) Source 1.
   a **Describe** the location of Melbourne's water storage reservoirs.
   b Why do you think they are located in these places?

Evaluate and create

6 What are some advantages and disadvantages of relying on water from forest areas?
7 Pick one of the strategies used by Melbourne Water to protect water supply. **Evaluate** (consider the strengths and weaknesses of) how effective this strategy is. How effective do you think it is overall?

3B Skills in context
The gifts of the Nile

Introduction

For thousands of years, the world's longest river, the Nile, supported some of the world's great civilisations. The Nile was the lifeblood of ancient Egyptian societies, providing the gifts of a reliable supply of freshwater and the fertile soil that the river carried and deposited in an annual flood.

About 4,500 years ago, when the Pharoah Khufu watched his Great Pyramid being built,

Egypt's population stood at around two million. Today, it is greater than 110 million and the same river still provides almost all of Egypt's water needs. This has placed a great strain on this mighty river.

While the ancient Egyptians developed a way of life that worked with the annual flooding of the Nile, engineers over the past 150 years have sought to control and regulate its flow. In 1902,

a vast dam was built across the river at Aswan to hold back the annual flood and release it gradually down the river. Although this dam was the world's largest when it was completed, it soon proved to be too small to control the great river and so a larger dam, the Aswan High Dam was built in the 1960s.

By controlling the flow of water, Egyptian engineers have been able to supply water to cities and farms along the length of the river downstream of the dam. However, by trapping the river at Aswan they have also stopped the flow of fertile soil to the river's delta.

Source 1 When the Aswan High Dam was built, it threatened to flood the ancient temple at Abu Simbel. So engineers sliced it into pieces and moved it to higher ground.

Source 2 Climate data: Cairo, monthly averages

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (mm)	5	4	3	1	0	0	0	0	0	1	2	2
Temperature (°C)	13	15	18	21	25	28	29	29	27	24	19	15

Key skill Collecting & representing data

Drawing climate graphs

Climate graphs combine column graphs and line graphs to help us interpret the climate in a specific location. To draw a climate graph, geographers gather climate data – the monthly average rainfall and temperature – for the location they are investigating. The purpose of a climate graph is to show the average monthly temperature and rainfall of a place over one year. Temperature is recorded as a line graph and rainfall as a column graph.

- **Step 1** Look carefully at the climate data to find the lowest and highest temperature figures that you will need to show on your graph. In this example, Cairo's temperature varies from 13 to 29°C. Decide on a scale that shows this range of data, then place it on the left-hand axis of your climate graph.
- **Step 2** Using graph paper, plot the temperature data on your graph by putting a small, neat dot in the centre of each month at the correct height. Join the dots with a smooth red line and continue the line to the edges of the graph.
- **Step 3** Look carefully at the climate data to find the lowest and highest rainfall figures that you will need to show on your graph. In this example, Cairo's rainfall varies from 0 to 5 millimetres a month. Decide on a scale that shows this range of data, then place it on the right-hand axis of your climate graph.
- **Step 4** Plot the rainfall on your graph by drawing a blue column to the correct height for each month. You may like to shade the bars very lightly with a blue pencil.
- **Step 5** Complete your graph with a suitable title and a label for each of the three axes.

For more information on collecting and representing data, see Lesson 1.6 Representing data (page 31).

Practise the skill

1 Using the steps above and the data in Source 2, **construct** a climate graph for Cairo. Refer to Climate graphs in Lesson 1.6 Representing data (page 31) for examples of a climate graph.

Extend your understanding

1 **Examine** the map of the Nile River in Source 3.
   a Identify three water resources on this map.
   b Which BOLTSS feature of the map helped you locate these resources?

2 **Describe** the climate of Cairo over a 12-month period. Make sure that you describe both the temperature and rainfall.

3 How does the climate of Cairo increase the reliance of the residents on the Nile River?

4 In your opinion, does Cairo suffer more from physical water scarcity or economic water scarcity? Or do you think they suffer from them both equally? Explain your answer using examples.

5 On the map of the Nile River you will notice that the river flows through several countries before reaching Egypt.
   a Name these countries.
   b How might this make it difficult for people in Egypt to rely on the flow of their river for their water needs?

The Nile River

Legend
- Dam or barrage
- Large-scale irrigation scheme
- Small-scale irrigation scheme

Source: Oxford University Press

Source 3

Enlarged map: The Nile River

Lesson 3.9
Why tropical cyclones occur

Introduction

While water is a precious resource, it also has the potential to be hazardous. Many of the **natural disasters** that occur on Earth involve water, such as floods, tsunamis and tropical cyclones.

Tropical cyclones, sometimes referred to as hurricanes or typhoons, are one of the world's most destructive natural disasters. They form over warm oceans, bringing heavy rainfall and strong winds to land. They are referred to as tropical cyclones because they originate over areas in the tropics, a region of Earth surrounding the Equator (see Lesson 3.10 Where tropical cyclones occur (page 109) for more information). These huge storms leave a trail of destruction throughout the tropics every summer – from the Atlantic coast of North America to Asian countries, such as the Philippines and Bangladesh, to right here in northern Australia – meaning tropical cyclones are among our deadliest disasters.

▶ **Key content video:** Why tropical cyclones occur

Learning intentions and success criteria

natural disaster a major hazardous event resulting from a natural process of the Earth (e.g. floods, volcanic eruptions, tsunamis)

How do tropical cyclones start?

Tropical cyclones form over warm areas of the Atlantic, Pacific and Indian oceans, typically during summer or autumn. They only form over areas where the water temperature is above 27°C. The warm water evaporates, creating warm moist air that begins to rise. Cooler winds from the side then rush in, and the rotation of the Earth causes this column of rising air to start spinning and moving forward.

As the cyclone moves across the ocean, the warm moist air rises high into the atmosphere where it cools and turns into water droplets. The water droplets create clouds and rain, forming gigantic thunderstorms. As the cyclone turns faster and rain begins to fall, it becomes more hazardous. The winds within a cyclone can reach extraordinary speeds of up to 300 kilometres per hour. As the rising air reaches the centre of the cyclone it descends, creating a calm area known as the eye of the cyclone.

Now fully formed and growing in size and strength, the cyclone moves across the warm ocean towards land. As it crosses the coast its heavy rain and strong winds cause damage to natural environments, such as forests and coral reefs, as well as human environments, including homes and roads.

Source 1 An oblique aerial photograph of a community in Mozambique affected by Cyclone Idai in 2019.

Source 2 A satellite image of tropical cyclones forming over the Atlantic Ocean in 2018. The largest of these, Florence, brought record rain and winds to the eastern United States.

3.9

High level winds spread cloud outwards

Cumulonimbus clouds

Descending cold air

Warm air spirals upwards (clockwise)

Ocean temperature above 27°C

Strongest wind at eye wall

Eye of cyclone
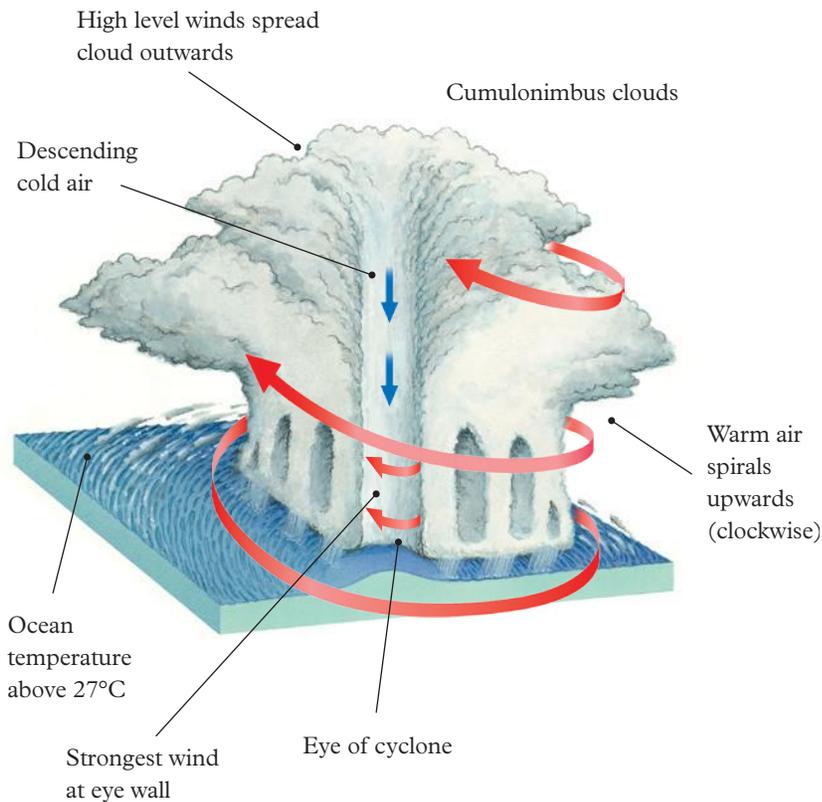
Source 3 A cross-section of a tropical cyclone

As it moves further inland and away from the energy of the warm ocean, the cyclone weakens. Winds slow, rain becomes less heavy and the cyclone eventually disappears. Cyclones can last for many days – the longest cyclone on record was Cyclone Freddy in 2023, which lasted 36 days as it crossed the Indian Ocean. They can also be enormous in size, reaching a diameter of up to 1,000 kilometres.

Cyclones are usually given names so that weather forecasters and the media can communicate about each one to the public. In Australia, cyclones are named with human names in alphabetical order from the first one of each season.

Quiz me! Why tropical cyclones occur

Check your learning 3.9

Check your learning 3.9

Review and understand

1 What are the main conditions needed for a tropical cyclone to form?
2 **Examine** Source 1.
   a **Describe** the damage to the human-made environment caused by Cyclone Idai.
   b **Describe** the damage to the natural environment caused by Cyclone Idai.
   c This is a coastal community. Why is it more common for tropical cyclones to affect coastal communities than inland communities?

Apply and analyse

3 **Explain** why tropical cyclones only form in tropical regions of the world.
4 On a satellite image, cyclones can be seen as a large circular pattern of clouds. How many cyclones can you **identify** in Source 2?

Evaluate and create

5 Design a machine to **create** a cyclone using only the equipment in the science laboratory at your school. Sketch, label and annotate your cyclone machine, then write a short paragraph explaining how your machine works.

Lesson 3.10
Where tropical cyclones occur

Introduction

Learning intentions and success criteria

Each year about 45 tropical storms form over warm oceans and transform into powerful tropical cyclones. They are not evenly distributed across the globe. Some places experience many cyclones and can be considered "cyclone hotspots", while many places on Earth receive no cyclones at all.

In Australia we use a classification system to determine the strength and intensity of each cyclone. The different categories, ranging from 1 to 5, are outlined in Source 1. In a category 1 cyclone, winds reach 150 kilometres per hour while in a category 5 cyclone, they exceed 250 kilometres per hour (see Source 1 for more details).

1	119–153 kph 74–95 mph	2	154–177 kph 96–110 mph	3	178–208 kph 111–129 mph	4	209–251 kph 130–156 mph	5	>252 kph >157 mph
Minimal damage		Moderate damage		Extensive damage		Extreme damage		Catastrophic damage	
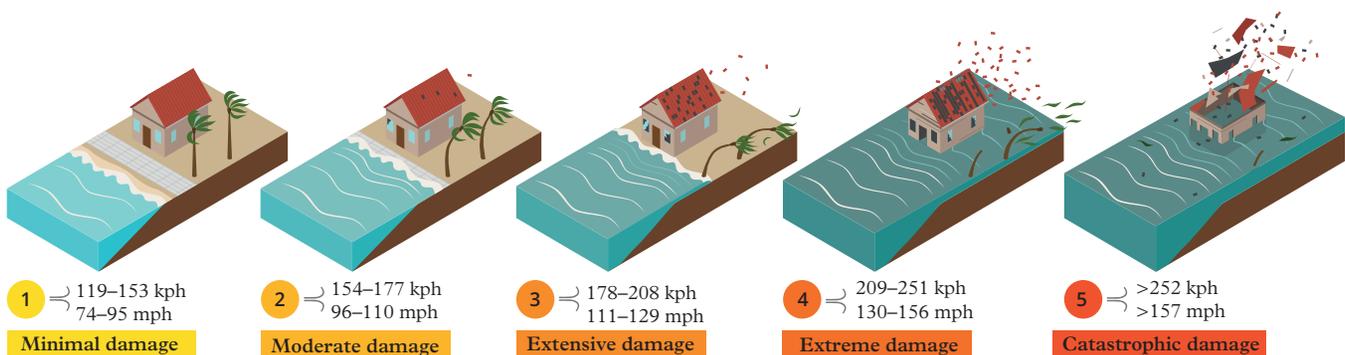
Saffir–Simpson Hurricane Wind Scale

Source 1 An infographic depicting the five categories of cyclones. 1) Minimal damage. 2) Moderate damage. 3) Extensive damage. 4) Extreme damage. 5) Catastrophic damage.

Source 2 shows the paths taken by tropical cyclones over the last 150 years. The different categories of cyclones are represented by colours on the map.

▶ **Key content video:** Where tropical cyclones occur

Australian tropical cyclones

Much of northern Australia is surrounded by warm, tropical waters. This makes the region vulnerable to tropical cyclones. Our official cyclone season begins in early November and lasts until late April. In that time, an average of six cyclones cross the coast in tropical Australia, although this can vary greatly from year to year.

Because of this, it is difficult to predict when and where tropical cyclones will occur in Australia. The Bureau of Meteorology (BOM), Australia's national weather, climate and water agency, closely monitors the changing weather conditions in and around the country to make sure that the population is as prepared as possible.

Tracks and intensity of all tropical storms

| TD | TS | 1 | 2 | 3 | 4 | 5 |

Saffir-Simpson Hurricane Intensity Scale
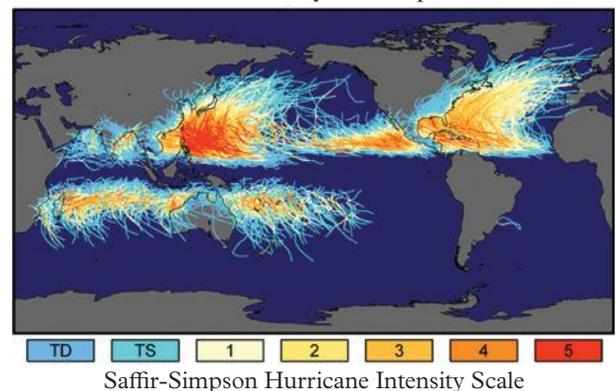
Source 2 A map of the world showing cyclone tracks and intensity. Tropical cyclones are referred to as "hurricanes" in places such as North America, and "typhoons" in many Asian countries. TD indicates tropical depressions, while TS indicates tropical storms.

In the southern hemisphere where Australia is located, winds spiral around the cyclone in a clockwise direction. By contrast, cyclones in the northern hemisphere rotate anti-clockwise. Interestingly, Australian cyclones tend to follow much more unpredictable paths than those in other places. Rather than moving in a straight line, they seem to move in any direction, and some have even been known to reverse direction.

Key skill Identifying patterns & relationships

Interpreting a flow map

Flow maps, like the one in Source 3, show movement from one place to another. The green arrows in this map tell us the direction and reach of different cyclones that have affected Australia. Pay attention to the length and shape of each line – Cyclone Annette, for example, started in the Indian Ocean off the north-western coast of Australia in 1994. From reading the flow map, we can see that it travelled across Western Australia and all the way down to the Great Australian Bight.

Key skill worksheet: Identifying patterns & relationships: Interpreting a flow map

Australia: Cyclones and region sea surface temperature (SST) averages
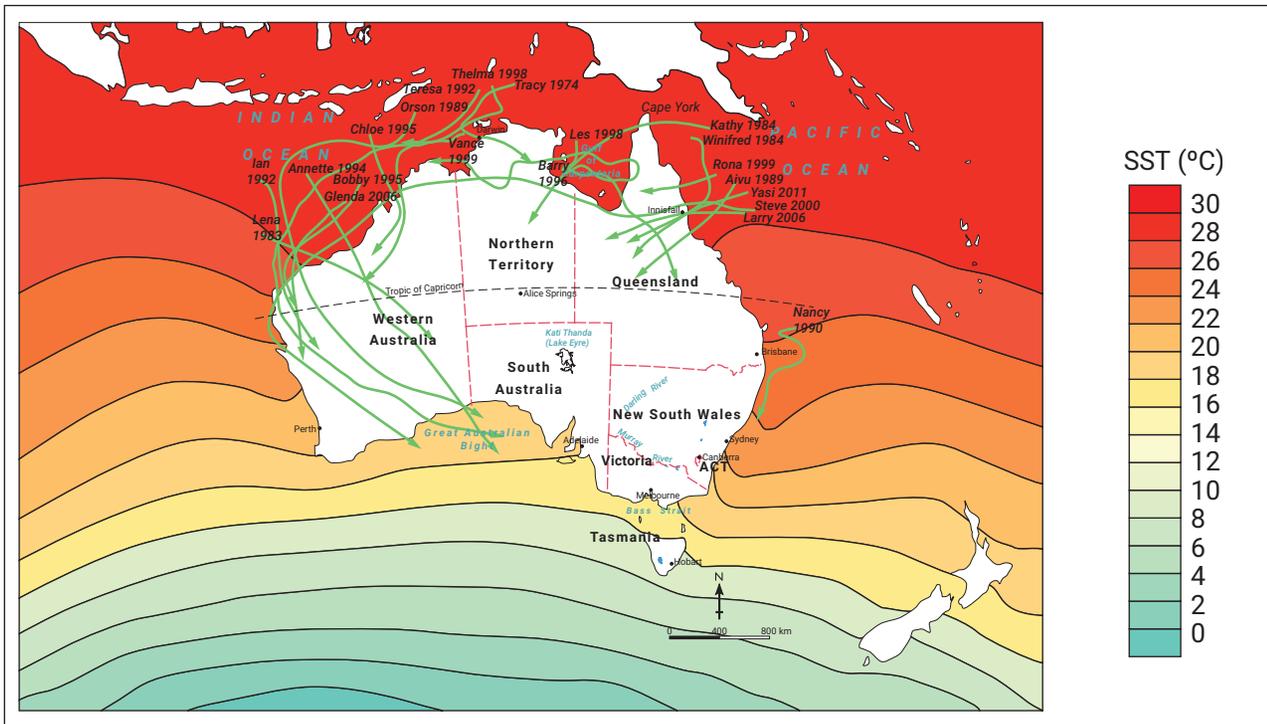
Source: Oxford University Press

Source 3

Enlarged map: Australia: Cyclones and region sea surface temperature (SST) averages

Map it! Australia: Cyclones and region sea surface temperature (SST) averages

Check your learning 3.10

Check your learning 3.10

Review and understand

1 Using your atlas and Source 2, **identify** the world's cyclone hotspots. Use the names of oceans in your list, for example, western Pacific Ocean.

Apply and analyse

2 **Examine** (look closely at) Source 3.
   a **Identify** and **describe** the purpose of this type of map.
   b **Identify** the regions in Australia that have experienced more than 10 cyclones in the last 50 years.
   c **Describe** the interconnection between the number of cyclones and sea temperatures in summer.
   d **Describe** the movement of cyclones in Australia.
3 Hurricane season in North America is from June to November. When is Australia's cyclone season? Why might these two seasons take place in different parts of the year?

Evaluate and create

4 "Tropical cyclones are expected to become more intense because of climate change." **Discuss** this statement. To discuss, make sure you:
   – read the question carefully
   – outline how true this statement is, based on everything you have learned so far
   – outline how untrue this statement is, based on everything you have learned so far
   – give your own opinion on the topic.

Lesson 3.11
The impacts of tropical cyclones

Learning intentions and success criteria

Introduction

Tropical cyclones often leave devastating and widespread impacts on the places they travel through. From the moment a cyclone's enormous storm waves travel onto land and batter the coastline, it leaves a trail of destruction in its path. For example, a powerful cyclone's strong wind can destroy whole cities and farming areas, while heavy rain can flood low-lying areas.

▶ **Key content video:** The impacts of tropical cyclones

3.11

Case study Typhoon Haiyan

Typhoon Haiyan struck the Philippines in 2013. Haiyan originated in the warm waters of the northern Pacific Ocean on 2 November 2013 and began moving west towards the countries of Micronesia, Palau and the Philippines.

As it moved, Haiyan grew larger and more powerful until it was classified as a category 5 cyclone. Travelling westwards, it destroyed cities, villages and rural communities. More than 6,000 people were killed, and over 6 million people were displaced from their homes.

Since Typhoon Haiyan, there have been many tropical cyclones that have had a significant impact. Haiyan is an important event to study because it helps us understand the three serious hazards caused by tropical cyclones. They are:

1 gale force winds
2 torrential rains
3 storm surges.

Philippines: Typhoon Haiyan's storm track
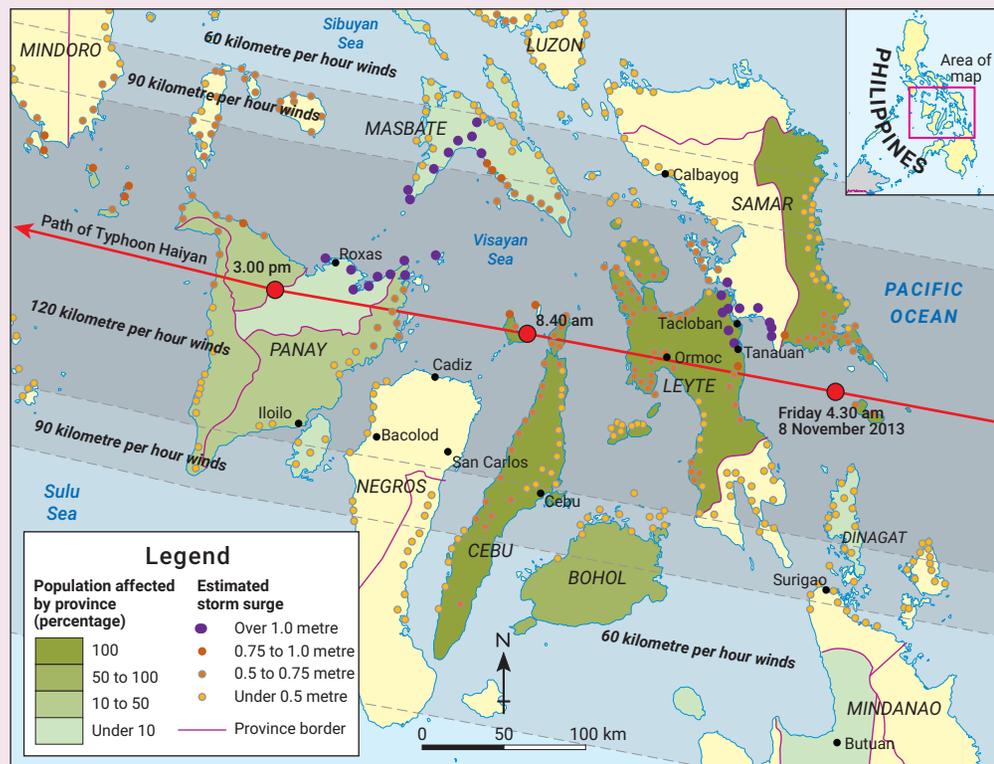
Source: Oxford University Press

Source 1

Enlarged map: Philippines: Typhoon Haiyan's storm track

Hazard 1: Gale force winds

You may have heard the phrase "It's blowing a gale!" used to describe windy weather conditions. A gale force wind is a strong wind that travels over the speed of 63 kilometres per hour. Gale force winds can cause significant damage to natural and human-made environments.

Tropical cyclones produce the world's strongest winds. By the time Haiyan crossed the coast of the Philippines on 7 November 2013, it had grown to become the most powerful storm to ever hit land, with wind speeds of 315 kilometres per hour. These strong winds caused significant damage – they destroyed roads and powerlines, uprooted trees and completely flattened entire villages. Fallen trees and power lines made it impossible to travel by road, which made it difficult for rescue teams to reach the victims of the disaster.

The damage caused by these gale force winds also had long-term impacts on the people of the Philippines. Up to 30,000 fishing boats were destroyed by the powerful winds, resulting in a loss of income for many fishermen. Many species of plants and animals lost their habitat after entire forests were flattened by the wind. In the coastal Iloilo Province, a major oil spill occurred when a ship loaded with 1.4 million litres of oil was blown ashore and leaked into the stormy seas. The oil polluted 10 kilometres of coastline, displacing people from their homes and causing significant damage to an area of mangroves.

Source 2 Powerful winds created by Haiyan destroyed whole towns and fishing fleets.

Hazard 2: Torrential rain and flooding

As you have learnt, water evaporates and travels upwards before cooling and falling again as rain. This process also takes place during a cyclone, but on a much larger and more dangerous scale. As a cyclone moves across the warm ocean, huge quantities of water evaporate from its surface and travel upwards. By the time a cyclone crosses onto land, this evaporated water falls as torrential rain.

"Torrential rain" is a term given to very heavy rainfall that falls rapidly. Torrential rain can cause widespread flooding, as low-lying areas like rivers and dry lakes rapidly flood with water that spreads quickly. The power of flooding is such that it can wash away buildings, roads and bridges. Even as a cyclone moves inland and weakens, the heavy rain can continue for many days.

Floods caused by Typhoon Haiyan devastated large areas of farmland, destroying crops such as rice, corn and sugar. It was estimated that more than 70,000 hectares of farmland were destroyed by floods. This affected communities significantly, causing many farmers to lose personal income and food shortages in affected areas where crops had been destroyed.
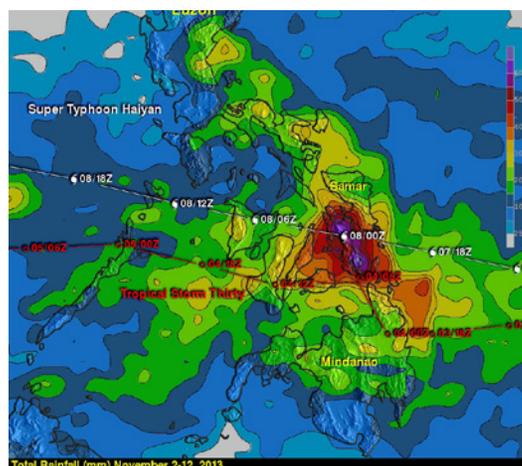
Source 3 Philippines rainfall between 2 and 12 November 2013. Some areas received almost 300 millimetres in only 12 hours.

3.11

Source 4 Bantayan, Cebu, Philippines after typhoon Haiyan struck
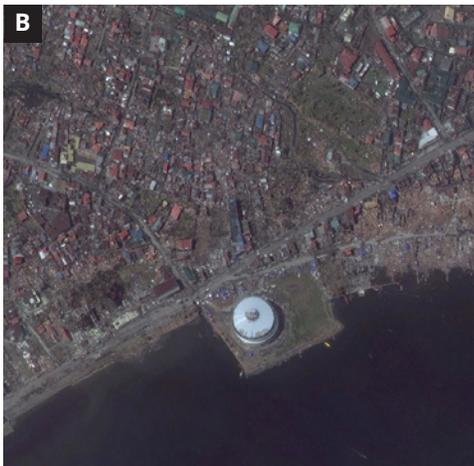
Hazard 3: Storm surges

The air within a tropical cyclone rises so rapidly that it lifts the surface of the ocean below it. As the cyclone moves towards land, a large dome of higher sea levels travels with it. Driven onto the land by powerful winds, the water rushes onto the land in great waves. This is known as a storm surge. Storm surges can cause immense damage to natural and human-made environments.

During Typhoon Haiyan, waves up to 5 metres high slammed into the Filipino coastline. The damage was worst in low-lying areas such as Tacloban City where the water rose to the height of the second storey of many of the town's buildings. Driven by huge waves, the rising water carried debris such as cars, boats and buildings. Important infrastructure in the city, including the airport, and electricity and water infrastructure, was destroyed.

Many of the survivors fled the city and sought refuge with friends and relatives. In one case, an evacuation centre where people had taken shelter was flooded, and many died in the chaos. Thousands of people died from the storm surge.

The impacts of the disaster continued for many months. Over 6 million Filipinos had lost their sources of income. In Tacloban, desperate people stole food and other goods from shops as the police struggled to maintain control. The damage to water infrastructure meant that people could not access clean water, and diseases spread through poor sanitation and polluted water.

Key skill worksheet: Interpreting geographical images: Analysing change

Quiz me! The impacts of tropical cyclones

Source 5 Satellite images of downtown Tacloban City. A) 23 February 2012 and B) 10 November 2013

Check your learning 3.11

Check your learning 3.11

Review and understand

1 **Identify** the three serious hazards caused by tropical cyclones.

2 **Describe** how food supplies can be disrupted by a tropical cyclone.
   a What is a storm surge?
   b Why are storm surges so devastating?

Apply and analyse

3   Using Source 1 and Source 3, **explain** why the impacts of Typhoon Haiyan were greatest in the places closest to its path.

4   **Examine** (look closely at) the images in Source 5.

   a   **Identify** the geographical concept that these two satellite images reflect. Give reasons for your answer. Refer to Lesson 1.1 Geographical concepts (page 6) to help answer this question.

   b   **Identify** as many impacts to the natural environment as you can.

   c   **Identify** as many impacts to the human-made environment as you can.

5   Tsunamis are another natural disaster that have some similarities with storm surges. Using the internet, research tsunamis. In a short paragraph, **distinguish between** a storm surge and a tsunami. Remember, when you distinguish between two things you should talk about how they are different.

Evaluate and create

6   Locate Tacloban in Source 1. Why do you think this location is so vulnerable to storm surges?

7   **Create** a diagram with three circles inside each other, like a dartboard. Inside the first circle, list the immediate impacts of cyclones, in the second circle list the short-term impacts (those that last about a week). In the final circle, list the long-term impacts (those that last longer than a week).

Lesson 3.12
Preparing for tropical cyclones

Introduction

Tropical cyclones are a part of the natural cycle of weather, which means it is impossible to prevent them. There are, however, many steps that we can take to lessen the impact of cyclones on people and places.

1   We can track the paths of cyclones and try to predict their future paths, so people have time to prepare.

2   We can ensure that people, homes and communities in cyclone-prone regions are properly prepared.

3   When a cyclone does strike, we can respond quickly and efficiently to save lives and make the affected area safe.

Learning intentions and success criteria

▶ **Key content video:** Preparing for tropical cyclones

Predicting tropical cyclones

To predict where and when a cyclone will strike, **meteorologists** use thousands of observations from radar, weather balloons, satellites and other sources. They use their observations to forecast the weather and inform the public about upcoming weather events. This includes issuing cyclone alerts and warnings.

meteorologist a scientist who studies the atmosphere to predict and understand the weather

3.12
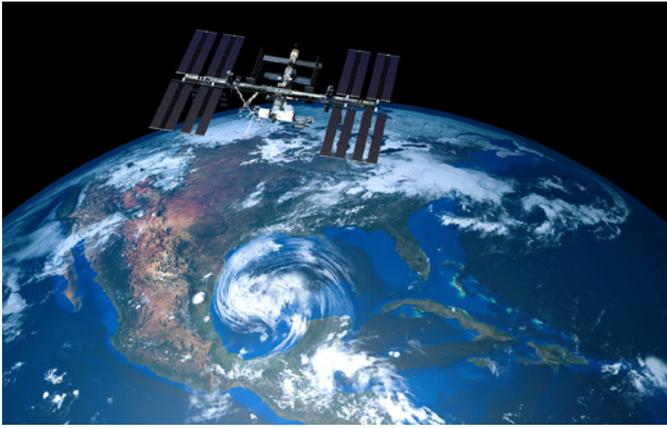
Source 1 Meteorologists use information from many sources when predicting the weather.

Preparing for tropical cyclones

People who live in areas where cyclones occur can do several things to prepare for cyclone season. Most importantly, they should make sure that their home is strong enough to resist the force of the cyclone and that it is built in a place away from the storm surge zone. They should also have a plan in case they need to evacuate, including having a prepared evacuation kit in case they must leave their home and travel to a safer area.

Key concept Place

Seawalls: help or hindrance?

Following Typhoon Haiyan, a 4-metre-high, 27-kilometre-long seawall was constructed to protect Tacloban and surrounding areas from storm surges. This was expensive to build and has significantly altered the landscape. While it is a smart prevention strategy for sea surges, local residents are concerned about its impact on the place where they live. Many homes were demolished to provide space for the wall, meaning that families with deep connections to that place had to be relocated. Many of these people are fishers, who rely on access to the coast to catch fish and are likely to suffer financially as a result.

For more information on place, see Place in Lesson 1.1 Geographical concepts (page 6).

Source 2 An example of a seawall built to prevent damage to towns from storm surges.

See, think, wonder

Look at Source 1.
- What do you see?
- What do you think?
- What do you wonder?

▶

Video: "Twisters" in the USA

Quiz me! Preparing for tropical cyclones

Responding during tropical cyclones

Living through a tropical cyclone can be terrifying and dangerous, which means it is important to be prepared. The safest way to avoid being injured by a cyclone is to evacuate, but evacuation must be done early, before the cyclone arrives on land. As you have learnt, cyclones can cause serious damage to roads, which means it is very dangerous to drive during one.

Some steps that people should follow if they are at home during a cyclone are:
- staying indoors until the cyclone has passed
- keeping away from glass doors and windows
- closing all shutters, blinds and curtains
- taking refuge in a small interior room or a cupboard
- not being fooled if the winds suddenly drop, because the eye of the cyclone may be passing overhead
- having a battery-powered radio with you whenever possible.

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3.12

Check your learning 3.12

Check your learning 3.12

Review and understand

1 How do satellites help communities prepare for a cyclone?

2 **Identify** the safest place in your home during a cyclone.

Apply and analyse

3 In a small group, decide what items need to be included in a cyclone evacuation kit. **Rank** these items in order of importance, then give reasons for your ranking.

4 Do you think seawalls are a good strategy to prepare for storm surges? **Explain** your answer.

Evaluate and create

5 Communities in developing countries are often affected more severely in disasters than those in developed countries. In small groups, **discuss** why this is the case. Come together as a class and share your answers.

6 Tourists can be affected by cyclones as well as locals. **Create** a poster to be displayed in hotel rooms in the Philippines explaining what to do during a cyclone. The messages need to be in pictures rather than words because tourists speak many different languages.

3C Skills in context
Cyclone Ilsa

Introduction

In April, 2023 a powerful tropical cyclone formed off the Western Australia coast. With wind speeds in excess of 250 kilometres per hour, Cyclone Ilsa was a category 5 cyclone, which is the highest ranking of intensity for cyclones.

As Ilsa approached, residents living in coastal towns evacuated, major highways were closed and emergency workers from other states prepared to help. The cyclone made landfall north of Port Hedland and then continued inland. It gradually weakened and within a day was no longer considered to be a cyclone.

By this time, Ilsa had left a trail of destruction across the Pilbara with several roadhouses and farms suffering significant damage, estimated at about $4 million. Tragically, two fishing boats capsized and nine Indonesian fishermen drowned.
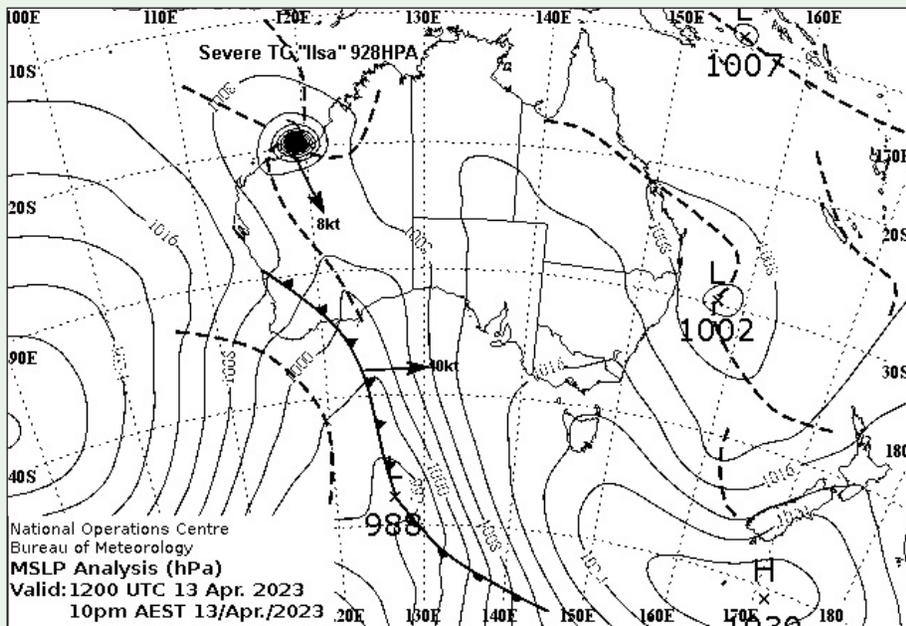
Source 1 Australia: Weather map of Australia, 13 April 2023
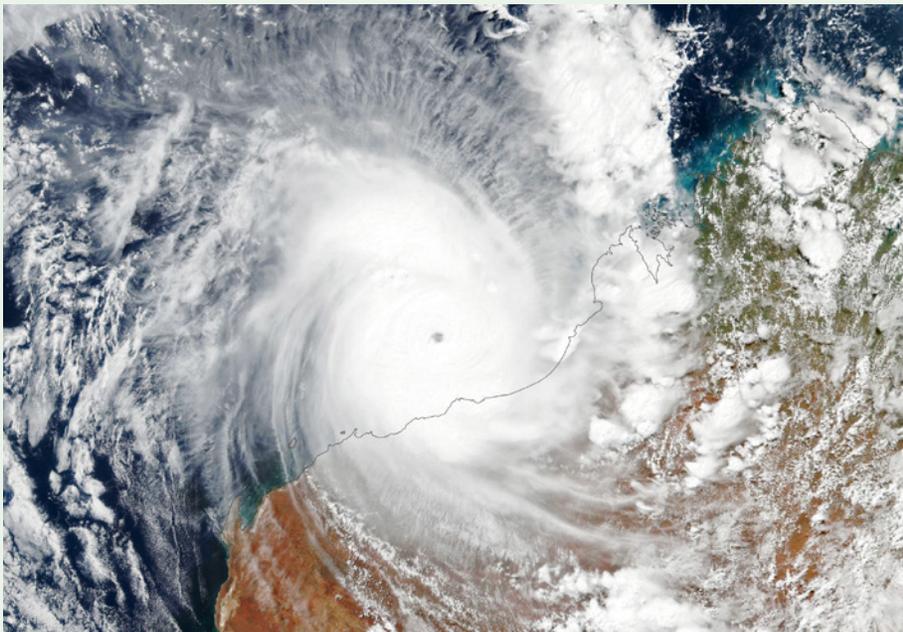
Source 2 Satellite image of Cyclone Ilsa.

Key skill Identifying patterns & relationships

Reading a weather map

Weather maps show what is happening to the air and in the atmosphere. They show air pressure (the movement of air rising, falling and spinning) as a series of lines. This helps meteorologists make predictions about temperature, wind and rainfall.

We can use symbols on weather maps to predict the weather. For example, in Source 1, there is a dotted line to the west of Perth. Source 3 tells us that this dotted line is known as a 'trough' that brings in rain. In the Southern Hemisphere, air moves slowly from west (left) to east (right). This means the trough will soon cross Perth so it is likely they will experience rain in the next few days after this map was created.

To predict the weather using a weather map, consider how the conditions in the atmosphere are affecting a place, and follow these steps:

Source 3 Weather map symbols

Symbol	Name	Explanation
1,012 1,016	Isobar	A line connecting places with the same air pressure; the closer together the isobars, the stronger the wind.
H	High pressure cell	Air rotates anticlockwise around a sinking air mass; conditions are warm and dry.
L	Low pressure cell	Air rotates clockwise around a rising air mass; conditions are cool and wet.
	Cold front	A line showing where cold air moves into an area and forces warm air to rise, cool and cause rain; cold fronts move in the direction of the arrowheads.
	Warm front	A line showing where warm air moves into an area, rises and cools; this often produces light rain and showers.
	Trough line	A long area of rising air often brings a line of rain and sometimes thunderstorms.
	Rainfall	On some weather maps, shading is used to indicate a region where rain is likely to fall.
TC	Tropical cyclone	Air rises rapidly and rotates clockwise with a calm centre; conditions are extremely windy and wet, and flooding is likely; cyclones move in the direction of the arrow.

- **Step 1** Look at the map. Is this location in the northern or southern hemisphere? In which direction will troughs and cold fronts move?
- **Step 2** Can you see any unusual patterns on the map, or are the symbols distributed evenly?
- **Step 3** Pick a section of the map to examine closely.
- **Step 4** Identify the shape and size of the isobars in this area. What does this tell you about the air pressure?
- **Step 5** Identify the shape and size of the high or low pressure areas. Are the conditions warm and dry, or cool and wet?
- **Step 6** Identify the different types of lines in this area. What does this tell you about rainfall?

For more information on identifying patterns and relationships, see Lesson 1.7 Identifying patterns and relationships (page 35).

Practise the skill

1 Using the steps above, **examine** the map in Source 1.

Extend your understanding

1 Using Source 1, describe the weather conditions in Melbourne on 13 April 2023. What was the weather likely to have been like a few days before this date?
2 Source 2 is a satellite image that shows part of the Western Australian coast at the same time as the situation shown in the map in Source 1. **Explain** why a satellite image such as this is useful inhelping people to prepare for a tropical cyclone.

Review: Valuing and managing water

Review activity

Read the text below and respond to the following questions.

The Aral Sea

The Aral Sea is located on the border of Kazakhstan and Uzbekistan. In the early 1960s, the two rivers that channelled water to the Aral Sea, the Amu River and the Syr River, were diverted to irrigate areas of the surrounding desert to grow rice, melons, cereals and cotton. From 1960 to 1998, the size of the Aral Sea shrank by 60%, and its volume was reduced by 80%. In 1960 the Aral Sea was the fourth-largest lake in the world. Today, it is the 41st largest. Over the same period of time, the lake has also become five times saltier.

Source 1 Fishing boats sit rusting in the desert. This area was once covered by the Aral Sea, which supported a thriving fishing industry.

1 **Identify** the two rivers that channel water into the Aral Sea. (2 marks)
2 **Describe** two environmental features in this area that make it vulnerable to water scarcity. (2 marks)
3 **Suggest** two ways the river might be used by people. (2 marks)
4 How do these uses affect the natural environment? (4 marks)
5 "Even though it is unfortunate the Aral Sea has shrunk in size, it is a worthy sacrifice to make because water is being diverted to grow crops and feed people." **To what extent** do you agree with this? A lot (strongly), a little bit (somewhat) or not at all? In your answer, think about different perspectives as well as your own. (10 marks)

(Total: 20 marks)

Source: Oxford University Press

Source 2

Enlarged map: Aral Sea basin: Water resources

Module checklist: Valuing and managing water

Module review quiz: Valuing and managing water

Module

4

Living in Australia

Sub-strand: Place and liveability

Overview

Aboriginal peoples and early European settlers to Australia both made decisions about where to live based on the availability of resources they needed to survive, such as water, food and shelter. The factors that influence where people live today are more varied. As well as needing access to food, water and shelter, people choose where to live based on access to services (such as hospitals and schools), environmental quality (such as access to clean air and parklands) and safety. Connections to family, friends and places also influence where we live. Where we choose to live can also change over time due to factors such as work and property prices. In retirement, many people choose a sea change or tree change to enjoy a more relaxed lifestyle.

Source 1 Torquay, on Victoria's Surf Coast, is one of the state's fastest-growing towns.

Lessons in this module

Lesson 4.1
Why we live where we do

Introduction

The **liveability** of any place is closely linked to how suitable and enjoyable people think that place is to live in. How liveable you find a place to be depends on your own wants and needs and whether they are met. What we like about places can depend on our age, income, cultural background, lifestyle, values and beliefs. The following questions will help you to determine the features of places that make them most liveable to you.

What do you like to do?

Source 1 New mountain bike trails are planned for Ararat in regional Victoria.

Access to services and facilities that allow us to do the things we enjoy influences what we think of the place we live. This, in turn, increases how highly we rate its liveability.

Sport and recreation play an important part in our lives. Team sports (such as netball, football and soccer) can be played in most places. Community facilities (such as sports stadiums and sporting parks) are provided in most communities. If your passion is surfing, you might consider a coastal town more liveable than an inland town. Mountain bikers might prefer to live in a rural area or on the edge of a city, close to open spaces where they can ride their bikes on suitable trails.

Where do you like to go?

Source 2 Melbourne's tram network helps to move people through the busy city.

The places we like to go to, and how easy they are to get to, also affect the liveability of a place.

Where do you spend most of your time? Do you like to catch up with friends, go to the movies, or shop at the local shopping centre? How do you get there? Do you walk, ride a bike, or catch a bus, tram or train? Think about how easy it is for you to travel from your home to where you like to go. Is it difficult? This could make you feel negatively about where you live, decreasing its liveability. Is there another place you could live that might make it easier for you to travel to where you like to go? If so, this would increase the liveability of that place for you.

What are your favourite places?

We all have places that are special to us. There are many different reasons for this. Some places are appealing because of the way they look. This is known as the aesthetic appeal. Others appeal to us because they are familiar or are attached to memories of things we have done. This is known as sentimental appeal. We may even have a spiritual connection with a place. As the traditional custodians of Australia, Aboriginal and Torres Strait Islander peoples have very strong connections with places. Places are a dominant feature of their stories and lives. These spiritual connections can also increase the liveability of one place over another.

Every year about 5,000 Australians are asked to take part in a survey about the factors that they believe make a place liveable. Their replies are often like the replies of people from all around the world when asked the same question. Most people agree that a liveable place:

- feels safe
- has high quality health services
- has affordable, decent housing
- has reliable and efficient public transport
- has good job prospects.

Quiz me! Why we live where we do

Source 3 Rock art cultural heritage protection specialist Jake Goodes in the Grampians (Gariwerd) Mountains in western Victoria. This area is of great significance to the traditional landowners, the Djab Wurrung and Jardwadjali peoples. This is because of its place in Dreaming stories, as well as the food, water and shelter it offers. The area contains 90 per cent of all the rock art sites in Victoria.

Check your learning 4.1

Check your learning 4.1

Review and understand

1 In your own words, **define** "liveability".
2 What characteristics of a place attract us? **List** these characteristics and write a short description of each one.
3 **Describe** some things that you like to do. Where would be a good place to live that enables you to do these things?
4 **Describe** some places you like to go. Where would be a good place to live that enables you to go to these places?

Apply and analyse

5 What are some important aspects of liveability that do not require a lot of money?

6 **Explain** how a person of your age and a much older person might have different ideas about the liveability of a place.
7 **Distinguish between** spiritual and sentimental values that influence how people view a place. Remember, when you distinguish between two things you should talk about how they are different.

Evaluate and create

8 **Discuss** the special places in your life with a partner. Why do you have a special connection to this place?
9 Look at the places shown in Source 1 and Source 2. Explain how the liveability might differ between these two places.

Lesson 4.2
Where early Aboriginal peoples lived

Learning intentions and success criteria

Introduction

It is estimated that the first people arrived on the land now called Australia at least 65,000 years ago. At that time, sea levels were lower than they are today. The islands of Indonesia were part of the Asian mainland, and over time people walked and undertook short sea voyages to reach what is now northern Australia. Over thousands of years, these people gradually moved south, eventually reaching the south-western and south-eastern corners of Australia. As sea levels rose, Australia became an island and the cultures and traditions of Aboriginal peoples developed and continued independently from other parts of the world.

Key content video: Where early Aboriginal peoples lived

Australia: Location and distribution of Aboriginal and Torres Strait Islander peoples in 1788
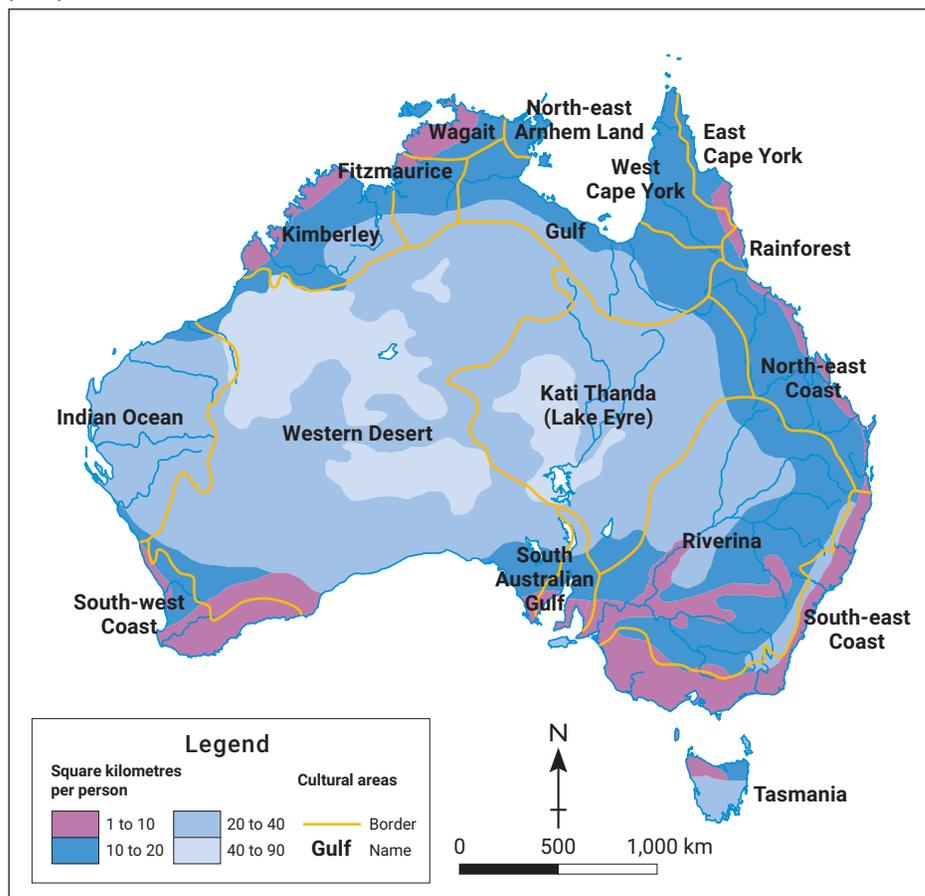
Source: Oxford University Press

Source 1

Enlarged map: Australia: Location and distribution of Aboriginal and Torres Strait Islander peoples in 1788

Factors that influenced where Aboriginal peoples lived

On reaching the Australian continent, early Aboriginal and Torres Strait Islander peoples looked for the most liveable places – those that supplied the resources needed to survive and prosper. Many settled along the northern, eastern and southern coasts as well as along what we now know as the Murray River. In these places, Aboriginal peoples found the resources they needed to survive, particularly fresh water and abundant food.

Aboriginal peoples developed a way of life that sustainably used natural resources, by only taking what was necessary from the land. Country was listened to and treated with respect. Trees provided many important resources, including bark to make shelters, canoes and shields, and wood to make fires and spears.

Aboriginal peoples fished the rivers, in some places building elaborate stone traps to catch eels and fish, and hunted larger game such as kangaroo and wallaby. Birds and lizards living in the trees also supplied much of the food. Shells, stones, plant fibres, coloured clay and bones all had their uses, but a reliable supply of fresh water, usually a river or stream, was perhaps the most important resource.

Further inland, resources were much scarcer. Aboriginal communities who lived there developed a different way of life suited to the resources that were available. Throughout much of Australia, fresh water is hard to find and there are few large animals to supply food. In these **desert** regions, Aboriginal peoples had a more seasonal way of life than the coastal and river Countries. Liveable places changed according to the season, so many groups travelled to follow the natural cycle of monsoon rains, the movement of animals and the fruiting of plants.

Aboriginal peoples became excellent hunters and were able to survive in some of the harshest environments on Earth, with very hot climates and not much access to fresh water. They found water in the most unlikely places, even in the roots of desert plants and the bodies of dormant (hibernating) frogs. Much of the food came from animals such as insects, grubs and reptiles, as well as from plants such as the bush tomato.

desert an area that receives less than 250 mm of rain every year; can be hot or cold

Source 3
In the Tanami Desert in the Northern Territory, Warlpiri people burn spinifex to promote growth.

Source 2 Yugambeh men in the Queensland rainforest demonstrating traditional hunting equipment.

4.2

A spiritual connection to Country and Place

Country the physical environment that a particular Aboriginal and Torres Strait Islander peoples' group has a spiritual relationship with; this includes lands, waters and the sky. For Aboriginal and Torres Strait peoples, Country both owns and is owned by the people

Aboriginal peoples developed a deep connection with the physical environment that supported them. While there were hundreds of different nations with different cultural practices and languages, the importance of the physical environment was a common belief held by all Aboriginal peoples, and is still upheld today.

Country

Aboriginal peoples do not see themselves as separate from the natural environment but as part of it. They refer to this environment as **Country** and it is seen as both owning and being owned by the peoples. Their perception of liveability is based on the principle that the land is much more than just a resource to be used.

Caring for Country was and remains an important part of Aboriginal peoples' connection to the natural environment. A common concept in Aboriginal cultures is that you should only take from the land what is needed, and what you can give back. This is shown in the way Aboriginal peoples looked after and preserved the environment that provided for the community. Today, caring for Country is a right given to Aboriginal and Torres Strait Islander peoples in areas that are covered by native title law, including national parks and protected areas.

Source 4 Many modern Aboriginal peoples connect with ancestors and beliefs through their traditional homelands.

Source 5 This illustration, by John Helder Wedge in 1835, shows Wathaurong women harvesting yam daisy tubers with digging sticks and turning the soil to help remaining tubers grow again the next year.

Part of the reason that Country is such an important concept to Aboriginal peoples is because their Dreaming stories, their way of life and their ancestors are all part of their homelands. Country provides a sense of deep connectedness and belonging with the past, present and future, as well as with ancestors and culture. For some Aboriginal peoples, when they are on their Country, their spirits and ancestors keep living through them.

Place

Place for Aboriginal peoples, special places that exist within Country, including places of ceremony and learning, and landmarks related to the ancestor spirits and creation. For Torres Strait Islander peoples, spaces (including lands, waters and sky) that individuals or groups occupy and regard as their own

Place is another significant concept for Aboriginal and Torres Strait Islander peoples. For them, Place means the special places within Country. These can include places of ceremony, initiation, birth and learning, as well as places for Sorry Business (see Lesson 8.6 Customs and ceremonies, page 290). They also include landmarks related to the ancestor spirits and creation. For Torres Strait Islander peoples, Place refers to spaces that individuals or groups occupy and regard as their own. Place may have spiritual significance. It includes lands, waters and the sky.

Quiz me! Where early Aboriginal peoples lived

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4.2

Geography

Check your learning 4.2

Check your learning 4.2

Review and understand

1 **Describe** how Aboriginal and Torres Strait Islander peoples first reached Australia.
2 Why did many Aboriginal peoples live along the coast or beside rivers?

Apply and analyse

3 **Examine** Source 1.
   a What is the purpose of this map?
   b Using the PQE method, **describe** the location and distribution of the population of Aboriginal and Torres Strait Islander peoples in Australia in 1788.
4 **Compare** the ways of life of Aboriginal peoples who lived in the inland desert and those who lived near rivers in south-eastern Australia. What were some of the similarities and some of the differences?
5 **Examine** Source 2.
   a What natural resources have been used to create these hunting tools?
   b How might these resources have been used in other ways to enhance the liveability of early Aboriginal and Torres Strait Islander peoples?
6 Are the factors that influenced the liveability of places for early Aboriginal and Torres Strait Islander peoples similar or different to those that influence your ideas on what makes a place liveable? Give reasons for your answer.

Evaluate and create

7 Brainstorm ways in which early Aboriginal and Torres Strait Islander peoples may have used each of these resources: shells, stones, plant fibres, coloured clay, fire and bones.

Lesson 4.3
Where Australians live now

Introduction

In much the same way as the early Aboriginal and Torres Strait Islander peoples did, Australians today make choices about where they live based on how liveable they perceive a place to be. Today, however, many things have changed. In the past, people chose where to live based on whether the place gave them access to the basics necessary for survival, such as water and food. Today, modern technology and infrastructure make food and water available right across Australia, even in the driest and most remote parts of the desert that would have previously been very difficult to live in, if not uninhabitable. As a result, the factors that influence where Australians live have changed and have resulted in a distinct pattern of population distribution (see Source 1).

Learning intentions and success criteria

Key content video: Where Australians live now

4.3

Urban settlements in Australia
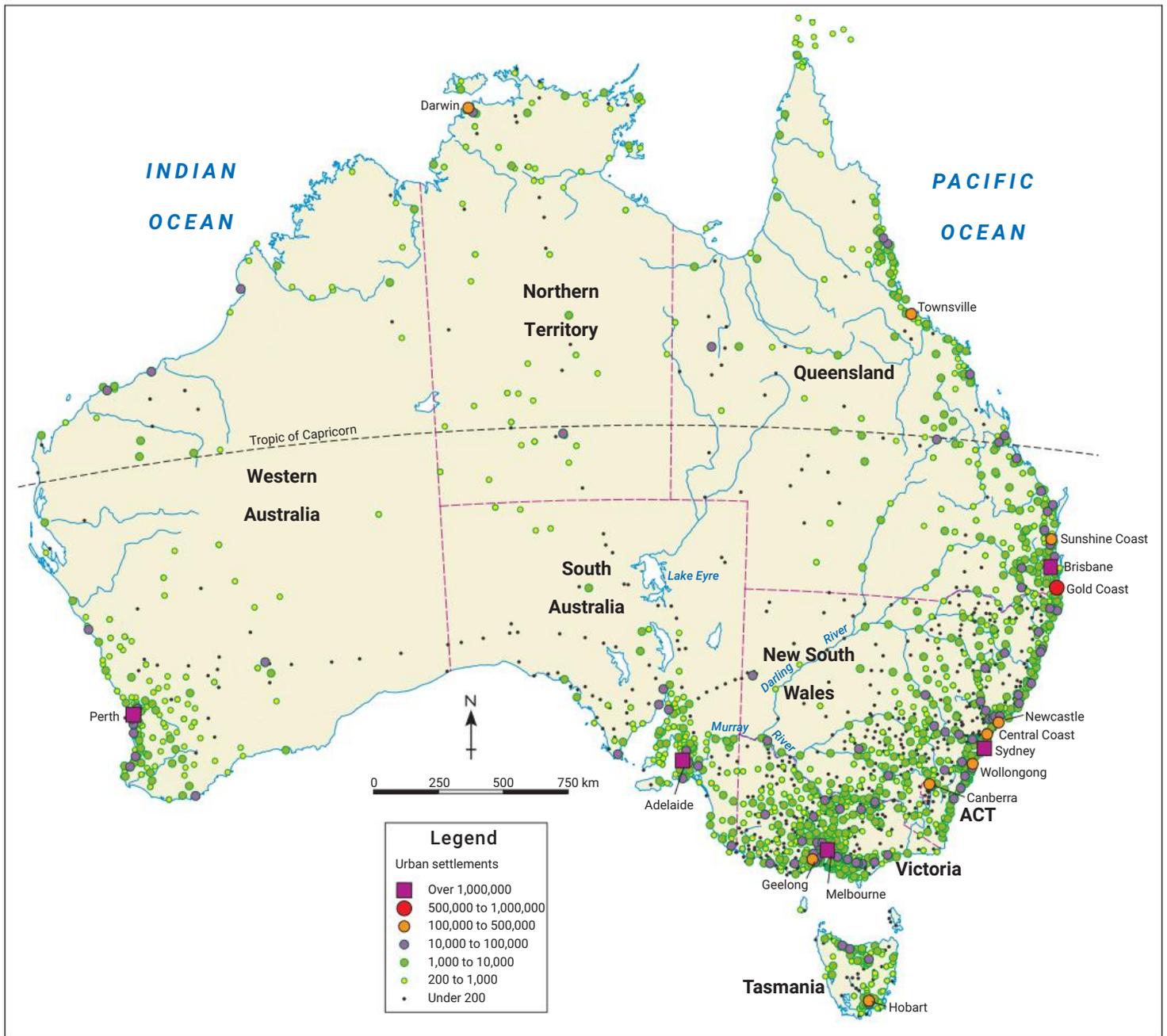
Source 1

Interactive map: Urban settlements in Australia

Source 2 Australians living in remote areas often have additional challenges impacting their daily lives.

Remote areas

Few Australians live in remote areas, away from towns and cities. Those who do so often have to overcome challenges such as lack of infrastructure and poor access to services like health care, entertainment and shopping. Some remote communities have been built to service mines for minerals such as iron ore, gold and coal.

East coast

Eight in 10 Australians live within 50 kilometres of the east and south-east coast, spreading along the narrow strip that extends from Cairns to Adelaide. Coastal parts of Australia are considered liveable due to the climate and the environment. The average temperature in coastal areas tends to be lower than in the drier, warmer interior of the country. Many people also like to holiday at the coast and, increasingly, people who have lived in cities are retiring there.

Source 3 The climate of Australia's east coast makes it a desirable place for people to live and holiday.

Large cities

Two-thirds of all Australians live in large cities. This is one of the highest rates in the world. People choose to live in these places because there tends to be better access to services in cities, including health care, education, shopping, banking and professional services such as accountants and lawyers. There are usually more jobs and a wider variety of jobs in cities. Cities also provide a wider range of entertainment such as music venues, nightclubs, concerts, theatres and big sporting arenas.

Source 4 Some Australians choose to live in large cities because of their proximity to jobs and entertainment offerings.

Small towns and rural areas

One in 10 Australians live in small towns of fewer than 10,000 people. Some features of small towns and rural areas make them more liveable than large cities – for example, housing is cheaper, and the air is cleaner without pollution from cities. However, some services such as specialist health care and universities can be more difficult to access, as they tend to be located in cities. There are about 135,000 farms in rural Australia.

Source 5 Small towns and rural areas can offer more affordable housing options than cities.

Key skill worksheet: Communicating: Justifying your response

Quiz me! Where Australians live now

Check your learning 4.3

Check your learning 4.3

Review and understand

1 **Identify** the area in which most Australians live.
2 **Identify** the area where the least number of Australians live.

3 Pick one of the locations listed below. Write a short paragraph **describing** why people choose to live there.
   – cities
   – coastal areas
   – regional areas
   – rural areas

4.3

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◄ **Apply and analyse**

4 In which of the four locations in question 3 do you live?

    a **Describe** why you live there.

    b **List** some of the things you enjoy about living in this place.

    c Brainstorm three strategies that could be used to improve the liveability of your area.

5 **Examine** (look closely at) the map in Source 1.

    a **Identify** the type of map and explain its purpose. See Lesson 1.5 Analysing maps (page 20) to help answer this question.

    b **Identify** how many Australian cities have more than one million people.

    c Using the PQE method, **describe** the distribution of population around Australia.

Evaluate and create

6 In which of the four locations listed in question 3 would you least like to live and why?

7 Do you think the answer to question 6 would be the same for everyone? **Justify** (give reasons for) your answer.

Lesson 4.4
Living in large cities

Introduction

Learning intentions and success criteria

metropolitan a term used to describe a city and its surrounding suburbs

rural–urban fringe the areas on the edge of a city where the city ends and country or farming areas begin

Most Australians choose to live in large capital cities. The greatest growth in capital cities usually takes place around the outer edges of **metropolitan** areas. New suburbs appear on what was once farmland in areas now known as the **rural–urban fringe**. As new housing estates are built in these areas, other services are attracted to these new suburbs to service the growing population. Schools, shopping centres, medical centres and sporting facilities are among the services that are bult in these areas to meet the needs of the residents. Industrial services, such as power or recycling stations, are often established in these areas because they offer more affordable land and rent compared to the inner-city suburbs.

▶ **Key content video:** Living in large cities

Case study Wyndham, Victoria

The City of Wyndham is a local government area located on the fringe of the metropolitan area in western Melbourne, just under 35 kilometres from the Melbourne central business district (CBD). It is one of the fastest-growing areas in Australia.

At the 2001 census, the area had a population of around 84,000 but this has now grown to over 290,000. Source 1 shows the change over time in the Wyndham suburb of Point Cook between 1999 and 2020.

Source 1 A street directory map of Point Cook: 1999 A) and 2020 B). There are bigger versions of these images available on Oxford Digital, which you can zoom in and out of to locate features and places on the maps.

Enlarged map: Street directory map of Point Cook 1999 and 2020

What features make Wyndham liveable?

Wyndham is linked to other parts of Melbourne and its CBD by a road and rail network. Wyndham is conveniently located by the Princes Freeway, which means that Melbourne is only a 30-minute drive away (in good traffic conditions).

Wyndham also attracts many new residents, particularly migrants. The largest migrant group in the city are those born in India. Many new migrants, particularly those with young families, are attracted by more affordable housing in the area with house prices 15% lower than for Melbourne as a whole.

There are many reasons for the liveability of Wyndham. There are 56 schools in the area, as well as multiple libraries and a Victoria University campus, all of which make access to education easy for residents. Residents can enjoy swimming at one of the many public pools in the area, or shopping in large retail centres and strips along major roads. Public clubs and community groups, such as the Truganina Cricket Club, offer residents a way to connect with each other and build a sense of community.

Source 2 The annual Wyndham Indian Diwali Festival. The suburb of Truganina in Wyndham is among the most culturally diverse in Australia. Eighty per cent of its residents have at least one parent born overseas.

4.4

What features threaten the liveability of Wyndham?

Like any rapidly growing area, Wyndham struggles at times to meet the demands of all its residents. For example, Werribee Mercy Hospital in the suburb of Werribee is sometimes not able to treat emergency patients quickly, because of high demand.

Many residents of Wyndham work in the Melbourne CBD and inner-city suburbs and drive to and from work. This puts hundreds of thousands of cars on the road at the same time each morning and afternoon during the week. The road system struggles to cope with this heavy demand, as the number of vehicles on the road cause traffic jams and long delays. More than one-quarter of Wyndham's residents spend more than two hours every day travelling to and from work. The demand for public transport is increasing, with train station carparks filled by 7am.

Source 3 The morning commute from Wyndham to Melbourne is often very slow because of the traffic.

Maintaining Wyndham's liveability into the future

An average of 13 babies are born each day in Wyndham. This continuous population growth puts demands on services in the region now and will continue to do so in the future. Birthing centres and hospitals, pre-schools, kindergartens, and primary and secondary schools all need to find spaces in the next few years to accommodate this growing population.

In addition to the high birth rate, Wyndham also attracts many new residents. Homebuyers from inner Melbourne are drawn to the area by the affordable housing, as are migrants. As the population grows, new **amenities** will need to be built to accommodate more people.

Without major improvements to infrastructure, such as building new roads or adding new bus routes, the traffic around Wyndham is likely to get worse. The local population is predicted to increase significantly in the next 15 years.

amenity a feature that makes living in a place more attractive (e.g. public transport, good roads, a park)

Source 4 Population pyramid for Wyndham, 2021

Males — Females

Age groups (top to bottom): 85 and over, 80 to 84, 75 to 79, 70 to 74, 65 to 69, 60 to 64, 55 to 59, 50 to 54, 45 to 49, 40 to 44, 35 to 84, 30 to 34, 25 to 29, 20 to 24, 15 to 19, 10 to 14, 5 to 9, 0 to 4

Males axis: 6% 5% 4% 3% 2% 1% 0
Females axis: 0 1 2 3 4 5 6

% of persons
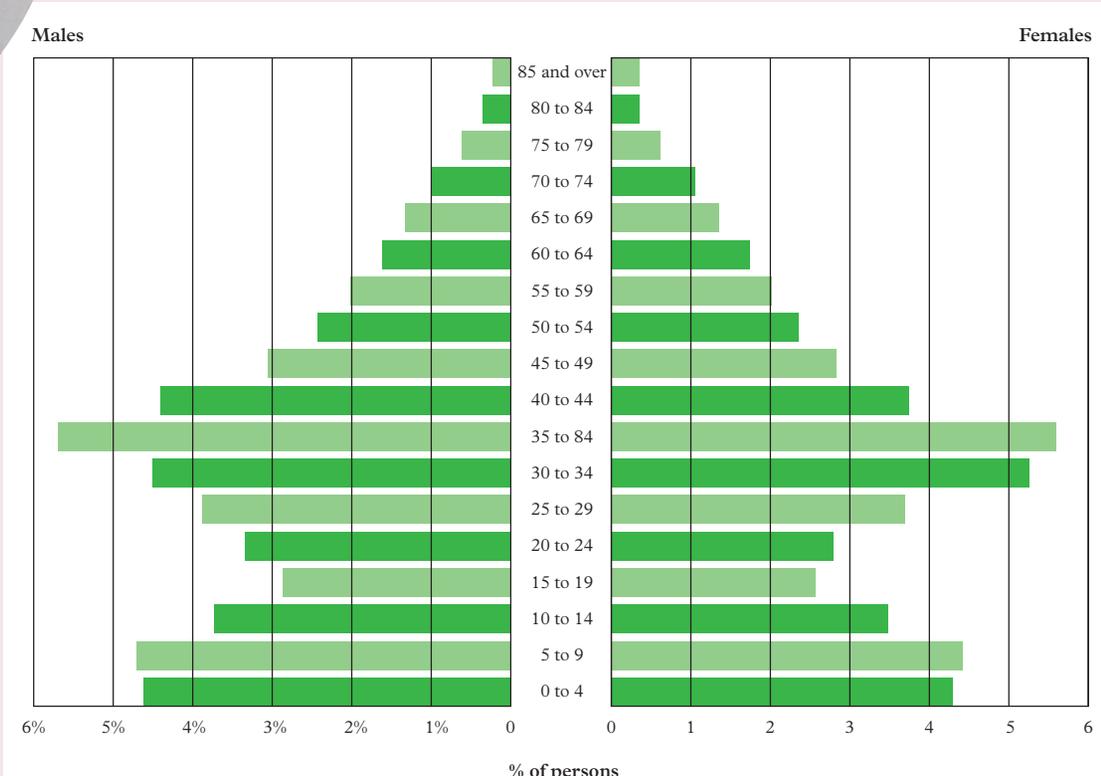
Key skill Collecting & representing data

Creating a line graph

Graphs are used in geography to display data and make it easier to understand. Raw data often appears as a confusing table of numbers, so turning data into graphs makes it easier to recognise and analyse trends and patterns. A line graph is a commonly used graph in geography. Line graphs are used to show trends over time (for example, the growth of a city's population).

To draw a line graph, follow these steps:

- **Step 1** Examine the data carefully to decide on the axes and the scale you should use so that all the data fits. It is important that the scale on each axis is an even scale. For example, 1 centimetre equals one year.
- **Step 2** Construct your axes and your scale using a ruler.
- **Step 3** Plot the data carefully using a small, neat dot for each entry on your graph.
- **Step 4** Join the dots with a smooth, freehand line.
- **Step 5** Label each axis with a description of the data and give your completed graph a title.

Practise the skill

1 Using the data provided in Source 4, **create** a line graph showing the forecast population of Wyndham.

Extend your understanding

1 Use the data from your graph to **describe** the forecast changes in the population of Wyndham.

2 **Explain** why the population in Wyndham is expected to grow at the rate shown in your graph.

3 **Suggest** one strategy that could be used by the government to support Wyndham's population in 2040.

For more information on collecting and representing data, see Lesson 1.6 Representing data (page 31).

Source 5 The predicted growth in Wyndham. Data provided by idcommunity.

Year	2025	2030	2035	2040
Population forecast	346,520	399,654	451,476	495,549

Graph it! Living in large cities

4.5

Check your learning 4.4

Review and understand

1 **Identify** where the greatest growth in capital cities generally occurs.
2 **Describe** the change that takes place as suburbs spread to the rural–urban fringe.
3 Copy this table into your notebook and add factors to each column.

Factors that make Wyndham a liveable place	Factors that threaten Wyndham's liveability

Apply and analyse

4 Launch the digital version of the maps in Source 1 on Oxford Digital. Look closely at the maps to **compare** them and answer the questions that follow:
   a How liveable was Point Cook in 1999? Give reasons for your answer.
   b **Identify** five new factors that have made Point Cook a more liveable place.
   c What evidence is there that many of Point Cook's residents are young families?
5 Using the SHEEPT method, **analyse** the factors that draw people to live in large cities. Refer to Using the SHEEPT method in Lesson 1.7 Identifying patterns and relationships (page 35) to help you write your answer.

Evaluate and create

6 Write a diary entry from the perspective of a person who has lived in Point Cook since 1999. Include their thoughts and feelings about their growing suburb.

Lesson 4.5
Living in rural areas

Learning intentions and success criteria

Introduction

Rural areas are those areas located outside major cities. In Australia, many rural areas are used as farms to raise animals and grow crops for food. Living in rural areas can be very different from living in a city. There are many advantages to living in rural areas, including a strong sense of community in small towns, and a more relaxed way of life compared with the hustle and bustle of big cities. Farms are often family-run businesses, which gives some farmers the opportunity to be their own boss. There is also less air pollution, noise and traffic in rural areas. In recent years, advances in information and communication technology have significantly increased the liveability of rural areas.

However, rural areas do not provide the same convenient access to amenities that large cities do. They are much less populated than large cities, and as a result have fewer amenities, including schools, shops and health care services.

▶ **Key content video:** Living in rural areas

Case study Western District dairy region, Victoria

The largest industry in rural Victoria is dairy farming. There are more than one million dairy cows in the state, and they produce more than 6 billion litres of milk a year. There are three main dairy farming regions in Victoria – in the north near Echuca; south-east of Melbourne; and in the Western District around the city of Warrnambool.

Near the small town of Condah in the Western District of Victoria, lies the dairy farm of Sam and Kristy Cheetham. Like many farms in Australia, this dairy farm is a family-run business. The farm has grown over the years as the family has bought more land. Several workers are employed to help milk the cows twice a day and carry out other farm jobs. These workers and their families also live on the Cheethams' farm.

Source 1 The herd heads to the milking shed for the afternoon milking on the Cheethams' farm.

What features threaten the liveability of this rural area?

The Cheethams' farm is close to several small towns, but it is some distance from larger towns and cities. The small towns of Condah and Branxholme have very few shops and the Cheethams only visit these places for basic items, such as bread.

To use amenities such as the bank and supermarket, the Cheethams must travel to the town of Heywood, which is 24 kilometres away. Heywood has a population of 1,800, which is large enough to support a wider range of retail shops and other services than the smaller towns. These include a doctor, vet and several schools.

To access major services, such as the international airport or specialised health care, people in this region must travel to Melbourne. Similarly, people in rural areas must travel to the state's capital for large sport and entertainment events, which are not held in regional areas.

4.5

Key skill Identifying patterns & relationships

Interpreting a proportional circle map

Source 2 is a map of the Western District dairy farming region. On the map, each town is shown in the centre of a circle. The size of each circle is determined by the number of people living in the town. The bigger the population, the bigger the circle. This makes it easy to see where the larger towns and cities are located and allows us to see a pattern in this distribution. These circles are called proportional circles, and when they are represented on a map like this, it is called a proportional circle map.

For more information on identifying patterns and relationships, see Lesson 1.7 Identifying patterns and relationships (page 35).

Key skill worksheet: Identifying patterns & relationships: Interpreting a proportional circle map

Enlarged map: Victoria: Western District dairy farming region

Victoria: Western District dairy farming region

Legend

Population
- 35,000
- 10,000
- 2,500
- 1,000

- Dairy farming area
- Highway
- Major road

0   10   20 km

N

Adelaide
Melbourne
Area of map

Source: Oxford University Press

Source 2

Quiz me! Living in rural areas

Check your learning 4.5

Check your learning 4.5

Review and understand

1 **Identify** Victoria's three main dairy farming regions.
2 **Identify** where the Cheetham family would go to buy or access each of the following:
   a a loaf of bread
   b a new car
   c an AFL football match.

Apply and analyse

3 **Describe** how living in a rural area is different to living in a city.
4 Look carefully at Source 2.
   a **Identify** the three largest towns in this region.
   b **Determine** (decide) the approximate population of the largest town.

c **Explain** why you think there are many small towns and only a few large towns in this area.
d **Explain** why proportional circles are useful on a map.

Evaluate and create

5 Think about the liveability of rural areas compared with larger cities.
   a **Rank** the top three features of rural areas that make them more liveable than large cities.
   b **Rank** the top three features of rural areas that make them less liveable than larger cities.
   c **Justify** (give reasons for) your rankings and share them with the class.

Lesson 4.6
Living in coastal areas

Introduction

Eighty-five per cent of all Australians live within 50 kilometres of the coast. As a result, nine of our 10 largest cities sit on the coast. As well as large cities such as Sydney and Melbourne, there are hundreds of smaller communities dotted along our coastline. Outside the capital cities, these coastal communities tend to be the fastest growing regions in each state – in Queensland, for example, it is the Gold Coast and the Sunshine Coast, and in Victoria, it is the Surf Coast.

Due to a range of factors, coastal towns and cities are growing in size and population across Australia. Many people decide to move to the coast because they want a more relaxed lifestyle near natural features such as beaches, bays and other landforms. Geographers refer to this trend as a "sea change".

Learning intentions and success criteria

Key content video: Living in coastal areas

Case study Ocean Grove, Victoria

Ocean Grove is located on Victoria's Surf Coast about 100 kilometres south-west of Melbourne. It has long been a popular holiday destination for Melburnians, particularly during summer.

The permanent population of Ocean Grove is around 19,000 people. This number can double on summer weekends as people travel from Melbourne to take advantage of the beaches and relaxed lifestyle in this coastal town.

The permanent population of residents in Ocean Grove is growing. By 2036, it is expected to be over 24,000.

What features make Ocean Grove a liveable place?

There are many features that contribute to the liveability of Ocean Grove. The environment in the area provides residents with several beaches and walking tracks to enjoy. In addition, there are several beachside cafes and wineries within a short drive of town. These amenities add to the liveability of Ocean Grove by offering residents ways to relax and enjoy themselves.

Victoria: Bellarine Peninsula

Source: Oxford University Press

Source 1

Enlarged map: Victoria: Bellarine Peninsula

There are many primary schools and one secondary school, as well as an array of places for shopping, such as Aldi and Woolworths.

4.6

This gives sea changers and permanent residents access to important amenities without having to travel.

However, residents may need to travel to nearby Geelong for access to health care services or entertainment. Ocean Grove is only 25 minutes from Geelong and 90 minutes from Melbourne's CBD. This gives residents the opportunity to commute to work in these bigger cities by car or public transport. There is infrastructure in place to enable this, including the Princes Highway and the V/Line train, both of which run from Geelong to Melbourne.

Ocean Grove also attracts many retirees. In some cases, retired people move permanently into holiday homes they already own, and in other cases they build new homes to live in. As more Australians reach retirement age, it is expected that the demand for new homes and services such as health care, education and roads will increase dramatically in sea change towns, including Ocean Grove.

What features threaten the liveability of Ocean Grove?

As the population grows in Ocean Grove, the small seaside town will need to adapt to support its growing number of residents. While real estate agents and builders welcome the new residents, not everyone feels the same way. Some residents are concerned that Ocean Grove will become exactly the type of suburban development that seachangers are trying to escape.

There are a number of retirement villages and housing estates being constructed in Ocean Grove to support its growing population. This construction has significantly altered the natural landscape in some places, including farmland and sand dunes. In some cases, caravan parks, which have been an important feature for summer visitors, have been redeveloped to make space for these new housing estates.

Locally run businesses with deep roots in the community are also under threat, as large hardware stores and food outlets such as McDonald's arrive in town. Additionally, there are several primary schools and kindergartens in Ocean Grove, but only one secondary school. This could create a problem in the future as the population grows and the demand for local access to secondary education increases.

Think, pair, share
- Think about how living in Ocean Grove is different from living in a big city like Melbourne.
- Discuss your ideas with a partner.
- Share your thoughts with the class.

Males / Females

85 and over
80 to 84
75 to 79
70 to 74
65 to 69
60 to 64
55 to 59
50 to 54
45 to 49
40 to 44
35 to 84
30 to 34
25 to 29
20 to 24
15 to 19
10 to 14
5 to 9
0 to 4

4% 3% 2% 1% 0%   0% 1% 2% 3% 4%

% of persons
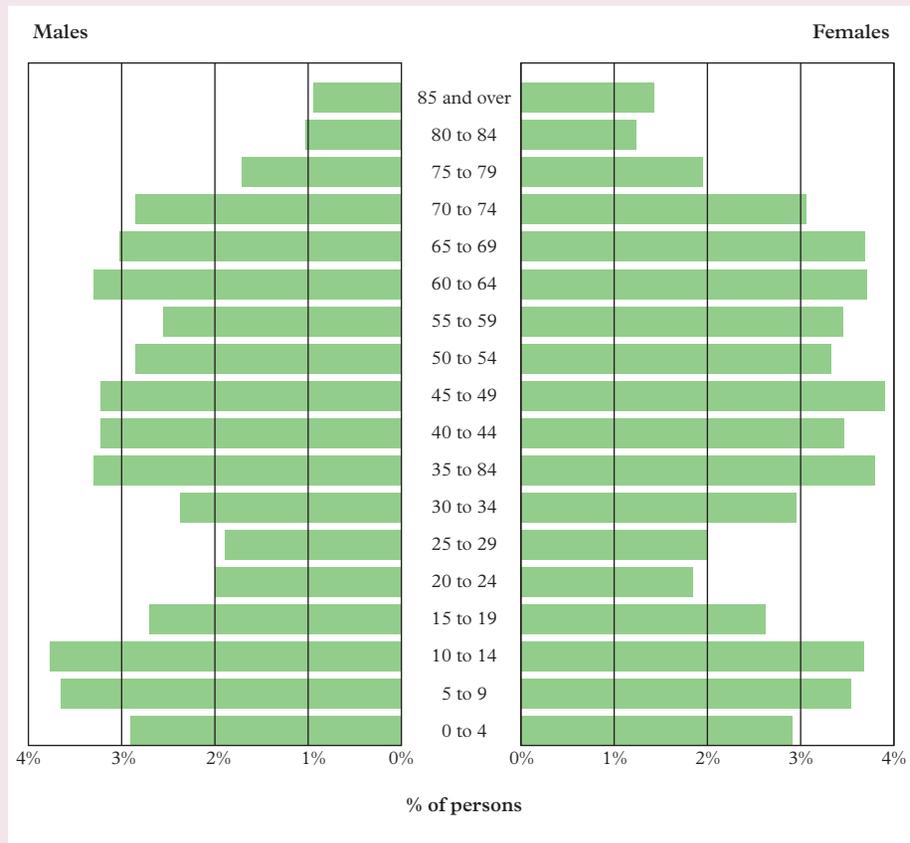
Source 2 Population pyramid for Ocean Grove, Victoria as at 2021. The data represented by this population pyramid tells us about the age and sex of residents in Ocean Grove.

Key skill Collecting & representing data

Reading population pyramids

Population pyramids are bar graphs that show the percentage of males and females of different age groups in a population. They help geographers compare different groups within a population and allow them to identify trends. Follow these steps to read a population pyramid.

- **Step 1** Read the title of the population pyramid to find out which population is being studied. Also read the labels running along the bottom (percentage or total population) and through the middle of the pyramid (age groups).
- **Step 2** Read the graph to understand how it represents the data. Population pyramids are organised so that the younger age groups are at the bottom and the older age groups are at the top. Percentages (or numbers) of males are always shown on the left side and percentages (or numbers) of females are shown on the right side.
- **Step 3** To compare the percentage of males and females in the same age groups, read across the rows. The scale on the male side begins at zero and increases from right to left. The scale on the female side begins at zero and increases from left to right.
- **Step 4** To compare the percentage of only males or females, look up and down the columns.

Practise the skill

1 Using Source 2, answer the following questions:
   a Are there more men or women aged over 85 in Ocean Grove? Use evidence to support your answer.
   b **Identify** the age group with the highest population in Ocean Grove.
   c There is a large group of Ocean Grove residents aged between 65 and 69. **Explain** why this is the case.

For more information on collecting and representing data, see Lesson 1.4 Collecting information (page 14).

Explore it! A virtual field trip to Ocean Grove

Check your learning 4.6

Check your learning 4.6

Review and understand

1 **Describe** how living in a coastal area is different from living in a city.
2 **Identify** the features that have made it possible for residents in Ocean Grove to enjoy both a coastal and city life.
3 In your own words, **define** the term "sea change".

Apply and analyse

4 **Examine** Source 1.
   a **Identify** three towns on the Bellarine Peninsula.
   b **Describe** where you think people on the Bellarine Peninsula would go to shop at department stores or purchase expensive items such as cars.
   c How do main roads contribute to the liveability of small towns like Ocean Grove?
5 "Some people are concerned that Ocean Grove will become exactly the type of suburban development the sea changers are trying to escape." **Explain** why some people feel this way.

Evaluate and create

6 Source 2 tells us that one of the largest population groups in Ocean Grove are children aged 5–9.
   a How does access to education contribute to the liveability of Ocean Grove for these people?
   b **Predict** how this might change in the next five years, when this age group reaches high school.
7 **Discuss** the liveability of Ocean Grove with a partner. Is this somewhere you would like to live?

Lesson 4.7
Living in remote areas

Learning intentions and success criteria

Introduction

Much of the interior land in Australia is desert or semi-desert, with large distances between towns and settlements. Geographers refer to these areas as remote because they are far away from amenities such as shopping centres, public transport and cinemas. People who live in remote areas have access to clean air and wide, open spaces. Additionally, remote areas with small populations provide their residents with a strong sense of community.

However, these areas do not have the same reliable access to food or water, and often lack proper road infrastructure. In addition, communications technology, such as the internet, tends to be much slower in remote areas.

In Australia, Aboriginal and Torres Strait Islander peoples represent 45% of all people living in very remote areas. As the traditional owners, Aboriginal peoples have a deep spiritual relationship to the land, which connects them to their identity and ancestors. For many Aboriginal peoples, living on and caring for the land is an extension of themselves. This is known as living on Country.

While lifestyle is a big factor that influences where many Australians want to live – for example, retirees moving to the coast for a more relaxed life – it is important to recognise that living on Country is much more than a lifestyle choice for Aboriginal peoples. Connecting to and caring for the land is an important feature that contributes to liveability of a place for Aboriginal peoples in Australia.

▶ **Key content video:** Living in remote areas

✏ **Key skill worksheet:** Asking questions & conducting research: Researching a location from afar

❓ **Quiz me!** Living in remote areas

Case study Yuendumu

Yuendumu is a remote community about 300 kilometres north-west of Alice Springs in the Northern Territory. Located on the edge of the Tanami Desert, it is one of the most remote places in Australia and is only accessible by four-wheel drive or plane. The drive from Alice Springs to Yuendumu takes about 4 hours and is largely on sealed highways, but the last 100 kilometres or so are unsealed, making it difficult to drive after heavy rain. Yuendumu is so remote that few locals have ever seen the sea. The population of Yuendumu is between 750 and 1,000 people, almost 85% of whom are Aboriginal peoples. The community of Yuendumu is mostly made up of Warlpiri peoples, who have inhabited the area for more than 40,000 years and have a deep connection to the land. Yuendumu is also home to residents who work or study in the area.

What features make Yuendumu a liveable place?

The area, while remote, is vibrant with several community-oriented amenities such as an arts centre, a women's centre and a summer football program. The Yuendumu Magpies football team, which plays in the Central Australian Football League, helps foster a sense of community for both players and spectators.

The Yuendumu School offers access to pre-school, primary school and secondary school education. In addition, the Yuendumu Kurdu Kurdu Kurlangu Childcare Centre runs a playgroup and creche for the youngest members of the community.

The Yuendumu Health Centre provides medical and public health services to people in the area, assisted by the Royal Flying Doctor Service in emergencies.

Source 1 Football is one of the most popular activities in Yuendumu.

What features threaten the liveability of Yuendumu?

Water scarcity is a serious problem threatening Yuendumu. Due to its desert location, Yuendumu is an arid region with a hot climate and receives little rainfall. The community draws its water from an aquifer, and many bores have been drilled in the area to improve the water supply. However, frustrated residents have found that the government does not always communicate well with locals about looking for water. According to Warlpiri Elder Harry Jackamarra Nelson, the government "didn't even bother to come and ask us where we can look for water".

In such a remote community, there are not as many job opportunities as there are in large towns and cities. About one-third of adults in Yuendumu do not have employment and, of those who have employment, many work at the same place: Yuendumu School. As a result of the lack of job opportunities, incomes are relatively low.

4.7
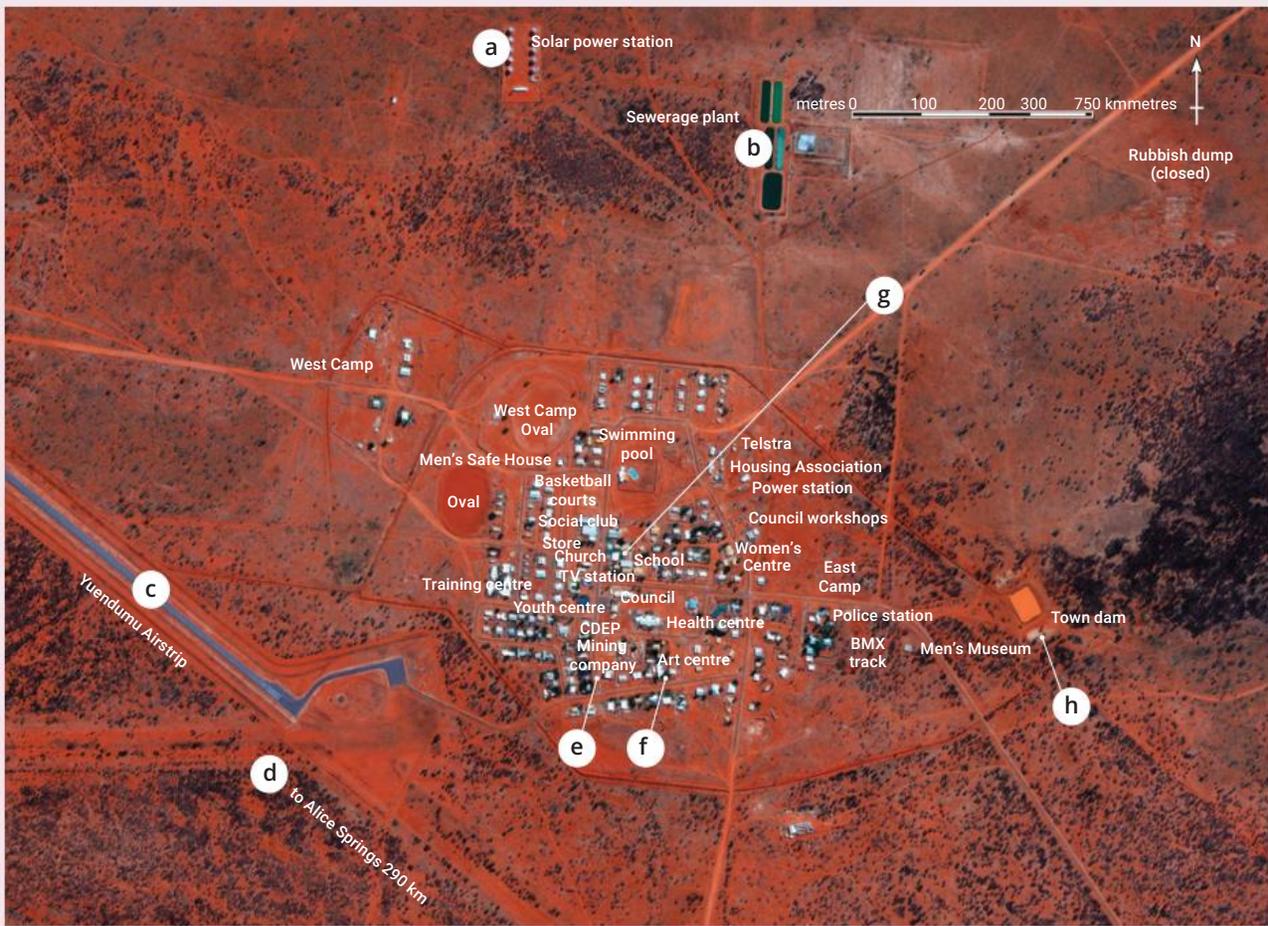
Source 2 Yuendumu satellite image

a About one-third of the town's electricity is generated by solar dishes, which collect and store the Sun's energy.

b In 1999, the whole town was connected to a sewage-treatment plant, which replaced individual septic tanks at each house.

c The Yuendumu airstrip provides access to planes from Alice Springs, including flights from the Royal Flying Doctor Service.

d The drive from Alice Springs takes about 4 hours and is largely on sealed highways, but the last 100 kilometres or so are unsealed, making it difficult to drive on after heavy rain.

e The Yuendumu Art Centre supports a thriving community of over 600 artists. It is an important hub for social activity and gives a sense of pride in the region.

f There is one school (the Yuendumu School) that caters for 260 students. Some lessons are in English while others are in Waripiri.

g The Yuendumu Mining Company is one of the town's major employers. It operates shale and gravel mines.

h Water is accessed from a series of bores 10 kilometres from the town. From there the water is pumped to the town dam.

Enlarged map: Yuendumu satellite image

Source 3 Yuendumu is one of the most remote towns in Australia.

Check your learning 4.7

Check your learning 4.7

Review and understand

1 **Identify** the services that are difficult to supply to remote areas.
2 **Outline** why the local Warlpiri people do not move to a different area with better access to services.
3 **Describe** some of the differences between living in your local area and living in Yuendumu.

Apply and analyse

4 Use the information provided in Source 2 to create a table of the services available in Yuendumu. List each of the services under the following headings: water and sanitation; transport; power; industry; education; and recreation.
5 Write a short paragraph **summarising** the factors that contribute to and threaten liveability in Yuendumu.

Evaluate and create

6 Water scarcity is a serious problem in Yuendumu.
   a **Identify** the main factor that contributes to water scarcity in Yuendumu.
   b **Propose** (put forward) one strategy that could be implemented to help with water scarcity in Yuendumu.
7 Use Google Maps (a link is provided on Oxford Digital) to answer the following questions:
   a **Identify** the absolute location (latitude and longitude) of Yuendumu.
   b **Measure** the straight line distance from Yuendumu to Alice Springs.
   c "The remoteness of the Yuendumu community is a threat to its liveability."
   To what extent do you agree with this statement? A lot (strongly), a little bit (somewhat) or not at all? Write a short paragraph explaining your position.

4A Skills in context
Port Melbourne skate park survey

Introduction

In 2024, the City of Port Phillip council in inner Melbourne announced a plan to redevelop the Port Melbourne skate park. The council asked a skate design company to plan a new park, and then wanted to find out how the local residents felt about this design. Residents were asked to provide feedback by completing an online survey.

Like all communities, the City of Port Phillip is made up of individuals, each with their own ideas about what makes a place liveable. For example, skaters and their friends are likely to see a skatepark as making a place more liveable. However, other people may see it as making it less liveable.

One hundred and five people responded to the survey, with people under the age of fifteen being the most common respondents. The survey found that most people supported the plan to redevelop the skate park and to remove some carparks to increase the size of the park. Some people felt that the area could be made safer by improving the lighting at the park. Others were concerned that adding lighting would increase the noise from the park at night.

One question in the survey related to new features that people felt should be included in the new design. This graph in Source 1 shows the responses to this question.
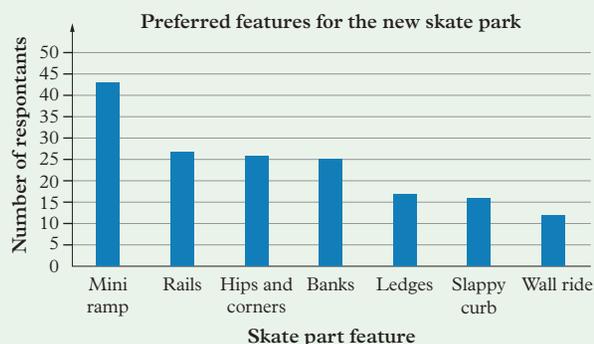
Source 1 This graph shows some of the results from the Port Melbourne skate park survey. Graphs are often easier to interpret than a list of numbers, because they represent data visually.

Key skill Conducting fieldwork

Conducting a survey and collating the results

To explore how people perceive the liveability of their local area, you have to ask them! The purpose of this survey is to explore how different students at your school perceive liveability in the local area. Follow these steps to conduct your survey:

• **Step 1** Begin with a big question or theory that your survey will aim to answer. For this survey, the theory is "The more that students use a place, the more they perceive it as having a positive impact on liveability".

• **Step 2** Create a list of 10 places in your local area that you believe each person in your survey group will know.

• **Step 3** Decide on the questions you are going to ask. You should ask closed questions with only a few possible responses, rather than open questions. For this survey, you have been provided two questions to ask in the table below.

• **Step 4** Create a survey form to record your responses. An example form is provided in Source 2.

- **Step 5** Decide how many students you are going to survey and provide a survey form to each of them.
- **Step 6** Collate your results. Gather the complete survey forms and document the results in a table. An example has been provided on Oxford Digital.

  For more information on conducting fieldwork, see Conducting fieldwork in Lesson 1.4 Collecting information (page 14).

Key skill worksheet: Conducting fieldwork: Survey form template

Key skill worksheet: Conducting fieldwork: Survey results table

List of local places	How often do you visit this place each month?				How would you describe the impact of this place on the liveability of the local area?					Write your questions in your survey form so you can easily collect results and interpret them later.
	More than 10 times	5–10 times	1–4 times	Never	Strong positive impact	Positive impact	No impact	Negative impact	Strong negative impact	
Library	3	2	1	0	5	4	3	2	1	

Ask survey participants to record their answers in the survey form.

Source 2 An example survey form

Practise the skill

1 Following the steps above, conduct a survey in your class or school about the liveability of the local area.
2 **Examine** the results of your survey by completing the following tasks.
   a **Rank** the places in your local area from the most visited to the least visited.
   b **Rank** the places in your local area from the most positive to most negative.
3 Think about the theory from the beginning of the survey: "The more that students use a place, the more they perceive it to have a positive impact on liveability". Did you prove this theory to be correct or incorrect? Write a short paragraph **explaining** your answer, using examples.

Extend your understanding

1 Using the results of your survey, **create** a graph showing the average liveability score of each local place.
2 **Describe** the data displayed in your graph.

Lesson 4.8
Living in communities

ethnicity the background, nationality or culture of a person, or group of people

Introduction

A community is a group of people who share something in common. It may be the place where they live, their religion, their interests or hobbies, their **ethnicity**, their school or their language. Every person on Earth is a member of one or more communities, some by choice and some just by being who they are. To make sense of all the world's communities, geographers consider the features that all members of a community share. One way to classify these features uses the five Ps shown in Source 2:

- Past
- Place
- Perspective
- Purpose
- Practice.

While some people feel strongly connected to communities, others feel isolated and poorly connected, which can affect their perception of liveability in their area. About 15% of Australians feel socially isolated, a figure that increased markedly during and after the lockdowns associated with the COVID-19 pandemic. Researchers believe that a sense of social isolation can have an impact on a person's mental and physical health.

The former Manager of Mental Wellbeing at VicHealth, Irene Verins, (who now works at Beyond Blue) believes that, "The most effective way to reduce loneliness is to make people feel connected to their community. Those communities may not be geographic – for example, they may be online for LGBTIQ+ youth or rural young people – but what's important is they share common interests and develop meaningful connections."

Source 1 Soccer is the most popular team sport in Australia. Playing a team sport often helps people build a strong sense of community.

Source 2 The five Ps that define a community are "Past, Place, Perspective, Purpose and Practice".

Past	Communities of past are made up of people who share similar histories, such as family, language and ethnic groups. War veterans are a community of past, as are the separate ethnic groups that make up the population of Australia, for example Greek Australians or Vietnamese Australians.	
Place	Communities of place are made up of people who live in the same area, such as a neighbourhood, region, town or country. Aboriginal peoples are members of a community of place, as are the residents of individual towns, such as Broken Hill or Broome.	
Perspective	Communities of perspective are made up of people who share similar beliefs and values, such as members of religious communities or political parties. The Australian Greens and Roman Catholics are both communities of perspective.	
Purpose	Communities of purpose are made up of people who share similar goals and visions, such as being members of a particular volunteer organisation, such as Surf Life Saving Australia or volunteer fire brigades. Communities of purpose are often involved in improving the lives of people other than themselves.	
Practice	Communities of practice are made up of people who have activities in common, such as the work they do, or the hobbies they enjoy. Health workers such as nurses and doctors belong to a community of practice, as do members of a book club or sporting group.	

▶ **Key content video:** Living in communities

4.8

Key skill Collecting & representing data

Drawing a concept map

A concept map is a visual tool used to show the links between different ideas or pieces of information. Each piece of information is usually represented in a circle or box and the relationship between two ideas is shown by a line or arrow connecting them. Words on the line or an arrow explain the relationship between the two ideas. Concept maps can be hand-drawn or prepared using computer software.

To draw a concept map, follow these steps:
- **Step 1** Draw and name the focus, central idea or main problem you are trying to explore. In the example in Source 3, this is "My communities".
- **Step 2** Build the concept map by adding ideas related to the central idea.
- **Step 3** Add a title to help the reader quickly understand your concept map.

For more information on collecting and representing data, see Lesson 1.6 Representing data (page 31).

Practise the skill

1 **Create** your own concept map to show the communities you are connected to. Place your name in the centre box. Add the types of communities to the connecting lines. Choose from the five types of communities shown in Source 2, such as place.

Friends
practice
School community
practice
Band
practice
Football club
practice
Local community
practice
Skateboarders
place
My communities
past
Chinese school
practice
Chinese community
perspective
Church

Source 3 Concept map

Quiz me! Living in communities

Check your learning 4.8

Check your learning 4.8

Review and understand

1 **Define** the term "community" in your own words.
2 **Identify** the five Ps that geographers use when describing communities.

Apply and analyse

3 Consider your own community.
   a Do you feel strongly connected to your local community? Why?
   b **Explain** why the answer to this question might be different for different people.
4 **Classify** each of these groups under one of the five types of communities:
   a the Australian Labor Party
   b employees at a supermarket
   c residents of Ocean Grove in Victoria
   d a Scout group
   e your family.

5 Members of a soccer team are members of a community of purpose. **Describe** why it is likely that they are also members of a community of place.
6 **Explain** how a person's connection to their community might affect their perception of liveability.

Evaluate and create

7 Using an example, **explain** how the communities a person belongs to are interconnected.
8 Collect images of communities from newspapers and magazines. Display these on your classroom wall using the five Ps of community to place them in groups.
9 **Propose** (put forward) reasons why there the number of people who felt isolated increased during the pandemic.

Lesson 4.9

Aboriginal and Torres Strait Islander communities

Introduction

In Australia today, Aboriginal and Torres Strait Islander peoples make up just under 3% of the total population. Aboriginal and Torres Strait Islander peoples live all over the country, in different places and as part of many different communities.

Aboriginal and Torres Strait Islander communities are examples of communities of the past. This is because members of these communities share an ethnic background, have strong family ties and millennia of shared history and beliefs. The spiritual ties that Aboriginal and Torres Strait Islander peoples have with the land also make them members of a community of place.

Learning intentions and success criteria

▶ **Key content video:** Aboriginal and Torres Strait Islander communities

4.9

No matter how much the country changes, Aboriginal and Torres Strait Islander peoples' strong connection to Country remains. Queensland-based Aboriginal scholar Bronwyn Fredericks writes about this, explaining that:

> Aboriginal peoples still have Indigenous belonging and Indigenous ownership of place [in cities]. This exists regardless of whether multi-storey buildings, freeways, sports grounds, houses and places of worship have been built within that geographic locality.

First Nations peoples people who identify as Aboriginal peoples from mainland Australia and Tasmania and Torres Strait Islander peoples from the Torres Strait Islands, located between Australia and Papua New Guinea

There are two recognised groups of **First Nations peoples** in Australia. The largest group is Aboriginal peoples from mainland Australia and Tasmania. The second group is from the Torres Strait Islands, which are the islands between Australia and Papua New Guinea. All the islands are considered part of Australia, even though islands such as Saibai and Boigu are only a few kilometres from the southern cost of Papua New Guinea.

For more information on the concept of Place, see Place in Lesson 1.1 Geographical concepts (page 6).

Source 1 Children on Thursday Island play on the beach.

Case study Thursday Island communities

Thursday Island (Waibene) lies in a cluster of islands in the Torres Strait just off Cape York, the northernmost tip of Australia. It has the largest population of all the Torres Strait Islands and is where most of the local government functions for the islands are located. Thursday Island and the inner island cluster are located on the lands of the Kaurareg peoples.

As it is the administrative centre of the Torres Strait Islands, Thursday Island's 2,800 people have access to excellent facilities, including several schools, a TAFE college, hospital, childcare centre, library,

Source 3 An oblique aerial photograph of Thursday Island (Waibene) with Hammond Island (Kirriri) in the background.

sports stadium with a swimming pool, and parks and gardens. There is little fresh water on the island, so a pipeline brings water from nearby Ngurapai (Horn Island). Daily flights from Cairns to Ngurapai and then a short ferry ride to Thursday Island reduce the isolation of life on the island.

With year-round warm temperatures and easy access to tropical reefs, the beach is the main focus of most leisure activities for children on Thursday Island. The islanders are keen fishers and the warm waters support a great variety of marine life. Many islanders are also passionate about sports, with NRL player Dane Gagai and basketballer Patrick Mills, both of Torres Strait Islander descent, being particular favourites.

Thursday island: topographic map
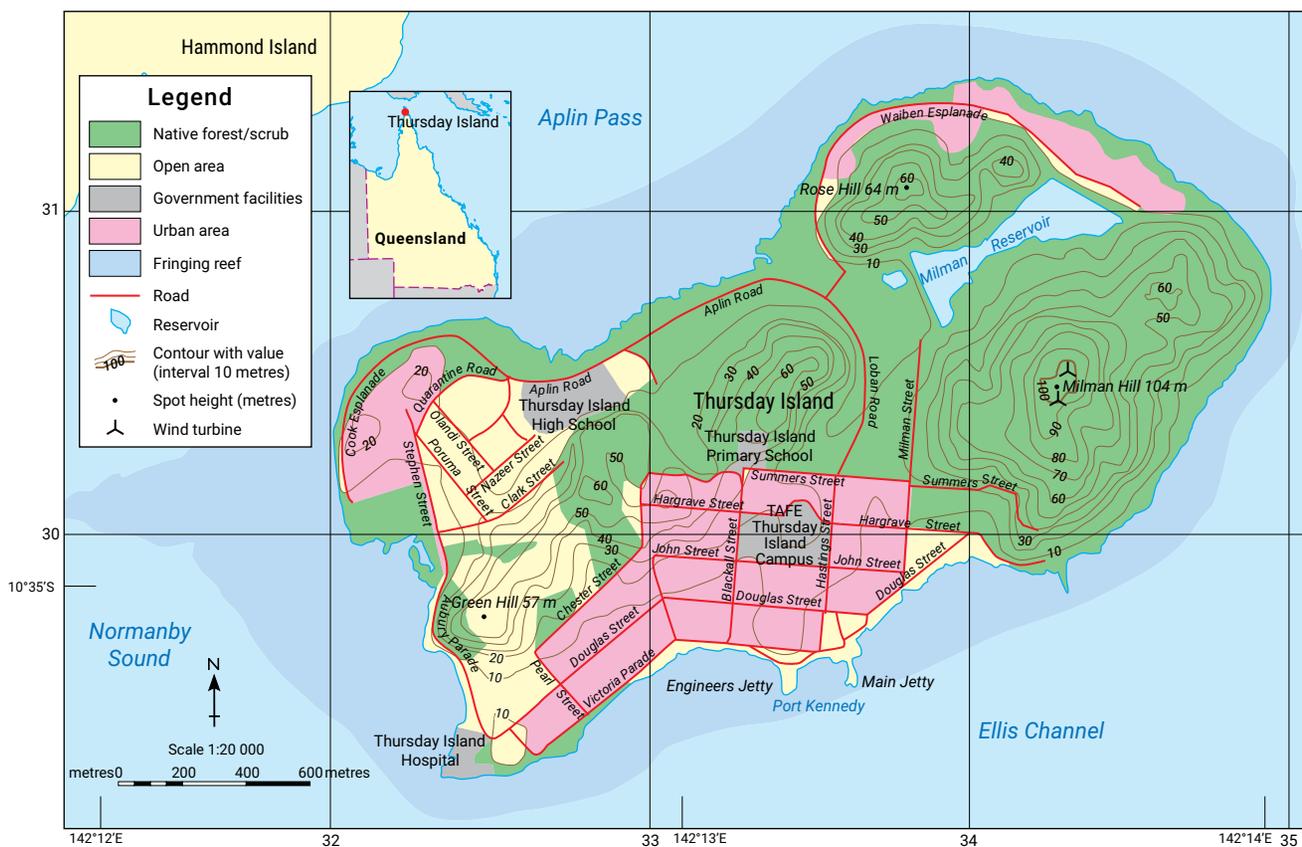
Source: Oxford University Press

Source 2

Enlarged map: Thursday Island: Topographic map

Explore it! A virtual field trip to Thursday Island

Provisioned to Campion Education (Aust) Pty Ltd on 20/06/2025 under licence.

4.9

Check your learning 4.9

Check your learning 4.9

Review and understand

1 Where is Thursday Island located?
2 **Identify** three community services that are located on Thursday Island.

Apply and analyse

3 **Explain** why Aboriginal and Torres Strait Islander peoples' spiritual connection to place remains strong, no matter what part of Australia they are in.
4 Source 2 is a topographic map. Examine the map and answer the following questions, using Topographic maps in Lesson 1.5 Analysing maps (page 20) to help you.

a **Describe** the purpose of a topographic map.
b **Identify** the spot height of Rose Hill.
c What are the advantages and disadvantages of living on Thursday Island?
d How do you think the geographical features of Thursday Island have influenced where the urban centre was built?

Evaluate and create

5 Would you consider Thursday Island to be a highly liveable place? Write a short paragraph in response to this question and give reasons for your answer.

Lesson 4.10
Feeling connected

Learning intentions and success criteria

Introduction

While most people in Australia feel socially connected, many do not. Researchers believe that feeling isolated and lonely can have an impact on a person's mental and physical health. It can also affect their feelings about the liveability of the place in which they live.

Studies have shown that almost one in seven Australians feel socially isolated, which means they feel they have little meaningful contact with other people. The age group most at risk of feeling isolated are those aged between 15 and 24. The lockdowns associated with the COVID-19 pandemic generally increased this social issue, with one-quarter of young males feeling isolated at this time.

Age group

Percent (male)	Age group	Percent (female)
12%	65+	9%
17%	55–64	10%
18%	45–54	10%
21%	35–44	14%
17%	25–34	13%
25%	15–24	17%
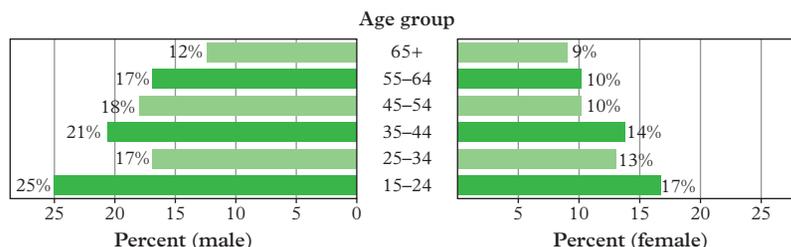
Source 1 The percentage of people aged over 15 who reported experiencing social isolation in 2021–2022.

Responding to social isolation

The reasons why many people feel disconnected and socially isolated are complex and personal. For example, some people build strong social connections on social media while for other people, the online world is a way to escape real world social interactions. However, most studies on social isolation have found that joining an interest group, perhaps through volunteer work, can reduce feelings of isolation.

Geographers can also play a role in reducing social isolation within our community by thinking about the ways in which our infrastructure is designed and built. A reliable and affordable public transport system, for example, can make it easier for people to connect with others. Spaces such as libraries, parks, swimming pools, leisure centres and shopping centres where people gather should also be designed to encourage, rather than discourage, social interaction.

Source 2 During 2020 and 2021, Melburnians were locked down for 262 days as the government tried to stop the spread of the COVID-19 virus. This earned the city the title of the world's most locked-down city.

Source 3 People playing a game of chess outside the State Library Melbourne.

Cultural connectedness of Aboriginal and Torres Strait Islander peoples

Earlier in this module, you learnt about the important concepts of Country and Place and the powerful spiritual connection that Aboriginal and Torres Strait Islander peoples have with the land, waters and sky. This connection and the rich culture of Aboriginal and Torres Strait Islander peoples has been passed on from generation to generation.

However, following the colonisation of the continent by Europeans, which began in 1788 when the British wrongly declared the land belonged to no one, many Aboriginal peoples were forcibly removed from their lands, which were taken from them by the Europeans. Massacres were carried out, many families were separated and children stolen, and traditional languages were not allowed to be spoken. This led to cultures being severely disrupted and stories and knowledge being lost or hidden.

While much knowledge and many cultural practices still exist, previous experiences have led to ongoing, deep feelings of injustice and disconnection for many Aboriginal people. A New South Wales government report in 2020 found that "Aboriginal people in Australia have persistently said that they do not feel like they belong, that they do not feel welcome".

Quiz me! Feeling connected

4.10

Check your learning 4.10

Check your learning 4.10

Review and understand

1 In your own words, explain the term "social isolation".

Apply and analyse

2 Discuss with a partner, then with your class, the links between social connection and liveability. How does one affect the other?

3 What are some examples from your local area of places that encourage social interaction?

4 What are some improvements that could be made to places in your local area to increase social interactions?

Evaluate and create

5 Source 4 lists some of the lockdown rules in Melbourne.

   a Which of these rules do you think had the greatest impact on people's feelings of isolation? Give some reasons for your answer.

   b Which groups in society were most impacted by these rules?

   c If you experienced these rules and can remember them, how did they impact on your ability to connect with other people?

Source 4 Some of the lockdown rules in Melbourne 2020–2021

Some of the lockdown rules in Melbourne 2020–2021
• Five reasons to leave home: getting food, exercising for up to 2 hours, care or care giving, authorised work or education, to get vaccinated.
• Work from home where possible.
• One person per household per day allowed to shop.
• Curfew from 9 pm to 5 am.
• Mask to be worn outside the home.
• No travel beyond 5 km from one's home.
• No visitors to homes.
• No visitors to aged care facilities.
• No one to leave Greater Melbourne. There was a period when this was enforced by police roadblocks supported by the Australian Defence Force, a so called "ring of steel" around Melbourne.

Lesson 4.11
Liveability in communities

Introduction

The word "community" can be used to describe groups such as neighbourhoods, towns, workplaces, schools, sports clubs, church groups or very large groups such as members of the same religion, or citizens of the same country. A community of place refers to a group of people with a common interest or goal. This common interest may be linked to where they live, work or spend a large part of their time. People connect with places where they feel included and safe. In this lesson, we will use the south-east Melbourne suburb of Cranbourne and its surrounding areas to explore how people feel connected through community services, job opportunities, and entertainment and recreation facilities.

Learning intentions and success criteria

Community services

Governments and local councils supply a range of services to different communities. These services include schools, hospitals, libraries, transport, parks and rubbish removal.

Not all communities need the same types of services. For example, a community with a younger population might require more schools and public facilities such as playgrounds, skate parks or cinemas. In comparison, a community with an older population might require greater access to health care and retirement villages.

Source 1 Casey Grammar School in Cranbourne East opened in 1995 and is now attended by more than 1,000 students.

Job opportunities

Local communities provide people with access to places of work, training and education. As well as jobs, businesses provide services to the community. Businesses found in many local communities include shops, hairdressers, plumbers, banks and solicitors. Shopping centres are often an important source of jobs within a local community. An industry may be a one-person operation or a large manufacturing business that employs hundreds of people. Industrial areas are usually grouped together in areas with flat land and access to power and transport links.

Entertainment and recreation

Leisure facilities such as basketball courts and skate parks are provided and maintained by local councils. Special areas are also set aside for recreation, such as parklands and sporting fields. These areas allow residents to socialise and exercise outdoors. In addition to these recreation areas, special conservation zones are set up by councils to ensure that native plants and wildlife are protected.

Source 2 Shopping on Clyde shopping centre in Cranbourne opened in 2015 in response to a growing population.

4.11

Source 3 Casey BMX track at Casey Fields is an example of a recreational area in the Cranbourne community.

Source 4 Street directory map of Cranbourne East and surrounding areas. There is a bigger version of this image available on Oxford Digital, which you can zoom in and out to find features and places on the maps.
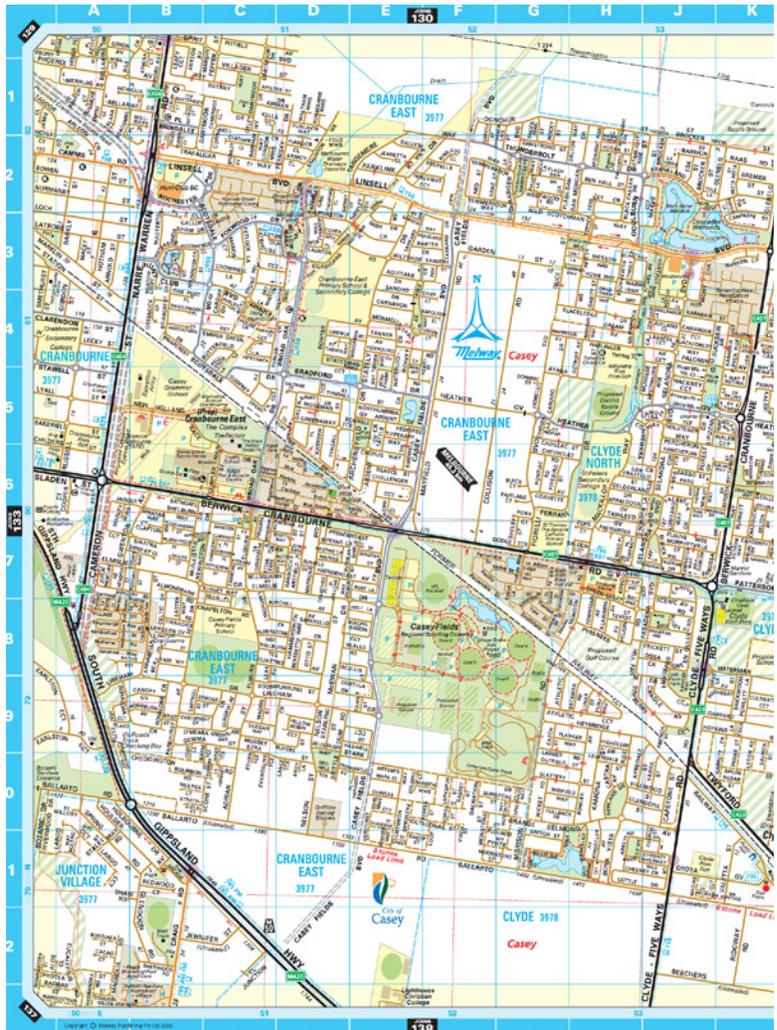
Enlarged map: Street directory map of Cranbourne East and surrounding areas

Quiz me! Liveability in communities

Check your learning 4.11

Check your learning 4.11

Review and understand

1   What is a community of place?
2   **List** some of the ways in which individuals connect to their local community.

Apply and analyse

3   Launch the digital version of the map in Source 4 on Oxford Digital. Look closely at the map to locate a grid reference for:
    a   a recreation facility
    b   a community facility
    c   a source of employment
    d   an education facility.

4   Cranbourne East is largely populated by families. **Describe** evidence from this lesson that suggests the local community is made up of many families.

Evaluate and create

5   **To what extent** are communities important when determining the liveability of a place? To what extent do you agree with this? A lot (strongly), a little bit (somewhat) or not at all? Write a short paragraph **explaining** your position.

Lesson 4.12
Building safe communities

Introduction

▶ **Key content video:** Building safe communities

Learning intentions and success criteria

The most liveable cities are those where people feel safe – not only for themselves, but also for their families and their property. Fear of crime can affect quality of life, reducing social interaction between people and forcing people to avoid certain places.

Safety in the community is not just about crime rates, but also about how safe people feel in their community. Surveys of local areas help authorities identify the key issues and map problem areas. With this information, they can then work to find solutions to these problems. One of the most reliable sources of information comes from surveys conducted by Australia's Bureau of Statistics (see Source 1).

Governments and local councils are always trying to improve the design of local environments to create safer places and encourage community-based activities. This helps to make places more liveable and encourages people to be active members of their communities.

✎ **Key skill worksheet:** Asking questions & conducting research: Investigating who makes policy in Australia

Percieved levels of safety in Australia

Legend: ■ 2005 ■ 2012 ■ 2016 ■ 2022
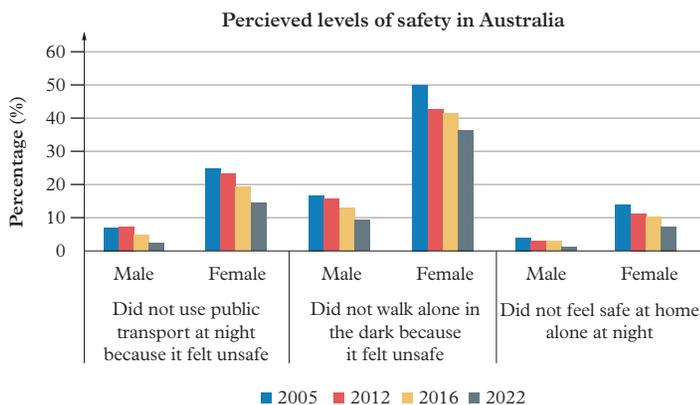
Source 1 This graph has been created from data collected over several years by the Australian Bureau of Statistics about how safe people feel.

Source 2 Improved street lighting is an important step to helping people feel safer at night.

❓ **Graph it!** Building safe communities

Safer community design

A key step towards improving local safety has been making public areas more visible. This is achieved through different methods such as designing buildings to face public space, removing bushes to give a clear line of sight, improving lighting and introducing surveillance cameras. These strategies help reduce the numbers of crimes by making places, and therefore any criminal activity, easier to see.

Community-based policing

Source 3 There are two Protective Service Officers (PSOs) at every Melbourne train station after dark. A study found that this has increased the levels of safety that people feel on Melbourne trains.

In recent decades, the police have developed community programs to create stronger ties with the general community. The goal is to involve members of the community in keeping their own streets safe. One of the most successful of these programs has been Neighbourhood Watch. The police work with local communities to educate people on safety and security issues and to encourage them to look out for, and report, any suspicious behaviour. The program also encourages community members to get to know each other, share safety concerns and support each other to stay safe.

Helping at-risk groups

Source 4 One Voice is a not-for-profit organisation that offers a safe place for people who are homeless to shower, shave and clean their teeth. They operate in all of Australia's capital cities.

Many government and not-for-profit groups work within local communities to provide outreach services for the most vulnerable members of the community. These services include things such as:

- temporary and permanent housing
- food trucks for the homeless and poor
- support services for victims of domestic violence
- rehabilitation programs for those with substance abuse issues
- drop-in centres for disadvantaged youths
- home services, such as Meals on Wheels for the elderly.

These services help to protect and care for those in our communities who need it most.

Check your learning 4.12

Check your learning 4.12

Review and understand

1 Why is safety one of the most important liveability factors for communities in Australia?
2 **Identify** an example of how police work with the community to reduce crime and increase feelings of safety.
3 What are some strategies used to help increase visibility in public places to prevent crime?

Apply and analyse

4 Look closely at Source 1.
    a Do you think this data is reliable? **Explain** your answer.
    b **Identify** three trends that you notice from the data in this graph.
    c Give an explanation for one of these trends.

Evaluate and create

5 Are there times when and/or places where you feel unsafe in your local area?
    a **Discuss** this with a partner and then with the class.
    b **Identify** any common times and/or places where members of your class feel unsafe.
    c What do you think could be done to improve feelings of safety in your community?
6 Design and complete a survey that asks five people about whether or not they feel safe in their local community. Use the steps in the skills in context task in 4A Skills in context Port Melbourne skate park survey (page 146) to help you.

4B Skills in context
Exploring your community

Introduction

For most people, the area in which they live is the basis of many of their communities. For example, you probably go to school within a few kilometres of where you live and you are more likely to join a sporting team close by, rather than one several suburbs or towns away.

But how much do you really know about your local community? Before you complete the activities in this task, guess the answers to the questions in Source 1 in relation to the people who live in your postcode. Add them to the "My guess" column.

In Australia, we have a very reliable source of data and information about our people and where they live. This is because every five years, every Australian household must complete a form that asks questions about the age, country of birth, work and education of those in the household. All this data is then processed and made available online. This data and its collection are known as the Census. Most countries in the world have a similar process and Australia's is considered one of the most reliable and accurate.

The Census is a very important tool for planners and governments as it provides information that can help them plan for the future needs of Australians. It is also a useful tool for you in your geography studies!
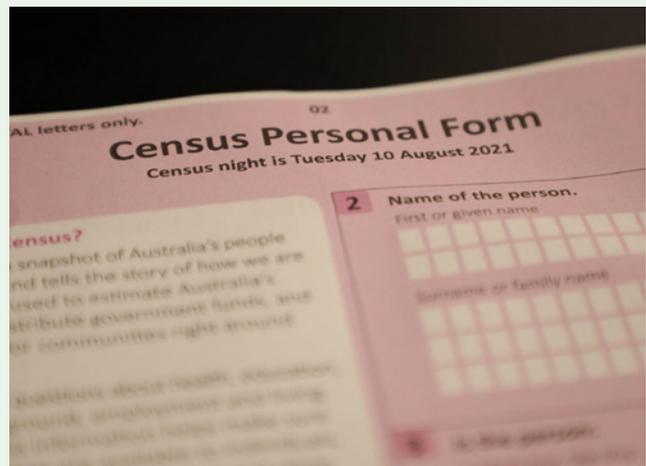
Source 2 Australians complete a census every five years and can complete the form either online or on paper.

Source 1 Survey questions about your local community

Survey question	My guess	QuickStats
How many people live in your postcode?		
What percentage of people in your postcode identify as Aboriginal or Torres Strait Islander peoples?		
What are the three most common countries of birth in your postcode?		
What percentage of people in your postcode have both of their parents born overseas?		
Other than English, what are the three most common languages spoken at home in your postcode?		
What percentage of people in your postcode take the train to work?		
What percentage of people in your postcode live alone?		

Key skill Collecting & representing data

Accessing Census data

Follow these steps to find the latest Census data for the people in your local community. The Census tools can be used to divide the population into various groups, but postcode boundaries are a useful division to use:

- **Step 1** Open the Census data portal at www. abs.gov.au/census. A link is provided on Oxford Digital.
- **Step 2** Click on "Find Census data" and then on "Search Census data".
- **Step 3** In the search bar below "Search by area name", add your postcode. This should open a map of your postcode. If this doesn't work, you may need to search by your address and then select the postal area option in the drop-down menu.
- **Step 4** In the box below the map, click on the blue "All persons" button. This will open a QuickStats page that contains the most recent Census data for the people who live in your postcode.
- **Step 5** Scroll down the page to view the Census data.

For more information on collecting and representing data, see Lesson 1.6 Representing data (page 31).

🔗 **Weblink:** Australian Bureau of Statistics Census data

Practise the skill

1 Access the most recent Census data for your postcode and use this data to complete the "QuickStats" column in Source 1.

2 What aspects of your local community did you guess accurately?

3 What did you find out about your local community that surprised you?

4 What else would you like to know about your local community? Where would you find this information?

5 Complete the profile of a typical resident in your local community in Source 3.

6 Who, if anyone, do you know that most closely resembles this "typical" resident?

Average age:

Most common martial status:

Most common country of birth:

Most common religion:

Most common occupation:

Most common industry of employment:

Most common family composition:

Number of registered vehicles:
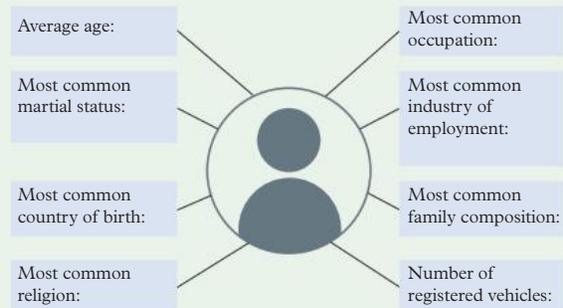
Source 3 Profile of a typical resident

Extend your understanding

1 As the QuickStats page also displays data for both the state and the country, you can compare your local community to the state and the country as a whole.

   a Which statistics for your local community in Source 1 and Source 3 are quite different from the broader Australian community?

   b Suggest some reasons for these differences.

2 You can also compare your community today to the way it was in a previous Census. Go back to the "Search Census data" and change the date to 2001 before moving on to selecting your postcode. Compare the data from the 2001 Census to the most recent Census.

   a How has the size of the population changed over time?

   b What other features of your local community have changed over this time?

Source 4 The 2021 Census revealed that the postcode of 3030 in Melbourne's west is one of the most multicultural in Australia. The area is home to people born in 148 different countries.

Lesson 4.13

Review: Living in Australia

Review activity

Use Source 1 to answer the following questions.

Australia's Aboriginal and Torres Strait Islander population

Australia is home to the world's oldest continuous cultures. Aboriginal and Torres Strait Islander peoples have lived on and cared for this continent for tens of thousands of years.

The source below displays data relating to the population distribution of Aboriginal and Torres Strait Islander peoples in Australia today.

1 **Identify** three areas of Australia that have large populations of Aboriginal and Torres Strait Islander peoples. Use compass directions and the names of states in your answer. (3 marks)

a Some Aboriginal communities are located in remote areas, further inland within Australia. **Summarise** two advantages and two disadvantages of this. (4 marks)

b Using the PQE method, **describe** the distribution of Aboriginal peoples in New South Wales. (3 marks)

2 Many non-Indigenous Australians share the belief that most Aboriginal peoples live in remote areas of Australia rather than in cities. Use evidence from Source 1 to decide **to what extent** (how much) this belief is true. Write a paragraph that explains your answer. (10 marks)

(Total: 20 marks)

Distribution of Aboriginal and Torres Strait Islander population, 2021

Legend

Aboriginal and/or Torres Strait Islander population (2021)

- 10,000 to 22,940
- 5,000 to 10,000
- 3,000 to 5,000
- 1,000 to 3,000
- 0 to 1,000
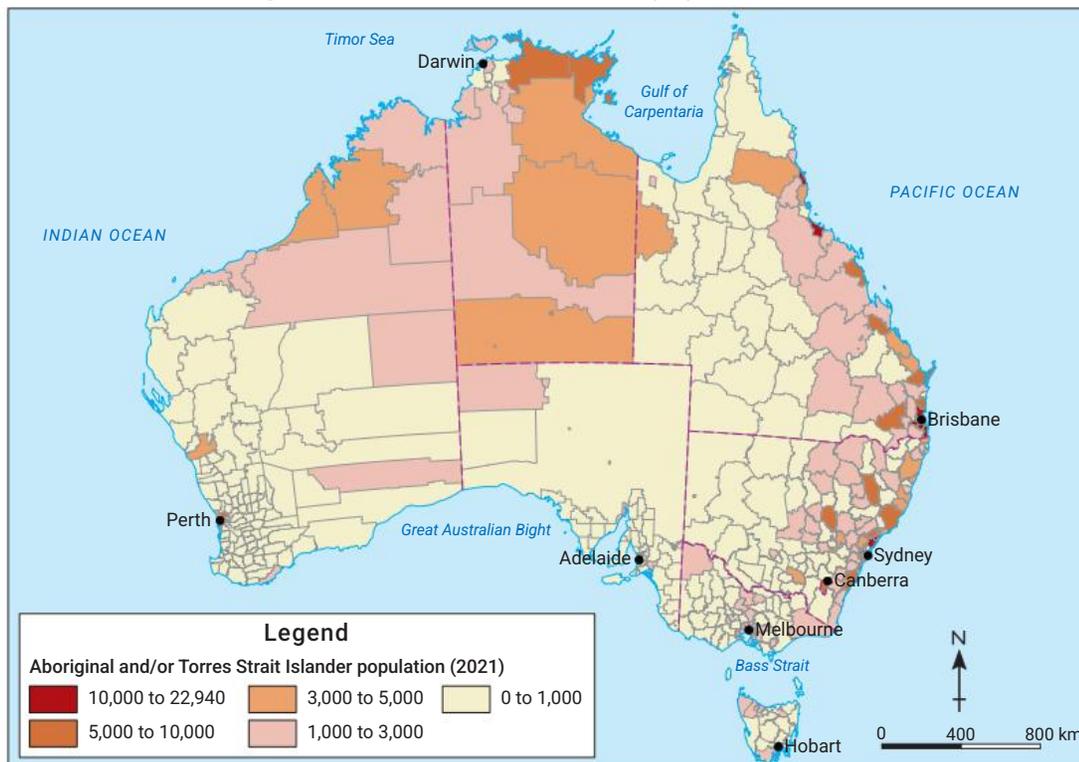
Source: Oxford University Press, with data from DITRDCA Geospatial Portal

Source 1

Module checklist: Living in Australia

Module review quiz: Living in Australia

Module
5
Liveable cities

Sub-strand: Place and liveability

Overview

As we have learnt, there are a range of factors that make places more or less liveable. Liveability is generally measured by factors that provide quality of life, such as access to fresh water, food, housing, transport, health care, education and a safe and stable environment.

Each year, the results of a number of surveys are released, rating cities all over the world in order of liveability.

In 2024, Damascus, the capital city of Syria, was rated as the world's least liveable city. It scored poorly on stability, health care and infrastructure. By contrast, the capital city of Vienna, Austria, was rated the world's most liveable city for the third year in a row. Melbourne was rated as the world's fourth most liveable city.

Source 1 A boy cycles in the street in the war-torn city of Damascus, the capital of Syria. A violent civil war in Syria has threatened the liveability of the city.

Lessons in this module

Lesson 5.1
How we measure liveability

Introduction

Cities are interesting places for geographers to study because they are always changing. Cities are also home to more than half the world's population (about 4 billion people). Some of the world's cities provide a supportive environment for their residents while others struggle to provide the most basic services, such as clean water and electricity.

The world's "best" cities

Each year, different companies review the liveability of cities around the world. For the residents of the cities near the top of the list, seeing their city on top often brings them pride and satisfaction. For residents of cities that appear lower on the list, this can make them feel like there is something wrong with their city. But it is important that we stop and ask the following questions: who comes up with these lists, what are they measuring, and what does liveability mean anyway?

As with any ranking, it all depends on what is being measured. In Source 1, there are six lists of the world's top 10 cities. However, each list is different! This is because each list was put together by a different organisation, so each one measures something different.

Source 1 Lists of the world's top 10 cities, put together by six different organisations. They are measuring different things, such as sustainability, liveability or safety.

Rank	Smart cities	Best work–life balance	Sustainable cities	Safe cities	Liveable cities	Quality of living
1	Zurich	Oslo	London	Tokyo	Vienna	Vienna
2	Oslo	Bern	New York	Singapore	Copenhagen	Zurich
3	Canberra	Helsinki	Paris	Osaka	Zurich	Auckland
4	Geneva	Zurich	Tokyo	Amsterdam	Melbourne	Copenhagen
5	Singapore	Copenhagen	Berlin	Sydney	Calgary	Geneva
6	Copenhagen	Geneva	Singapore	Toronto	Geneva	Frankfurt
7	Lausanne	Ottawa	Oslo	Washington	Sydney	Munich
8	London	Sydney	Amsterdam	Copenhagen	Vancouver	Vancouver
9	Helsinki	Stuttgart	San Francisco	Seoul	Osaka	Sydney
10	Abu Dhabi	Munich	Chicago	Melbourne	Auckland	Dusseldorf
Organisation that developed the list	IMD, Swiss-based management company	Kisi, American security company	IESE, Spanish university	*The Economist*, American newspaper	EIU, research division of *The Economist*	Mercer, American finance company

Measuring liveability

The list from Source 1 that most people know about is the one that measures liveability. People's opinions about what makes a place liveable vary greatly. There are many factors that influence a person's views on liveability, including their age, income, cultural background, lifestyle choices, values and beliefs. These factors are measured in two ways: as **objective factors** and **subjective factors**.

Liveability lists such as those created by the Economist Intelligence Unit (EIU) and Mercer rank cities based on objective factors. Other organisations, such as the Organisation for Economic Co-operation and Development (OECD), also produce regular reports. Unlike the EIU, the OECD incorporates more subjective factors, such as life satisfaction, into their surveys.

Objective factors

There are many different objective factors that affect liveability. The most important are introduced briefly below, then covered in more detail later in this lesson.

Clean water and sanitation

People's access to a clean, reliable source of water varies greatly around the world. Access to proper sewage disposal also varies greatly depending on where a person lives. The liveability of a place may be affected by poor access to water, because the time taken to access water can limit people's ability to attend work or school. It can also negatively affect levels of health in a community and contribute to a higher death rate.

Environmental quality

The environment is another key factor that determines how liveable a place is. Environmental quality can refer to several characteristics relating to the natural or built environment, such as clean water and clean air. It can also be a measure of other things such as the level of pollution, rubbish or noise in an environment. "Environment" is one of the key concepts in the study of geography.

Landscape

The natural environment also contributes to how liveable a place is. It includes factors such as the natural resources, soils and slope of the land. Places with natural resources such as minerals, fertile soils and large areas of flat land tend to be more liveable. In mountainous areas, it can be difficult for people to easily access important services such as emergency health care. It may also be difficult to connect mountain communities to road, water and electricity networks.

Source 2
Is Copenhagen the "best" city in the world? It is the only one that appears in five of the lists of the world's top 10 in Source 1, despite not topping any of them.

objective factor
a factor contributing to liveability that can be measured in numbers, such as the climate, cost of housing, number of schools or hospitals, level of crime and availability of public transport

subjective factor a factor contributing to liveability that cannot be measured in numbers, such as personal likes and dislikes, connection to family and friends, and feelings of spirituality and belonging

Source 3 Liveability can be measured by objective and subjective factors.

Objective factors (measurable factors)	Subjective factors (personal and emotional factors)
Clean water and sanitation	Personal likes and dislikes
Environmental quality	Feelings of connection to friends and family
Landscape	Traditions and spiritual connections
Infrastructure	
Safety and stability	
Access to health care and education	

Source 4 Dhaka in Bangladesh has some of the most congested traffic in the world. This lowers liveability as it reduces access to important services that people need.

Source 5 Australia has one of the best health systems in the world. Unlike many countries, access to this care is universal, meaning that anyone can use it, regardless of wealth. This is one of the reasons why Australian cities tend to score highly in liveability surveys.

Infrastructure

The availability of services and facilities (such as roads, public transport, emergency services, post offices, water, sewage treatment plants, airports, housing, sporting and entertainment facilities, electricity and communications) helps make a place more or less liveable. Together these services and facilities are referred to as infrastructure.

Safety and stability

Safety and stability are two of the most important factors linked to the liveability of a place. More than most other things, people value feeling safe and stable in their homes. Australian cities are regarded as some of the most liveable places in the world for this reason. Safety and stability are measured by considering crime statistics and other information collected by the government. Many of the world's least liveable cities are found in war-torn countries such as Iraq, Syria and Ukraine, where crime rates are very high and there are fewer police to enforce the law. Many refugees flee to countries such as Australia in search of safety and stability.

Access to health care and education

In general, people living in the world's most liveable cities have access to good health-care services, including doctors, public and private hospitals, specialist clinics and over-the-counter medication. They also have access to a range of schools and other education facilities, such as training centres and universities. In many of these cities, including those in Australia, a school education is not only compulsory, but also free. Cities in Canada, the United States, Australia and western Europe generally rank highly in both health care and education. Cities in some African countries are the lowest ranked in the world in terms of these services.

Subjective factors

Unlike objective factors, subjective factors cannot be easily measured and compared. They are linked to personal likes and dislikes, and feelings of connection to family, friends and cultural groups. They are also linked to beliefs, traditions and spiritual connections to places. Organisations such as the OECD are now conducting life-satisfaction surveys to take some of these subjective factors into account when rating the liveability of different places. These surveys try to consider how happy or sad people feel and look for the factors in their lives and environments that cause these feelings. This information is then considered alongside more objective factors in order to give a more complete picture of liveability.

Key skill Analysing maps

Using GIS maps

Geographic Information Systems (GIS) maps are a very useful tool in geography as they allow us to create our own maps from data that is readily available online. By mapping the data we can more easily see patterns of distribution. We can, for example, explore the suburbs of Melbourne to see if education and public transport services are evenly spread across the city.

- **Step 1** Open the Digital Twin program at https://digitaltwin.vic.gov.au/public/
- **Step 2** Zoom into the Melbourne region. You may like to change the base map in the "map settings" drop-down menu to show roads – to do this, choose the "VIC cartographic" option.
- **Step 3** It's now time to add a layer of information to your map. To choose a layer, click on the "View Catalogue" button. This will provide access to hundreds of layers of data that can be added to the map.
- **Step 4** Click on the "Landmarks" folder, then "Education Services" and then the plus symbol next to Education Facilities. This will add a layer of data to the map showing all schools.

- **Step 5** Go back to the "View Catalogue" button, and click on the "Transport" folder, then "Public Transport Victoria", then "Department of Transport and Planning". From there you can add Tram Stops and Metro Train Stations. Hold the CTRL key down so you can add multiple layers.
- **Step 6** The layers and their legends are now in the panel on the left of your page. You can turn the layers off and on by clicking on the small white box next to each layer title.

🔗 **Weblink:** Digital Twin

Practise the skill

1. Follow the step-by-step instructions to create a map of Melbourne showing education and public transport services.
2. The layers of education and public transport have been chosen as they impact liveability. Are they subjective or objective measures?
3. **Compare** an inner-city suburb such as Fitzroy with an outer suburb such as Ringwood. What differences do you notice in public transport and education services?

🖥️ **Quiz me!** How we measure liveability

5.1

Check your learning 5.1

Review and understand

1   What are the objective measures of liveability for countries?

2   What are subjective measures of liveability? **Outline** how they are measured.

Apply and analyse

3   What is the key difference in the way that the Economist Intelligence Unit (EIU) and the Organisation for Economic Co-operation and Development measure liveability?

4   Safety is a key objective factor that we use to measure liveability in all communities.
   a   Brainstorm a list of the safety issues that people living in large cities in Australia might face.
   b   Brainstorm a list of the safety issues that people living in Damascus might face (see Module 5 Liveable cities, page 164).

c   **Compare** the safety issues that people living in Australian cities and Damascus might experience. Which safety issues are similar? Which are different?

Evaluate and create

5   One of the common criticisms of the lists of world's top cities is that European cities dominate, with only one city from the Middle East, South America or Africa.
   a   Do the lists in Source 1 support this criticism?
   b   Do you think this is a fair criticism? Why or why not?

6   If you had to create a survey to measure liveability in your local area, which three objective measures would you use and which three subjective measures? **Justify** (give reasons for) your answer.

Lesson 5.2
Clean water and sanitation

Learning intentions and success criteria

sanitation
measures designed to ensure good health in a community by preventing human contact with health hazards (such as sewage)

city dweller
a resident or inhabitant of a city

Introduction

Access to clean water for cooking, drinking and cleaning is essential for a healthy life. The same can be said for access to proper **sanitation**, such as a flushing, private toilet and a sink to wash hands in.

Almost all Australians have access to these basic services, but this is not always the case in other countries. Around the world, approximately one in five of all **city dwellers** do not have access to a basic toilet and are forced to use a crowded and dirty pit toilet or a bucket or the open air.

Impact on liveability

Poor sanitation affects people's lives in many ways. It is responsible for hundreds of millions of deaths a year, as it helps to spread serious diseases. Untreated water contains germs, bacteria and viruses that cause people to get very sick.

Poor sanitation has the most impact on liveability for women and children around the world. With better sanitation, the deaths of around 300,000 children under five years could be prevented each year. Waiting in the dark to access a toilet can also make women and children vulnerable to attack.

Diarrhoea is one of the deadliest effects of poor sanitation. It causes childhood hunger and stunted mental and physical growth. Sick children are less likely to attend school and sick adults are less likely to go to work. Poor sanitation is a common problem in many **developing countries**. Proper sanitation for their citizens must be provided for them to prosper.

developing country
less economically developed countries that have some difficulties supporting their own people

Case study Orangi Slum, Karachi, Pakistan

Orangi is Asia's largest **slum**, with approximately 2.4 million residents. As is the case in many large cities, it is the slum areas that have the poorest sanitation and fresh water supply. Slums are built by their residents from temporary, makeshift materials without help or support from the local authorities. This means that the residents do not have the resources to supply proper pipes, sewers and toilets, and instead rely on pits and open sewers as toilets.

After many requests to the local and national governments, the people live in Orangi decided to take matters into their own hands. The residents of each street contributed a little money to buy pipes and toilets. Instead of waiting for the authorities to install them, they did it themselves! Four hundred kilometres of sewer pipes have been installed in trenches dug by hand and covered over. Streets and laneways are no longer open sewers and are safe for people to use. Around 72,000 toilets have been installed and it is estimated that almost all the slum's residents can now access a safe, reliable toilet.

Despite the improvements in this Karachi community, the city is ranked as the fifth-least liveable in the world. It scored particularly poorly for safety and stability.

Source 3 In Orangi, Pakistan, sewer pipes are installed by the residents themselves.

slum
a settlement within a city where the inhabitants have inadequate housing and poor access to basic services

▶ **Video:** Living in a slum

World: Percentage of population using safe managed sanitation services

Legend
Percentage of the population with access to improved sanitation

- Over 97
- 90 to 97
- 75 to 90
- 40 to 75
- Under 40
- No data available
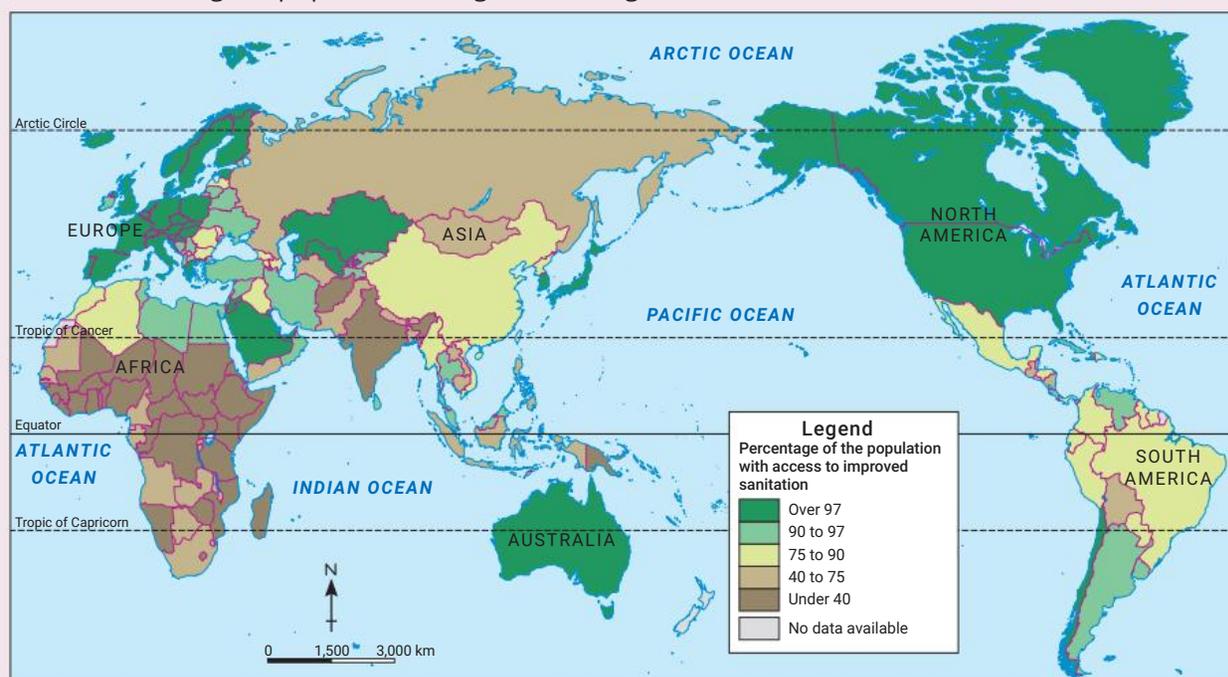
Source 2

❓ **Map it!** World: Percentage of the population with proper sanitation

Geography

Check your learning 5.2

Check your learning 5.2

Review and understand

1 **Identify** two ways in which poor sanitation affects the liveability of a place.

2 Why is sanitation generally poor in slum areas?

Apply and analyse

3 Read the case study of the Orangi slum.

   a **Identify** how many people live in the slum.

   b **Identify** how many toilets have been installed.

   c **Calculate** the number of people who use each toilet.

   d **Compare** the toilet access in your home to that of a person living in the Orangi slum. Remember that when you compare two things, you should talk about how they are similar and different.

   e Do you think the installation of toilets in the slum is a sustainable solution? **Explain** your answer.

Source 1 In sub-Saharan Africa only 35 per cent of the population has access to a basic toilet.

4 **Examine** Source 1. The United Nations ranks sanitation services and decides whether or not they dispose of human waste safely. Do you think the toilets in this image are safe or unsafe? Give a reason for your answer.

5 Using the PQE method and Source 2, **describe** the distribution of safely managed sanitation around the world. Remember to use correct sentence starters! See Using the PQE method in Lesson 1.7 Identifying patterns and relationships page 35 for a refresher.

Lesson 5.3
Environmental quality

Introduction

Learning intentions and success criteria

The quality of air, water and parklands in cities is an important part of liveability for both health and aesthetic reasons. Air quality, in particular, can have a big impact on health.

Air pollution tends to be worse in large cities where factories, power stations and motor vehicles spew harmful gases into the air. The polluted air can sometimes be trapped close to the Earth's surface or move high into the atmosphere where it may contribute to a layer of gases that contribute to climate change. The United Nations estimates that each year, nine out of every 10 people breathe air that is unsafe. People who live in the cities of developing countries are most at risk.

Increasing numbers of people and cars on our roads means we need to take action to improve the quality of the air we breathe. Air quality in Australian cities is good by world standards, but can vary. In Sydney, Melbourne and Brisbane,
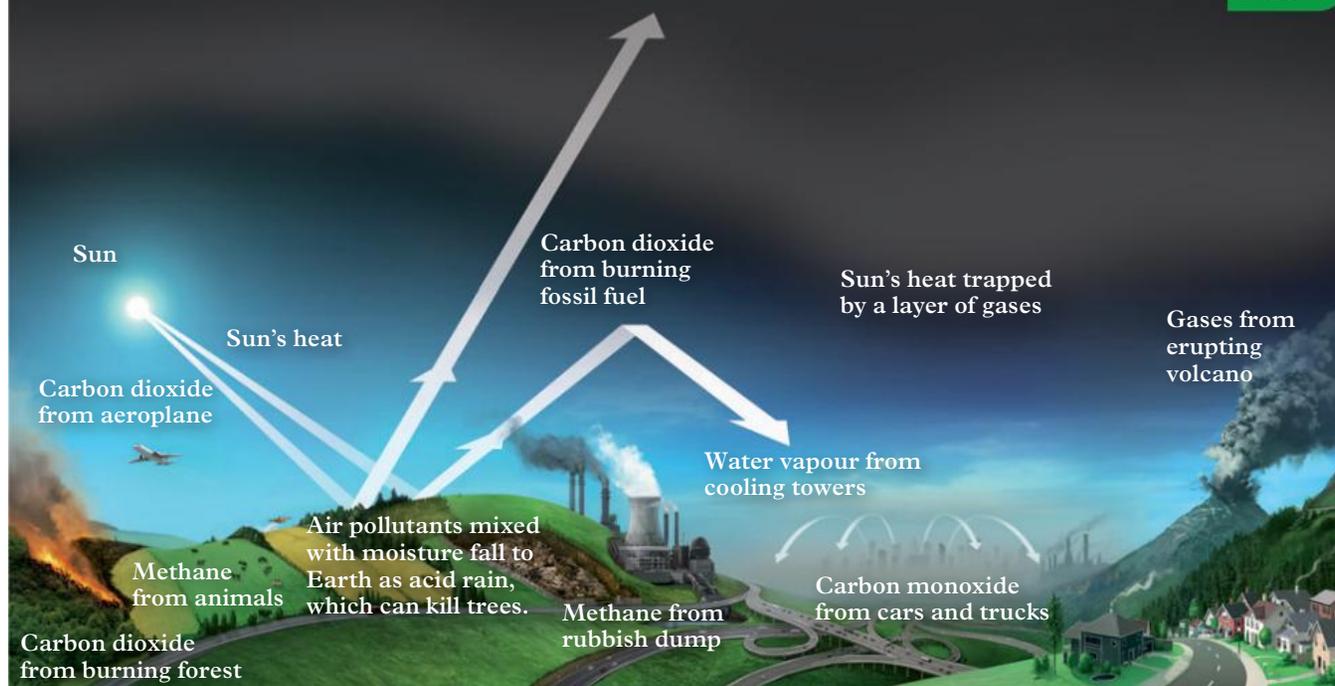
Source 1 Sources of air pollution

the number of days per year where pollution exceeds the National Environment Protection Measures standard is generally fewer than 10. Some years it can be much higher, however, particularly when air quality is negatively affected by other events such as bushfires and factory fires.

Quiz me! Environmental quality

Source 2 In July 2024, a massive chemical explosion in a Derrimut factory in Melbourne's west triggered a large fire. The EPA closely monitored both the air and water quality in the area for several days after the fire. While air quality was largely unaffected, chemicals used to fight the fire affected local streams.

Key concept Environment

The quality of the environment can be measured in a number of ways. A researcher interested in how environmental quality impacts the liveability of an area may ask residents how they feel about the local environment. The researcher may ask them, for example, if they think the local stream is polluted or if they have noticed a change in air quality. These are subjective measures and can have a significant impact on a person's decision to live in a particular area.

Environmental quality can also be measured objectively by using a range of scientific tools. For example, there are a number of air quality stations around Melbourne. These take in air from the surrounding area and measure it for pollutants. The stations are continually monitored by the Environment Protection Agency (EPA). This information is available in real time on the EPA website (a link is provided on Oxford Digital).

Weblink: Environment Protection Agency – Airwatch

The water quality of Victoria's rivers and beaches is also continually monitored. Hundreds of sensors in the water measure levels of pollution and other factors, such as temperature, to ensure that the water is safe. Governments use this information to decide if it is safe for us to visit the beach or to drink water from particular rivers. This data is also available in real time on the website for the Department of Energy, Environment and Climate Action (a link is provided on Oxford Digital).

Weblink: Department of Energy, Environment and Climate Action – online water monitoring tool

Check your learning 5.3

Check your learning 5.3

Review and understand

1 Air pollution is a factor that impacts on liveability.
   a Using the information in this topic, **list** as many causes of air pollution that you can.
   b Does air pollution mainly come from natural or human sources?

2 How did the factory fire shown in Source 2 affect environmental quality?

Apply and analyse

3 **Explain** why air quality is an important factor that contributes to liveability.

Evaluate and create

4 Access the online Airwatch tool on the EPA website (a link is provided on Oxford Digital) and use it to answer the following questions.

   a Where is the closest air monitoring station to your house?
   b What has the air quality been like at this site in the past 48 hours?
   c What are some of the local factors that may affect air quality near this site.

5 Access Victoria's online water monitoring tool (a link is provided on Oxford Digital) and answer the following questions.

   a Where is the closest water monitoring station to your house?
   b Why is it important to know the water quality in your local area?

6 Do you think reducing the use of cars will improve air quality? **Discuss** with a partner.

Lesson 5.4
Natural landscape

Learning intentions and success criteria

Introduction

The natural environment of a place is one of the objective factors that affects its liveability. Many of the world's cities have been developed in places with favourable natural landscapes, including large areas of flat land and rich soil that is good for growing crops.

The locations of many of New Zealand's largest cities have been developed in these types of areas. However, some elements of the natural landscape, such as the natural disasters that occur, can make these cities less liveable.

1 Auckland
Almost one-third of all New Zealanders live in Auckland. The city lies on a large natural harbour and has a milder, warmer climate than much of the country. Auckland is built on a volcanic field of 53 volcanoes. These provide the area with rich soils. The most recent eruption was about 700 years ago. Auckland was ranked as the world's tenth most liveable city in 2024.

2 Hamilton
Hamilton lies at the centre of a large, productive farming area. Fertile soils laid down by the country's largest river, flat land, reliable rainfall and mild temperatures make the Hamilton region ideal for agriculture.

3 Palmerston North
Palmerston North is located on a large area of flat, fertile land beside a large river. This river has cut a narrow gorge through the mountains that run the length of the North Island. A train line and highway follow this gorge, linking the east and west. However, heavy rain and unstable slopes caused a large landslide in 2017. This destroyed the road, which is now permanently closed.

4 Wellington
See Case study Wellington, New Zealand.

5 Christchurch
Christchurch is located on the Canterbury Plains, a large, flat and very fertile region. Many rivers cross the plains from the Southern Alps to the sea. In 2011 large areas of the city were destroyed by a powerful earthquake.

6 Dunedin
Dunedin is the second-largest city in the South Island and the seventh-largest city in New Zealand. In the 1860s gold was discovered in the hills surrounding the city, and the gold rush that followed made Dunedin the country's largest and fastest growing city. As the gold ran out in the 1900s, the population began to decline.

Source 1 The location of six of New Zealand's largest cities.

5.4

fault lines cracks in the Earth's crust; movement along these cracks causes earthquakes

Case study Wellington, New Zealand

Wellington's natural features are dominated by hills, earthquakes and wind. The city sits on several **fault lines**, which means that earthquakes are common. These fault lines are also responsible for Wellington's hilly terrain.

Wellington was chosen as the country's capital because of its central location at the southern tip of New Zealand's North Island. It also plays an important role in linking the country together. At the busy ferry terminal, passengers, goods, cars and trains depart from Wellington for the South Island.

Source 2 Wellington's CBD and port sit on the only flat land available in the city.

Wellington usually ranks high in liveability rankings, consistently ranking in the top 20 of the world's most liveable cities. The factors that contribute to this ranking include Wellington's low levels of pollution, short commuting distances and affordability of housing.

Explore it! A virtual field trip to Wellington, New Zealand

Check your learning 5.4

Check your learning 5.4

Review and understand

1 **Identify** the natural landscape features of Wellington that make it liveable.
2 Why was Wellington chosen as New Zealand's capital city?

Apply and analyse

3 Complete the following table using information from this lesson.

Landscape features that make a city more liveable	Landscape features that make a city less liveable

4 There are several natural hazards mentioned in this lesson. **Explain** how natural hazards might change people's perception of liveability.

Evaluate and create

5 **Create** a travel brochure for one city in New Zealand. Your brochure should show off the liveability of this city.
6 **Research** the Christchurch earthquake of 2011.
   a From your research, find out:
      » what caused the earthquake
      » the extent of the damage to Christchurch
      » how Christchurch has recovered from the damage
      » what strategies have been put in place to prepare for future earthquakes.
   b Use your research to write a short report (around 150 words) on the Christchurch earthquake.

Lesson 5.5
Infrastructure

Introduction

Services and facilities (such as roads, public transport, emergency services, post offices, water, sewerage, airports, housing, electricity and communications) are known as **infrastructure**. Good infrastructure helps make a place more liveable. By contrast, poor infrastructure can make a place less liveable.

The world's best infrastructure: Singapore

Singapore is considered to have some of the best infrastructure in the world. It has been recognised for its excellent roads, and for developing one of the world's busiest and most efficient ports. A first-class airport acts as a central Asian hub for tens of millions of travellers every year. Most Singaporeans live in high-rise apartment blocks in a form of public housing available to most of the population. These buildings are clean, modern and well serviced.

With its reliable electricity supply, Singapore has developed as a centre for advancement in technology and now boasts one of the best communication networks in the world, with fast mobile and wireless internet and communication services available everywhere.

Singapore also has a ready supply of fresh drinking water, a good sewerage system and, thanks to the Restroom Association of Singapore, the cleanest public toilets. Singapore can be particularly proud of its public transport with buses, taxis and two train networks covering the whole country. The use of public transport is encouraged – over 50% of workers in Singapore travel to work on public transport.

Learning intentions and success criteria

infrastructure the facilities and services necessary for any community, city or country to function (e.g. buildings, electricity, roads, airports and water supply)
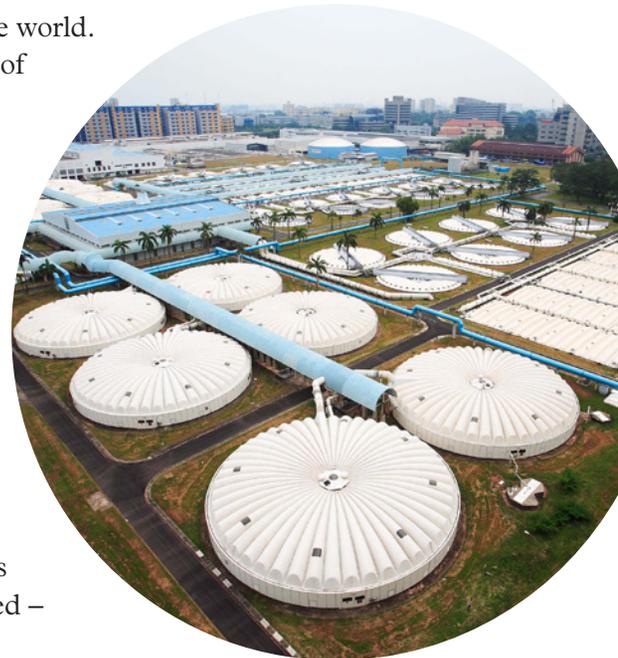
Source 1 Singapore's wastewater is treated so that it is more pure than drinking water. It is then used by factories making computers.

Source 2 Singapore's public transport system is considered one of the best in the world. It is clean, safe and efficient.

The world's worst infrastructure: Dhaka

The capital of Bangladesh, Dhaka, is considered to have some of the worst infrastructure in the world. It rates poorly in the quality of its telecommunications, water and housing, but even worse in terms of transport. Both its road network and public transport are considered to be intolerable. This is due to several factors. Dhaka is a city of over 22 million people and is growing at a rate of 4.2% every year. This adds almost one million people a year to the city. Poor rural migrants flood into the city, placing the existing infrastructure under great strain. For many of the rural poor who move to Dhaka, pulling a rickshaw is their first job.

Only about one-quarter of Dhaka's population is connected to the sewerage system. The rest use open toilets in the street or slums where they live. Only two-thirds are connected to a reliable water supply. Dhaka has the highest population density of any of the world's megacities with about 44,000 people crammed into every square kilometre of land. This leaves little room for roads, rail lines, car parks, bus terminals and other elements of an effective transport system. There are very few forms of public transport and these are largely inefficient and poorly organised. People moving around Dhaka rely on a limited bus service and bicycle rickshaws. There is no train service within Dhaka, only trains between Dhaka and other centres in Bangladesh (see Source 4).

Source 3 Cleaning Dhaka's sewers has been called the "worst job in the world".

Quiz me! Infrastructure

Source 4 Dhaka's public transport system is considered one of the worst in the world. It is old, overcrowded and dangerous.

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5.5

Geography

Check your learning 5.5

Check your learning 5.5

Review and understand

1 In your own words, **define** "infrastructure".
2 **Outline** how efficient and reliable infrastructure contributes to a city's liveability. Give some examples to support your response.

Apply and analyse

3 **Compare** the photographs of the rail systems in Singapore and Dhaka (Source 2 and Source 4). What are some of the differences and some of the similarities?
4 **Explain** two of the factors that have led to such poor infrastructure in Dhaka.
5 Why do you think the infrastructure in Singapore is so reliable? **Explain** your answer.

Evaluate and create

6 Make a list of all the forms of infrastructure mentioned in this spread. **Rank** these forms of infrastructure from the one you consider to be the most important to the one you consider to be the least important. Give reasons for your response.
7 "It is possible to live in a city and not rely on or use any of its infrastructure." **To what extent** do you agree with this statement? A lot (strongly), a little bit (somewhat) or not at all? Write a short paragraph explaining your position. Use examples to support your point of view.

Lesson 5.6
Safety and stability

Introduction

Safety and stability are two of the most important factors that influence the liveability of a place. Cities where people feel safe and supported by their leaders tend to rank higher on liveability lists.

Learning intentions and success criteria

Safety

While we may be tempted to think of safety just in terms of our own personal safety, there are other important types of safety. Infrastructure safety, for example, considers how likely it is that networks such as roads, water and electricity will break down. Health safety refers to access to health care and clean water and air. Increasingly, cybersecurity is also an important part of safety at the national, local and personal scale.

The safest cities in the world (see Source 3) are those with a strong and reliable infrastructure. This includes dependable emergency networks, such as police, ambulance and fire response services. In safe cities the people are kept informed about potential threats and are willing to work with emergency services to reduce these threats. Australian cities are among the safest in the world, with Sydney ranked as the fifth safest and Melbourne as the tenth safest.

Source 1 Tokyo in Japan is the safest city in the world.

In unsafe cities there tends to be high levels of corruption within the government and emergency services. Murder rates are high, as are the rates for other crimes such as assault and theft. There also tends to be high rates of poverty and a large gap between the very wealthy and the very poor. Cities experiencing war are also among the world's least safe.

Source 2 Liveability in Ukraine's capital, Kyiv, has fallen dramatically since the country was invaded by Russian forces in 2022.

Stability

Stability refers to the strength of a country and its ability to look after its citizens. In stable countries such as Australia, human rights are generally respected and protected. Our government and emergency services are also trusted by the people. On the other hand, unstable countries (sometimes referred to as "fragile states") often experience human rights violations. The governments in these countries also struggle to look after their people properly. Some fragile states are in the grips of civil war, where different groups are trying to seize control from the government. This has a significant effect on the liveability of these places because war has a negative impact on the objective and subjective factors of liveability.

Each year, the US-based research group, Fund for Peace, releases its Fragile States Index that measures the stability of each country. The map in Source 3 shows the results for 2024.

World: Safest and most dangerous cities (includes country stability)
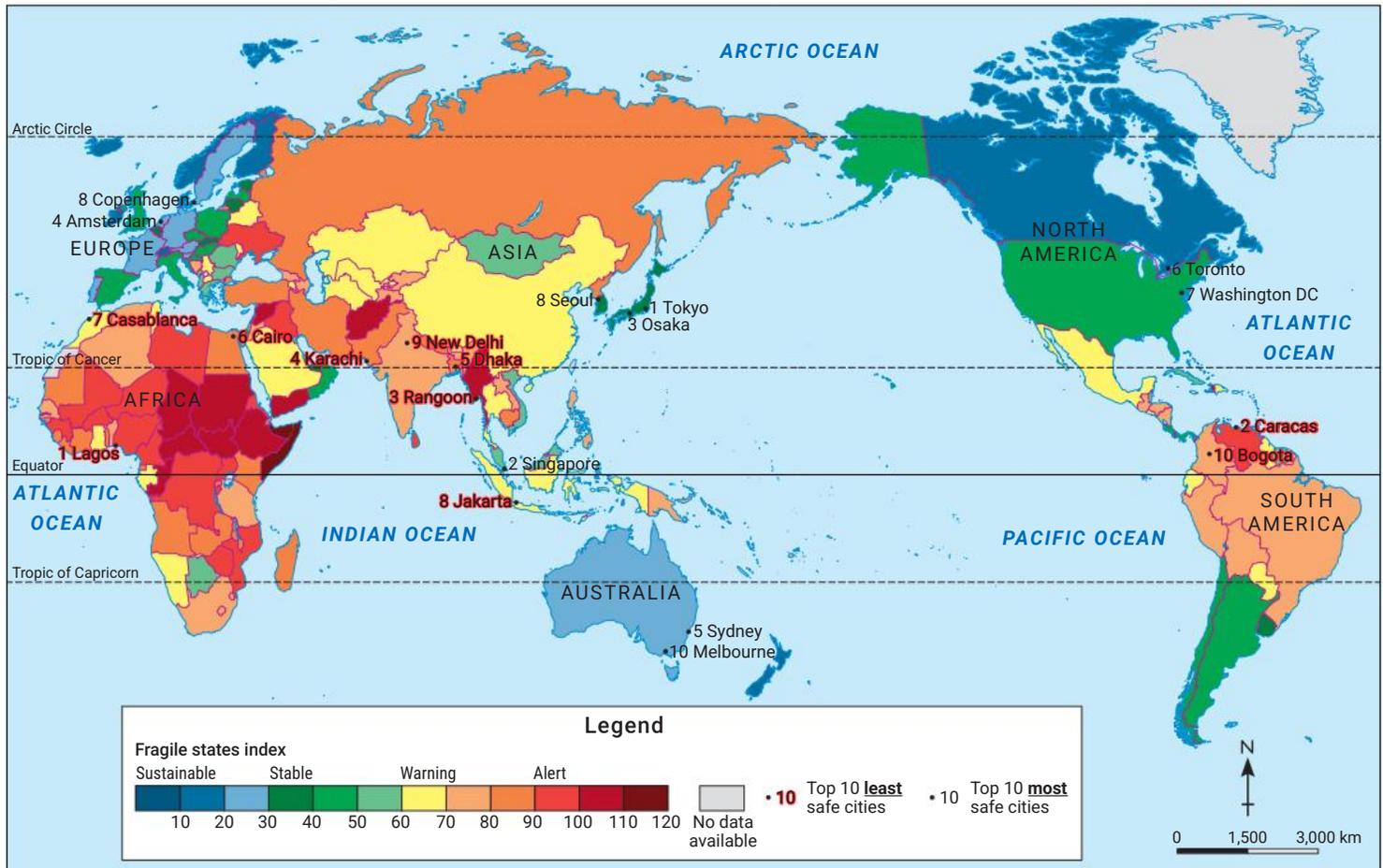
Source: Oxford University Press

Source 3

Enlarged map: World: Safest and most dangerous cities

Check your learning 5.6

Check your learning 5.6

Review and understand

1 **Identify** four different types of safety.

2 **Identify** three threats to liveability in Source 1.

Apply and analyse

3 **Distinguish between** a stable and an unstable country. Remember, when you distinguish between two things you must talk about how they are different rather than how they are the same.

4 **Explain** how stability affects the liveability of a place.

5 Using the PQE method, **describe** the distribution of the world's least safe cities as they appear in Source 3. Remember to use the correct sentence starters! Check Using the PQE method in Lesson 1.7 Identifying patterns and relationships page 35 for a refresher.

Evaluate and create

6 "People who live in dangerous cities or unstable countries should just leave." **To what extent** do you agree with this statement? A lot (strongly), a little bit (somewhat) or not at all? **Explain** your position in a short paragraph.

7 **Propose** (put forward) one strategy that could be put in place to improve the stability of a country.

   – Think carefully about the challenges of putting your strategy in place in a stable country compared to an unstable state. How might some of these challenges be different in each place?

See, think, wonder

Look at Source 3.
- What do you see?
- What do you think?
- What do you wonder?

Quiz me! Safety and stability

Lesson 5.7
Access to health care and education

Learning intentions and success criteria

Introduction

In general, people living in liveable cities have access to good health-care services. This includes doctors, public and private hospitals, specialist clinics and over-the-counter medication.

Liveable cities also offer access to a range of schools and other education facilities like training centres and universities. In many of these cities, including those in Australia, a school education is not only compulsory but is also free.

Cities in Canada, the United Kingdom, Australia and western Europe generally rank highly in both health care and education. By contrast, many cities in Africa are among the lowest ranked for these services.

life expectancy
the average number of years a person can expect to live

Case study London, United Kingdom

Education in London

In London, education is free and compulsory up to the age of 18. Students begin school at the age of five and most attend schools in their local area. By the time students reach university age, there are more than 40 universities in London for them to attend. There are also many more higher education colleges that offer an alternative for those who do not want a traditional university education.

This access to education has helped London to have the world's most highly educated workforce. Almost 60% of adult Londoners have a university degree and 99% can read and write.

Health care in London

Throughout the United Kingdom, health care is free. It is also universal, meaning that everyone has access to it. Most treatments, from a doctor's appointment to emergency surgery, are free for all patients. However, there are often long lists of people waiting for hospital treatment, which

Source 1 A modern operating theatre in a London hospital

means that many people also pay for some services through their health insurance. This is similar to the health-care system in Australia. In the United Kingdom, **life expectancy** is 82 years. This high life expectancy can be linked to the availability of health care.

Case study Niamey, Niger

Niamey is the capital city of Niger in north Africa. The city's population is 1.5 million, but this is increasing rapidly because Niger's population is one of the fastest growing in the world. Niamey is struggling to meet the demands of this rapid growth.

Education in Niamey

School is compulsory between the ages of seven and 15, however many children do not attend school regularly. More than half of Niger's children are not in school and less than 24% attend secondary school. This has resulted in very low rates of **literacy**. Only 37% of adult Nigeriens can read or write. There is one university in Niamey and another four throughout the country.

Health care in Niamey

In Niamey, the health-care system is poorly funded. As a result, more than half of the people of Niger do not have access to a health-care provider. As the government does not fund health care, this also means that people must pay high fees when they need to visit a doctor or hospital. The average life expectancy in Niamey is 61, which is one of the world's lowest.

literacy the ability to read and write

Source 2 Nigerien classrooms tend to be crowded and poorly resourced.

Map it! World: Best and worst health care

Check your learning 5.7

Check your learning 5.7

Review and understand

1 Briefly **outline** how access to health care affects liveability.
2 Briefly **outline** how access to education affects liveability.
3 Many Londoners claim that their city has the best education in the world. **Identify** the factors that contribute to this.
4 Using Google Maps, **identify** the absolute location (latitude and longitude) of London.

Apply and analyse

5 **Create** a table to help you **compare** access to health care in Niamey and London.
6 **Explain** why there is such a difference in access to health care between Niamey and London.

7 Look closely at Source 2. **Compare** this classroom to your own. How is it the same and how is it different?
8 **Explain** the interconnection between education and job opportunities.

Evaluate and create

9 "Education outcomes tend to be lower for girls in Niger than for boys." **Research** this statement by using the internet and the library to find out what you can about education for girls and boys in Niger. When you have finished researching, write a short paragraph (around 150 words) explaining whether you agree with the statement and why.

5A Skills in context
Liveability with disability

Introduction

Melbourne has the world's largest tram network. It has 250 kilometres of tram tracks that cater for more than 200 million trips by Melburnians and visitors every year. It is one of the features that make Melbourne among the world's most liveable cities.

However, for people who use a wheelchair, the tram network often makes the city less liveable, rather than more liveable. Wheelchair users require a low-floor tram and a level access stop to be able to access the tram without assistance. Most of Melbourne's trams are not low-floor and most of its tram stops do not allow level access. There are some exceptions, mostly in the CBD.

Source 1 The design of most of Melbourne's tram network makes it inaccessible for wheelchair users.

Source 2 An example of a level-access stop with a low-floor tram.

Key skill Collecting & representing data

Interpreting graphs

Graphs are a useful tool for displaying different types of data visually. Graphs help us understand complex sets of numbers in an easy-to-read way. This, in turn, allows us to see patterns more clearly than a list of numbers.

To interpret a graph, follow the steps below.

- **Step 1** Read the title carefully so that you understand exactly what is being shown in the graph.
- **Step 2** Read each axis carefully. The axis will include a title. In Source 3, years are shown on the horizontal (x) axis and percentages on the vertical (y) axis.
- **Step 3** Some graphs have a legend. If so, read it carefully. This shows the colours and symbols used on the graph. For example, in Source 4, the percentage of high-floor trams on the network is shaded pale green.
- **Step 4** All graphs have a source. This tells us where the information displayed in the graph

has come from. Make sure you always check the source, as it helps us know how reliable and up to date the information is.

For more information on collecting and representing data, see Lesson 1.6 Representing data page 31.

Practise the skill

Look closely at Source 3 to answer the following questions.

1 Look at the graph.
   a **Identify** the type of graph shown in Source 3
   b **Describe** the purpose of this type of graph.

2 **Identify** the percentage of Melbourne's tram network that was high-floor in 2019.

3 **Identify** the year in which wheelchair users can expect half of Melbourne's trams to be "new low-floor".

4 **Describe** the change that is currently underway on Melbourne's tram network. Use figures from Source 3 to support your response.

Look closely at Source 4 to answer the following questions.

5 **Identify** how many tram routes have both level-access stops and low-floor trams.

6 **Identify** how many tram routes have level-access stops but no low-level trams.

7 **Identify** the number of tram routes that have neither of these.

8 **Identify** the number of tram routes that have more than half of all departures accessible to wheelchair users.

Percentage of high- and low-floor trams 2019 to 2031

Legend: New low-floor trams | Older low-floor trams | High-floor trams

Source 3 Change in composition of the state tram fleet, Melbourne 2019–2031. This is a compound column graph. You can learn more about it in Column graphs in Lesson 1.6 Representing data page 31

Extend your understanding

1 Does the data in these graphs show us an objective measure or subjective measure of liveability? **Justify** (give reasons for) your answer.

2 **Explain** how poor access to public transport can have an impact on a wheelchair user's perception of liveability.

3 Other Melburnians with disabilities also have challenges with some aspects of the tram network. What are some of the challenges that a person with vision impairment might have accessing public transport?

4 The following table shows data taken from a survey by Public Transport Victoria in 2018. It shows the main purposes of people using public transport in Victoria on a weekday.

   a **Create** a bar graph from this data set.

   b **Describe** the pattern you see in your chart.

Source 5 Main purposes of trips on weekdays

Purpose of trip	Weekday (Jan–Mar 2018)
To get to/from work	38%
To get to/from leisure activities	51%
To get to/from place of study	18%
To run errands	44%

Percentage of level-access stops and low-floor trams, 2019
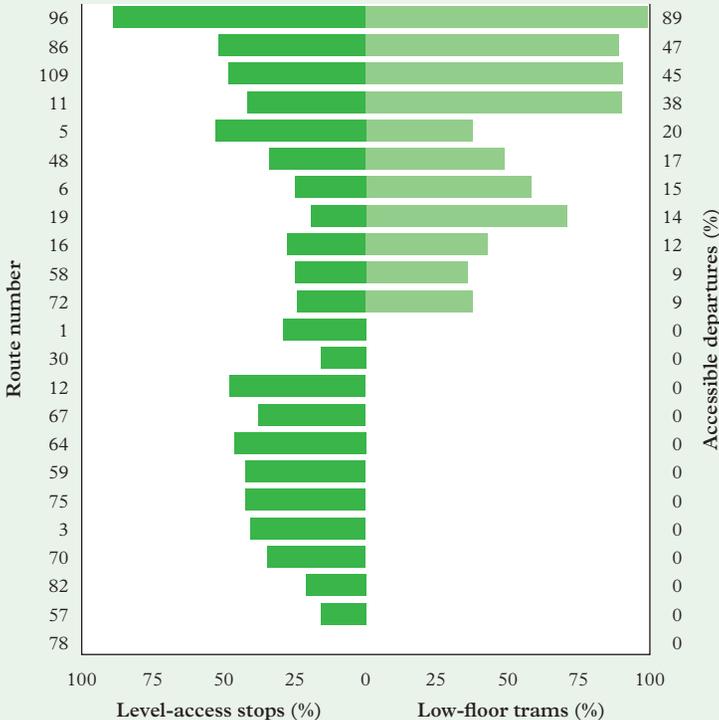
Source 4 The percentage of level-access stops and low-floor trams on Melbourne's tram routes in 2019.

Lesson 5.8
The world's most liveable cities

Learning intentions and success criteria

Introduction

It is difficult to compare one city to another because people tend to favour their own city. This can make it hard for others who are considering moving to a new location to find out what it is really like to live there. In response to this problem, a number of companies research the world's biggest cities and rank them from the most liveable to the least liveable.

These liveability rankings are useful for geographers as they give us the opportunity to compare places and to consider what makes one place more liveable than another. Importantly, it also allows us to make better decisions about improving the liveability of cities around the world.

Every year, the Economist Intelligence Unit (EIU) conducts a liveability survey of over 170 of the world's cities. After analysing the data collected in this survey, it gives each city a score based the following objective factors:

- stability (such as crime and terrorism threats)
- health care
- culture and environment (such as climate, shopping and religious freedom)
- education
- infrastructure (such as roads, public transport and water).

In 2024, the EIU ranked the top 10 cities as follows:

Source 2 In 2024, Vienna was ranked the most liveable city by the EIU. As in many European cities, there are very few cars in the inner city.

Source 1 Top ten liveable cities, 2024

Ranking	City
1	Vienna, Austria
2	Copenhagen, Denmark
3	Zurich, Switzerland
4	Melbourne, Australia
5	Calgary, Canada
6	Geneva, Switzerland
7 (tied)	Sydney, Australia
7 (tied)	Vancouver, Canada
9	Osaka, Japan
10	Auckland, New Zealand

Case study Calgary, Canada

Calgary in Canada is North America's most liveable city. It held a ranking in the top five cities worldwide for the 10 years up to and including 2024. Geographers have noticed that Calgary shares many features with virtually all the top cities. They are all mid-size cities of between one million and five million people and are all in developed countries. Many of them have a mild climate.

Source 3 Trams pass beneath a covered pedestrian walkway in the Calgary CBD. Calgary has 18 kilometres of covered walkways, making it the world's largest skywalk system.

Calgary scored perfect scores in three of the five categories on which the EIU judges liveability. The category that the city scored lowest in was "culture and environment". This is largely due to Calgary's climate, which is very cold (Source 4). Even in the summer months, Calgary's average daily temperature does not reach much above 15°C.

Calgary's economy is supported by the major oil and gas fields located nearby. The money generated by these resources has allowed the city to develop top infrastructure including a tram network, a busy international airport, five major hospitals and several universities.

Quiz me! The world's most liveable cities

— Avg monthly temperature
☐ Avg monthly rainfall

Altitude: 1044m   Climate: °C: 3.4   Dfbmm: 428
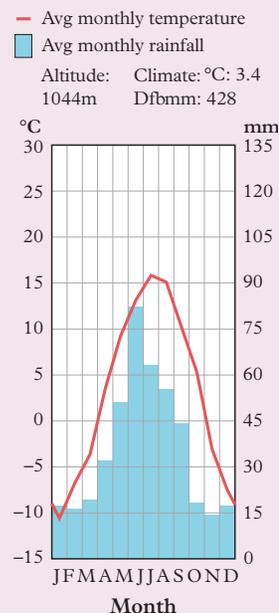
Source 4
Climate graph, Calgary

Check your learning 5.8

Check your learning 5.8

Review and understand

1 Brainstorm three features that most of the world's liveable cities share.
2 How does the EIU calculate liveability rankings?
3 **Describe** two reasons why liveability rankings are an important tool for geographers.

Apply and analyse

4 Calgary is North America's most liveable city.
   a **Describe** the trend of the temperature in Calgary.
   b **Explain** how this influences the liveability of Calgary.

c Imagine you are planning a holiday to visit Calgary. When do you think would be the best time of year to visit and why?
5 How do you think Calgary's skywalk network improves the liveability of the city?

Evaluate and create

6 Think about the five categories used by the EIU to judge how liveable a place is. **Determine** (decide) how the COVID-19 pandemic would have affected the liveability of cities. Draw a mindmap to show your findings.
7 One of the features common to most of the top ten cities is a tram network. Discuss with a partner why a reliable public transport system is an important part of liveability.

Lesson 5.9
A liveable city: Melbourne

Learning intentions
and success criteria

Introduction

Melbourne tends to score highly in most rankings of the world's most liveable cities. Since the EIU began its global ranking of the world's cities in 2002, Melbourne has frequently been ranked in the top three. Source 1 shows Melbourne's scores in the five categories included in the EIU survey for 2024.

Interactive map:
Melbourne CBD and inner suburbs
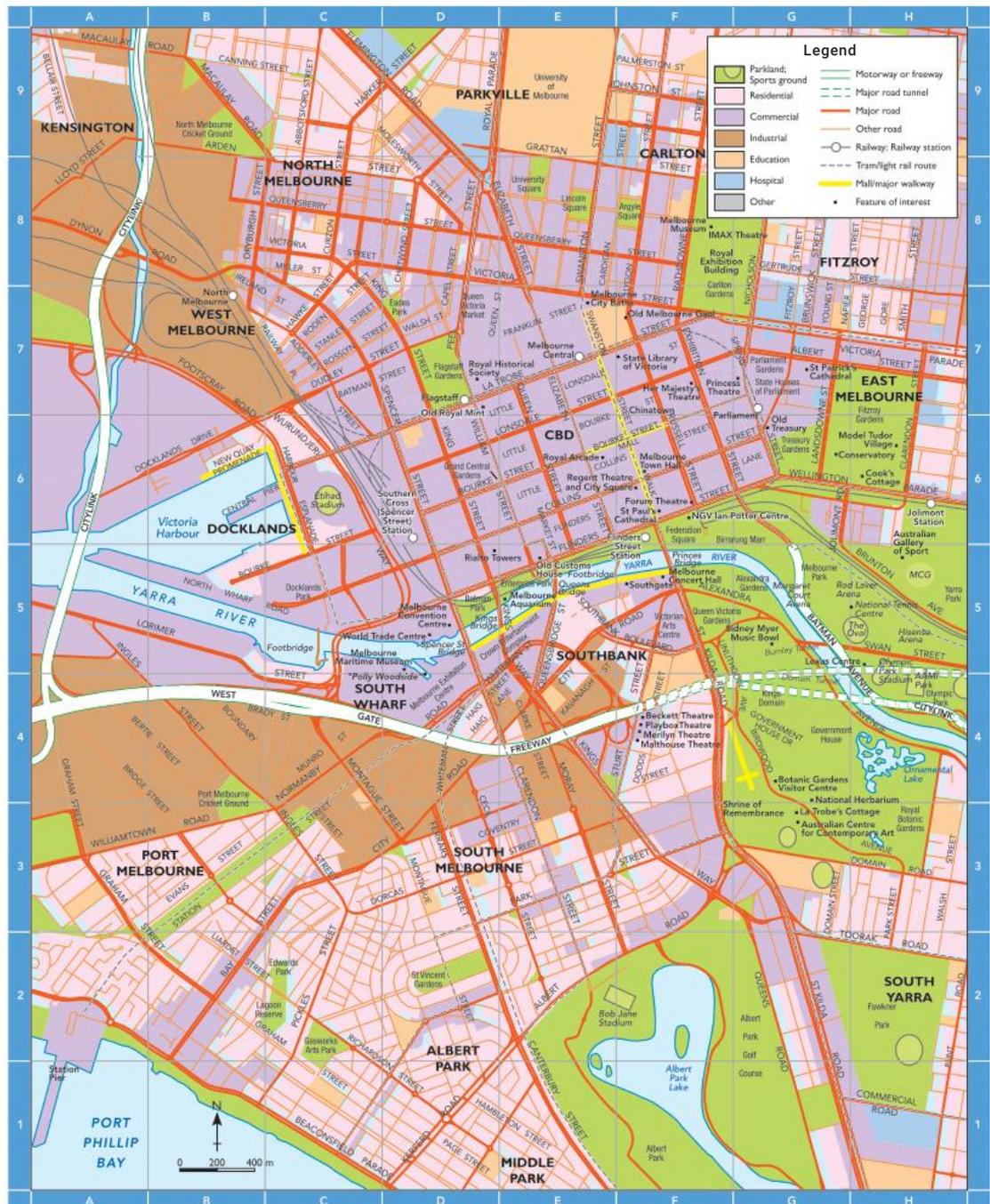
Source 1 Melbourne consistently ranks in the top three of the world's most liveable cities.

Infrastructure (96.4/100)

Melbourne has scored highly for its infrastructure since liveability surveys began. It has large and reliable road and public transport networks as well as strong links to cities in other places. Melbourne has Australia's busiest container port and the second busiest airport. The EIU also gave Melbourne's energy, communications and water networks a perfect score. There is also a wide range of housing types available, although Melburnians are finding cheaper homes harder to buy.

Stability (95/100)

Both Australian cities in the 10 most liveable cities (Melbourne and Sydney) scored 95/100 for stability. While the threats of violent crime and war are very low, the EIU noted the ongoing threat of a terror attack and the number of smaller crimes in the city.

Health care (100/100)

There are more than 200 private and public hospitals in Melbourne. These range from specialist hospitals, such as the Royal Children's Hospital, to large general facilities. Melbourne's scientists are world renowned for important medical developments, including the bionic ear and stem cell research.

Education (100/100)

Melbourne prides itself on the quality of its education system. Throughout Australia, education is free, universal and compulsory for all children aged between 5 and 15. Melbourne has eight universities, two of which, Monash University and the University of Melbourne, are ranked in the top 100 universities in the world. Over 200,000 students from other countries study in Melbourne, making education one of the city's most important businesses.

Culture and environment (95.8/100)

This is one of the highest scores for this category in the world and reflects Melbourne's mild climate. Melbourne also has very low levels of corruption and access to a wide range of sporting and cultural facilities including the Melbourne Cricket Ground, Melbourne Park and the Southbank Arts Precinct.

Watch it! A liveable city: Melbourne

5.9

🖥 **Check your learning 5.9**

Review and understand

1 **Identify** the categories in which Melbourne scored 100/100 for liveability in 2024.

2 Why did stability receive the lowest score in Melbourne's liveability ranking?

Apply and analyse

3 Are the ways liveability has been measured by the EIU objective or subjective factors? Give reasons for your answer.

4 **Examine** the map in Source 1. An interactive version of the map is available on Oxford Digital.

   a Identify five examples of infrastructure. Use grid references in your answer. For example, West Gate Freeway E4.

   b Using the same system, identify five examples of cultural facilities.

5 Many of Melbourne's sporting facilities are clustered together. What are some of the strengths and weaknesses of this?

Evaluate and create

6 Melbourne's population has grown rapidly in the last 20 years and is now over 5 million people. **Explain** how this rapid growth may have had an impact on Melbourne's liveability.

7 Using the map and legend in Source 1 as a base, **create** a brochure for Melbourne for tourists. In it, include:

   – five must-see features around the city

   – how to get around between each of these sites using Melbourne's tram network

   – a short description of why tourists should see these sites.

Lesson 5.10
The world's least liveable cities

📄 Learning intentions and success criteria

Introduction

Source 2 The infrastructure of Karachi struggles to supply people with their daily needs. A delivery of ice helps to keep drinks cold in a shop without refrigeration.

civil war a war between citizens of the same country

While cities in Europe, Canada and Australia dominate the top ranks of the world's most liveable cities, Asian, Middle Eastern and African cities tend to be ranked among the lowest. However, it is important for us to remember that most liveability surveys are paid for and conducted by companies in wealthy, developed countries. These lists tend to measure aspects of each city that these companies think will be of most interest and relevance to their workers rather than the experiences of the people who live there all the time.

In 2024 the EIU published its annual list of cities ranked from most liveable to least liveable. Source 1 shows the 10 least liveable cities identified in that survey. These cities rate poorly in terms of health care, infrastructure and access to education. They also rate poorly in terms of safety and stability, a category that measures crime, terror and conflict. Although many of these cities have been ranked low for many years, there was a new entry in 2013: the Syrian capital city of Damascus. Due to a violent **civil war** that has been raging in Syria since 2011, Damascus has been listed as the least liveable city for the last 12 years.

Source 1 The 2024 ranking of world's ten least liveable cities from the EIU

City	Location	Rank	Index	Stability	Health care	Culture & environment	Education	Infrastructure
Caracus	Venezuela	164	44.9	35.0	37.5	45.1	66.7	53.6
Kyiv	Ukraine	165	44.5	40.0	41.7	53.2	75.0	26.8
Port Moresby	PNG	166	44.1	30.0	41.7	52.5	58.3	46.4
Harare	Zimbabwe	167	43.8	40.0	29.2	56.7	66.7	35.7
Dhaka	Bangladesh	168	43.0	50.0	41.7	40.5	66.7	26.8
Karachi	Pakistan	169	42.7	20.0	54.2	35.9	75.0	51.8
Laos	Nigeria	170	42.2	25.0	37.5	54.4	41.7	53.6
Algiers	Algeria	171	42.0	35.0	50.0	45.4	58.3	30.4
Tripoi	Libya	172	40.1	30.0	45.8	37.5	58.3	41.1
Damascus	Syria	173	30.7	20.0	29.2	40.5	33.3	32.1

Case study Port Moresby, Papua New Guinea

Port Moresby, the capital of Papua New Guinea, is often ranked as one of the world's least liveable cities. This is largely due to high crime rates and a lack of safety experienced by many residents and visitors.

In many developing countires, such as Papua New Guinea, large numbers of people move from rural areas to the cities hoping for a better life. They are attracted by the possibility of a steady job or the chance for their children to attend high school. This puts a strain on the city's infrastructure and services such as hospitals, schools and the police force.

In Port Moresby, many of the young men who have arrived in the city have not been able to find jobs. Some of them join crime gangs – often called Raskols (from the English word "rascals") – to survive, to earn money to buy food and to gain a sense of belonging. These gangs are responsible for much of the violent crime in Port Moresby, such as robberies, carjackings, beatings, murders and rape.

Armed battles between the Raskols and the police are common, creating a dangerous environment. Many wealthier people in Port Moresby have responded to the dangers by building fences of razor wire and hiring armed security guards. The poorer people, having no access to these defences, have instead armed themselves with clubs and machetes.

Source 3 Stilt housing on the harbour in Port Moresby.

Source 4 In 2024, riots broke out in Port Moresby as security officers went on strike. These people are looting a department store in the city centre.

Check your learning 5.10

Check your learning 5.10

Review and understand

1 **List** some of the common features of the world's least liveable cities.

2 **Identify** three reasons why people are moving to Port Moresby.

3 **Outline** why Damascus has been ranked one of the least liveable cities since 2013.

Apply and analyse

4 **Examine** Source 1.

a Cities move up or down this list over time. **Explain** why this is the case.

b **Identify** the three least stable cities (look at the "Stability" column).

c What would cause these cities to score a low "stability" rating?

d Port Moresby is the eighth least liveable city. In what areas does it score higher than the cities ranked below it?

5 Refer to Source 1. Locate each of the 10 least liveable cities in an atlas. **Identify** the cities that are not in Asia or Africa.

Evaluate and create

6 Using labelled boxes and arrows, **create** a flow chart to show how one problem has led to other problems in Port Moresby. There is a template available on Oxford Digital to help get you started.

Template: Flow chart

Quiz me! The world's least liveable cities

Lesson 5.11
Damascus: the least liveable city

Learning intentions and success criteria

Liveability before 2011

Damascus is the capital of Syria. One of the world's oldest cities, Damascus has been continually inhabited for thousands of years. In that time, it has developed a vibrant and lively culture.

Historically, Damascus was an important trading link between Africa, Asia and Europe. The city was particularly famous for its textile, lace and sword industries. The whole of the inner city, known as the "Ancient City", is a World Heritage Site. The population of the city boomed between 1950 and 2011 as Syrians from poorer parts of the country poured into the capital in search of work and a better life.

As the country's capital, Damascus is home to important national services. This includes 10 universities, hospitals and a large international airport. Public transport services are limited to fleets of minibuses. The narrow, winding streets of the city leave little room for regular-sized buses, trams or trains. The roads are often congested as more and more people own cars. Water is supplied from a nearby river, but this is under strain from the rapidly growing population.

Liveability since 2011

The events in Damascus demonstrate to us how liveability can be seriously affected by conflict. In 2011 a violent civil war broke out in Syria as various groups within the country fought for control. Some of the fiercest fighting has taken place in Damascus, particularly on the edges of the city. Up to half a million Syrians have been killed in the war and more than six million displaced from their homes. Damascus, once called the "pearl of the East", is now the world's least liveable city.

Source 1 Some of the worst fighting has taken place in Eastern Ghouta on the outskirts of Damascus. This was once a hospital but was destroyed in a bombing raid.

   More than half of the city's health services have been destroyed. Many health workers have fled the country as refugees. This means that it has become increasingly difficult to access a doctor, dentist or other health-care professional. The population of the city doubled since the war began, because people moved further into the centre of the city to flee fighting in the outer areas. This placed enormous strain on infrastructure, particularly water supplies, electricity and education. Throughout the country, more than two million children are out of school and one in three children have missed out on important life-saving vaccinations. More than one-third of Syria's population no longer have access to safe drinking water. Police forces have collapsed in many places, leading to a wave of violent crimes such as murder and kidnapping.

Key skill worksheet: Interpreting geographical images: Comparing different types of geographical images

Strategies to improve liveability

Geographers have difficulty proposing solutions for conflict. There is no "easy" way to solve this problem. There are, however, some strategies that have been proposed to increase the liveability of Damascus for its residents. These include:

- securing funding and aid from countries around the world. To help around 13 million people in Syria, the United Nations has called for continuing aid from other countries. Among other things, this money will go towards medical support for seriously ill people in Damascus. The Australian Government has provided $570 million in aid since 2011.
- increasing access to water by transferring it from another place by building a pipeline. There have been talks of an investment from Switzerland and Japan to help Syria achieve this, but with the country still unstable, this is unlikely to be built.

Source 2 These two satellite images show the Yalda neighbourhood of Damascus in 2003 A) and 2013 B). The 2013 image shows the destruction of the area as a result of civil unrest.

Quiz me! Damascus: The least liveable city

5.11

Check your learning 5.11

Check your learning 5.11

Review and understand

1 **Identify** the national services that Damascus is home to.
2 **Outline** why the population of Damascus increased between 1950 and 2011.
3 **Describe** the public transport and quality of water supplies in Damascus before the civil war.

Apply and analyse

4 Answer these questions.

   a Complete the following table using information from this lesson.

Liveability factor	Impacts of civil war
Safety and stability	
Health care	
Education	
Infrastructure	

b In a civil war, attacking forces often target hospitals and schools. Why do you think this is the case?
c Using the information you completed in question 4a, write a paragraph **summarising** how civil war affected the liveability of Damascus.

Evaluate and create

5 How do you think war-torn countries like Syria are affected by global emergencies such as the COVID-19 pandemic?
6 Satellite images, like the ones in Source 2, have become useful tools for assessing damage caused by war. Why do you think this is the case?
7 In groups, **discuss** the strategies to improve liveability mentioned in this lesson. Do you think they are strong strategies? Why or why not? Share your discussion with the class.

Lesson 5.12
Australia's liveable cities

Learning intentions and success criteria

Introduction

In the 2024 Global Liveability Survey, Melbourne was rated as the world's fourth most liveable city. Sydney (seventh), Adelaide (eleventh) and Perth (fifteenth) were also ranked in the top 15. Australian cities usually score well in liveability studies because they generally have open spaces for recreation, relatively low crime rates, low population densities and good education and health care.

Large cities in a wealthy country such as Australia tend to have a wide range of goods and services available to the people who live there. The infrastructure in large Australian cities includes schools and universities; efficient transport networks; clean water delivered to homes and businesses through a vast network of dams, treatment plants and pipes; and electricity supplied through a system of overhead and underground wires and cables.

Australian cities also score well in terms of their safety and stability because corruption and crime rates are low. The country also has a stable government and no ongoing wars or other conflicts within its borders.

Individual state and local governments are responsible for improving liveability on a local scale.

Geography

Key concept Space

More accessible = more liveable

A large liveable city such as Melbourne has all the services that residents need to live a prosperous and fulfilling life. The city is home to thousands of shops and schools, and numerous hospitals, health clinics and recreation spaces. There are enough jobs in the city for virtually every adult to have employment.

However, not all residents are able to access these services. Their personal situation, such as their wealth, physical and mental health or cultural differences may create barriers. Access to reliable and affordable transport options also have an impact on accessibility.

When geographers explore the patterns of services such as public transport routes, they

Source 2 The western suburbs of Melbourne have been called a "public transport desert".

are using the concept of space. By looking closely at maps such as those in Source 1, they can see that residents in some areas of Melbourne have easier access to jobs than those living in other areas.

For more information on space, see Space in Lesson 1.1 Geographical concepts page 6.

The most disadvantaged populations in Melbourne generally have the worst access to employment by public transport
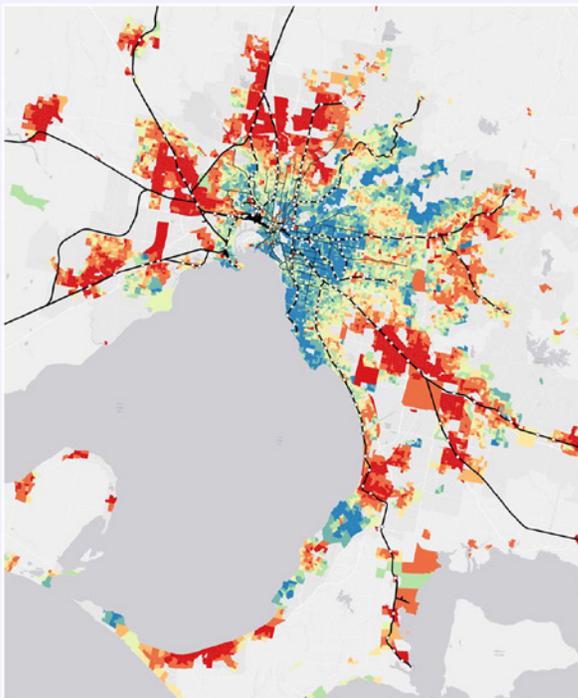
ABS index of relative social advantage and disadvantage
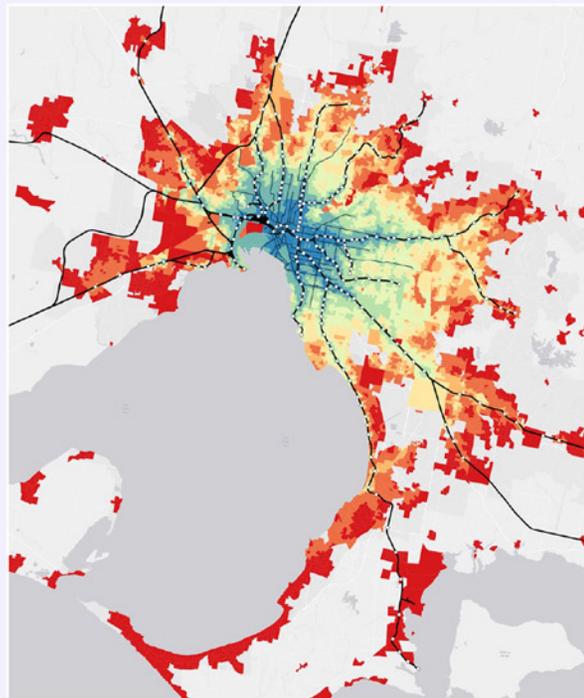
Jobs accessible on public transport within a 45 minute journey

— Rail line
— Tram line
○ Passenger rail station

Disadvantaged   Advantaged
Less jobs   More jobs

Source 1 These two maps of Melbourne compare social advantage and disadvantage with accessibility to jobs. They show that the most disadvantaged areas usually have the worst access to employment by public transport.

Case study Improving accessibility: Melbourne's 20-minute neighbourhoods

In 2017 the Victorian Government announced its plan for the 20-minute neighbourhood. The aim of this strategy is to have every person living in Melbourne able to meet most of their daily needs within a 20-minute walk of their home. The strategy is designed to make Melbourne a healthier city where cycling and public transport is used more often.

While the state government has developed this plan, each local government will be largely responsible for applying it in their council area. A few have started by looking carefully at their local shopping centres and streets, and thinking about changes that could be made to make their local area more liveable.

Weblink: "Living locally" project

Features of a 20-minute neighbourhood

- Local shopping centres
- Local health facilities and services
- Local schools
- Lifelong learning opportunities
- Local employment opportunities
- Well connected to public transport, jobs and services within the region
- Local public transport
- Safe cycling networks
- Walkability
- Housing diversity
- Ability to age in place
- Affordable housing options
- Safe streets and spaces
- Community gardens
- Sport and recreation facilities
- Green streets and spaces
- Local playgrounds and parks

Think, pair, share
- Think about the 20-minute neighborhood. What do you think of this idea? Is it missing anything?
- Discuss your ideas with a partner.
- Share your thoughts with the class.

Source 3 Features of a 20-minute neighbourhood

Quiz me! Australia's liveable cities

Check your learning 5.12

Check your learning 5.12

Review and understand

1 Why do Australian cities tend to score well in liveability surveys?

2 What is the purpose of a 20-minute neighbourhood?

Apply and analyse

3 **Classify** the features in Source 3 into three groups: objective measures of liveability, subjective measures of liveability, and any you are unsure of. For those you are unsure of, explain why.

4 One of the features of a 20-minute neighbourhood is "walkability". How walkable is your local area? Could this be improved? If so, **explain** how.

5 **Examine** the maps in Source 1.
   a What similarities do you notice between the two maps?
   b What differences do you notice between inner city suburbs and outer suburban areas in Melbourne?

Evaluate and create

6 "Making my neighbourhood more sustainable is more important to me than being able to access everything within 20 minutes." **To what extent** do you agree with this statement? A lot (strongly), a little bit (somewhat) or not at all? Write a 150-word paragraph explaining your position.

5B Skills in context
Local area liveability

Introduction

Liveability also applies to local areas. Some are more liveable than others because of infrastructure or culture and environment.

Key skill Conducting fieldwork

Completing a map survey

There are several pieces of information that you can collect to assess the liveability of your local area. The first of these is a map survey. To complete a map survey of your local area, follow these steps:

* **Step 1** Locate a map of your local area. This could be from a street directory (such as the one in Source 1) or from a website, such as Google Maps. Decide on the limits of your local area. This could be a suburb if you live in a large city or the whole town if you live in a smaller rural town. In this example, the student lives in South Geelong and has chosen an area 1.5 kilometres from where she lives.
* **Step 2** Mark the limit of your local area on your map.
* **Step 3** Examine this area closely and count each of the following pieces of infrastructure within it:
  – police stations
  – hospitals
  – chemists
  – doctors
  – churches
  – sporting grounds
  – parks
  – post offices
  – schools.

Practise the skill

1 Using the steps outlined above, complete a map survey of your local area.

2 **Describe** the infrastructure of this area in a carefully worded paragraph.

Geelong: Inner Suburbs
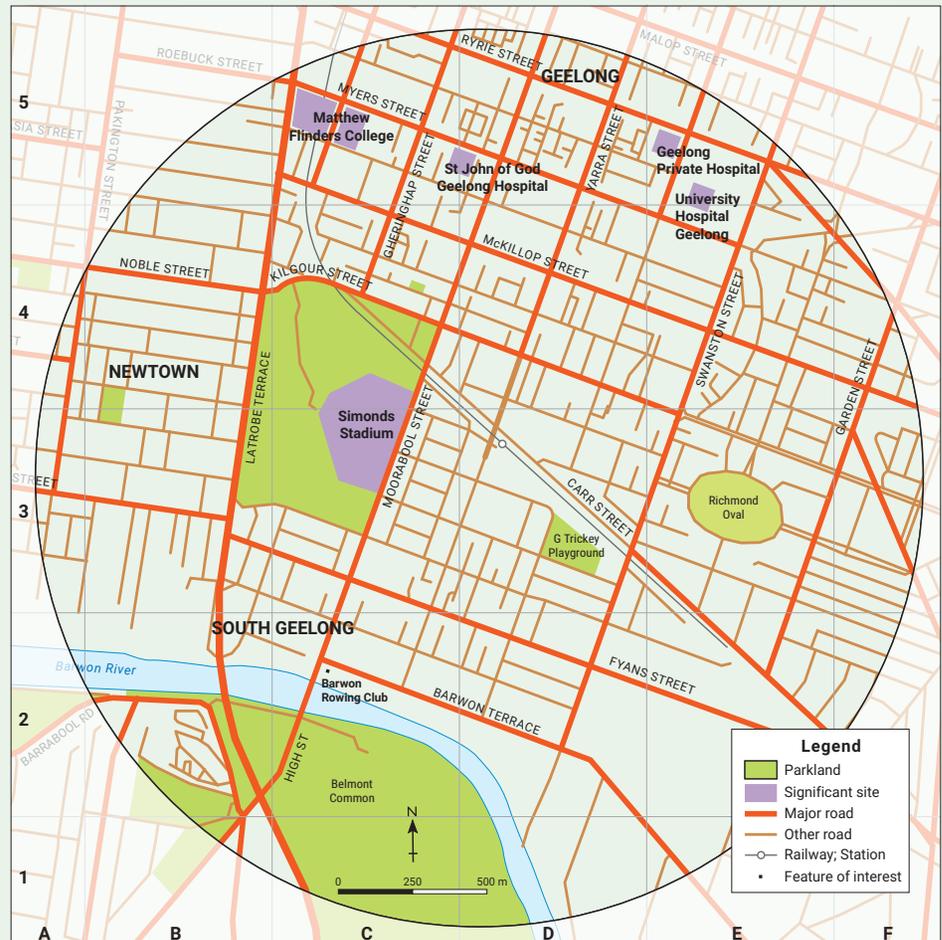
Source 1

Source: Oxford University Press

Key skill Conducting fieldwork

Completing a street survey

Another useful way to collect information about the liveability of your local area is to undertake a street survey as part of some fieldwork. Fieldwork is any geographical study that takes place outside the classroom. It is an essential part of Geography, because it allows you to collect primary data. For example, you can draw sketches, conduct tests or construct questionnaires. In this activity, you are conducting a street survey to assess the quality of the housing and other features of a street or several streets.

To complete a street survey in your local area, follow these steps:

- **Step 1** Choose a street with at least 30 properties and a length of at least 100 metres.
- **Step 2** Use a street survey form like the one shown in Source 2 to score your chosen street on a scale of 0 to 3 in a range of categories.

Source 2 Street survey template

Street name:		Suburb:				
		Scale				
		3	2	1	0	
Traffic	Free of parked vehicles Low volume of traffic Safe for children					Cluttered with parked vehicles High volume of traffic Dangerous for children
Gardens	Variety of plants Neatly maintained					No plants Overgrown
Houses	Well maintained Variety of housing styles Variety of building styles					Run down All houses the same style All houses built from the same material
Vegetation	Tree shade near road					No trees
Street furniture (signs, electricity poles, seats, etc.)	Inconspicuous Improve the area					Conspicuous Detract from the area
Street lighting	Well lit					Poorly lit
Litter, vandalism and graffiti	No litter, vandalism or graffiti					Much litter, vandalism or graffiti
Access to facilities	Shops within walking distance Parks within walking distance Primary school within walking distance					Shops not within walking distance Parks not within walking distance Primary school not within walking distance
Footpaths, roads and kerbing	Clearly defined Good condition Maintained nature strips					Undefined Poor condition No nature strips
Other land uses	No offensive land uses					Offensive land uses
Column score						
Total score						

Practise the skill

1 Using the steps outlined above, complete a street survey in your local area.

2 In what parts of the survey did the street score well? In what areas did it score poorly?

3 What could be done to improve this street?

Extend your understanding

1 **Identify** the health-care facilities that are available to residents of South Geelong.

2 **Identify** the education facilities that are available to residents of South Geelong.

3 "As an inner-city area, South Geelong is well served with public transport."
To what extent do you agree with this? A lot (strongly), a little bit (somewhat) or not at all? Write a short paragraph explaining your position. Use evidence from Source 1 to support your answer.

Lesson 5.13
Threats to liveability

Learning intentions and success criteria

Introduction

Cities are constantly changing. In most countries, cities are growing both in size and population. Many cities in the developing world are growing at an alarming rate. Delhi, for example, has doubled in population in the past 20 years and grows by more than 2,000 people a day!

In developed countries such as Australia, city growth is not as rapid but is still significant. As cities grow, they may become less liveable. Some of the factors that threaten liveability of growing cities include urban sprawl, traffic congestion and environmental issues.

Enlarged map: The liveability of Melbourne's suburbs

Melbourne suburbs: Liveability index, 2021

Legend

Liveability index

	Over 108 (best liveability)
	106 to 108
	104 to 106
	102 to 104
	100 to 102
	98 to 100
	96 to 98
	94 to 96
	92 to 94
	90 to 92 (worst liveability)

CBD

Port Phillip Bay

Source 1

5.13
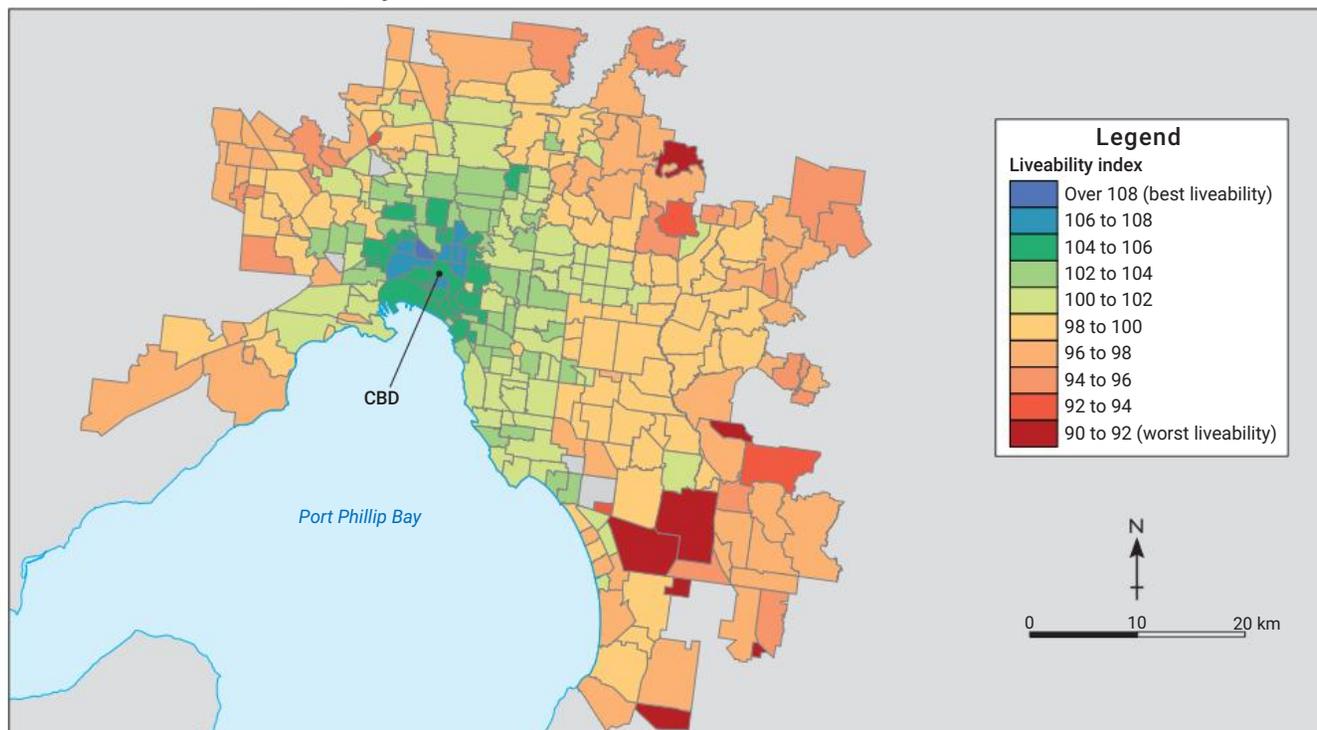
Urban sprawl

Urban sprawl is the quick, outward expansion of cities and towns. This expansion often happens by building residential housing estates on the edge of the city. Land is cheaper on the edges of cities, so new arrivals and young families tend to build and buy their homes on the city's outskirts. These new homes replace the existing land, which had previously been used for farming.

City authorities struggle to meet the demands of the people in these new housing areas. Infrastructure such as schools, hospitals, shops and places to work can take years to develop so the residents often must travel inwards to more established suburbs for these services. Source 1 is a map showing the liveability for each of Melbourne's 307 suburbs. There is a clear pattern that inner-city suburbs rate highly for liveability, but this rating gradually declines closer to the city's edges. The least liveable suburbs are on the city's fringe, particularly in the north-west and south-east. These are also the fastest growing parts of Melbourne.

Source 2 Lyndhurst in Melbourne's south-east is one of Melbourne's least liveable suburbs. It rates particularly poorly for access to public transport, especially buses. This is the carpark at the local train station, which fills every workday as residents commute to the city.

Source 3 The threats to liveability caused by urban sprawl, and the responses that could be put in place to combat them.

Urban sprawl threatens the liveability of a place by:	We can respond to this threat to liveability by:
• reducing the amounts of productive farmland near cities	• increasing the density of housing in established suburbs closer to the CBD with more multi-storey dwellings
• threatening the habitats of native plant and animal species	• protecting native habitats with bushland corridors and by planting more native trees in urban areas
• creating greater dependency on cars, which in turn increases levels of air pollution and traffic congestion	• ensuring public transport services are provided to all new developments
• suffering from a lack of community services and infrastructure, which negatively affects its residents.	• establishing satellite business centres outside the CBD to encourage local employment and services for those living on city fringes.

Traffic congestion

People who settle on the edge of the city need to travel further to access amenities in the city, such as work, school and public events. In Melbourne, 83.9% of all households own at least one car. High rates of car ownership mean that there are many cars on the road network, which struggles to cope with this huge amount of traffic. Rather than drive, some people can catch public transport. However, access to public transport options like trains and trams tends to be uneven in a city. Older suburbs near the city centre usually have much better access to these travel options than those in the newer, outer suburbs. As mentioned above, it can take a while for the infrastructure in a new suburb to be fully complete.

Melbourne: Traffic congestion, 2019

Legend

Level of traffic congestion

- 5 (Most traffic)
- 4
- 3
- 2
- 1 (Least traffic)
- Major road

CBD

Port Phillip Bay

0   10   20 km
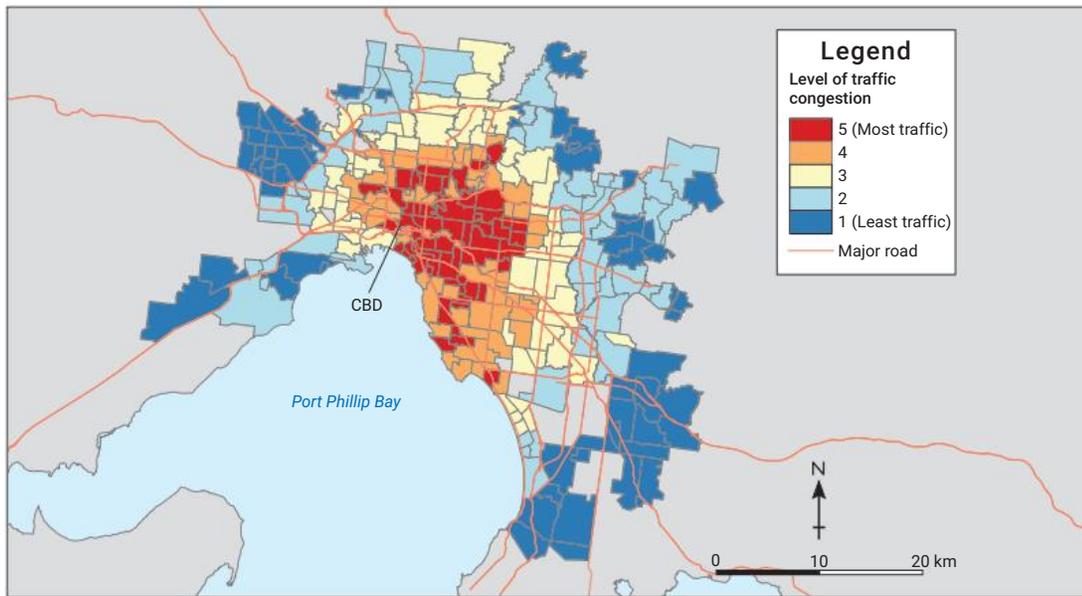
Enlarged map:
Traffic congestion in Melbourne

Source 4

The result of this is bad traffic congestion on the road. Traffic congestion affects liveability in several ways, some of which are outlined below in Source 5.

Source 5 The threats to liveability caused by traffic congestion, and the strategies that could be put in place to combat them.

Traffic congestion threatens the liveability of a place by:	We can respond to this threat to liveability by:
• increasing the level of air and noise pollution • increasing the amount of time that people spend in their car, and decreasing the amount of time people spend at home • increasing the levels of stress and frustration for drivers, which may lead to increased incidents of road rage.	• building new roads that take road-users around rather than through the city • increasing public transport options to encourage people to leave their cars at home • encouraging alternative modes of transport, for example, building more bike paths for cyclists.

Source 6 Traffic congestion is a significant problem for many people in Australian cities.

5.13

Source 8 Cities such as Melbourne generate large amounts of waste, including waste from households and factories.

Environmental issues

As cities grow, they have a greater impact on the environment. Water resources are used at a higher rate, pollution increases, and more energy is required to service the growing population.

Environmental issues include air pollution from increased energy and transport usage, land contamination from landfill, water shortages and damaged waterways. The increased demand for electricity and energy for transport creates harmful gases like carbon dioxide. These collect in the atmosphere and are responsible for changing the Earth's climate. It is estimated that cities are responsible for three-quarters of all carbon dioxide emissions.

Source 7 The threats to liveability caused by environmental issues, and the responses that could be put in place to combat them.

Environmental issues threaten the liveability of a place by:	We can respond to this threat to liveability by:
• increasing air pollution from increased energy usage • increasing land contamination from landfill, water shortages and damaged waterways.	• recycling rubbish materials • restricting water use • developing buildings and cars to be more energy efficient • using renewable energy sources.

Quiz me! Threats to liveability

Check your learning 5.13

Check your learning 5.13

Review and understand

1 **Define** the term "urban sprawl".
2 How can growing cities be harmful to the environment?

Apply and analyse

3 **Examine** Source 4.
 a Is traffic congestion worse in the inner city or outer city?
 b Follow one of the major roads from the outer city to the inner city. How does traffic congestion change as this road approaches the inner city? Why do you think this is?
 c **Explain** some of the causes of traffic congestion.

 d Now look at Source 1. Can you identify any spatial association between the liveability of Melbourne's suburbs and traffic congestion? Remember, spatial association is the degree to which things are arranged in a space *similarly*.

Evaluate and create

4 **Create** a flow chart using labelled boxes and arrows to show how population growth can lead to a range of issues. There is a template available on Oxford Digital to help get you started.
5 Which of the issues discussed do you think is the most difficult to solve? **Justify** (give reasons for) your answer, and be sure to use some evidence from this topic to support it.

Template: Flow chart

Lesson 5.14
Responses to improve liveability: Sustainability

Introduction

In many cities around the world, residents and planners are working hard to reduce the impact of their city on the environment. Many are focusing on reducing their carbon dioxide output to help slow climate change, because people have noticed that reducing carbon dioxide brings other benefits as well.

Case study Copenhagen, Denmark

Copenhagen, the capital of Denmark, is one of the world's most liveable cities (see Source 1 in Lesson 5.8 The world's most liveable cities, page 186). It has also claimed the titles as the world's greenest city and Europe's Green Capital in the past few years. This does not refer to the colour of its buildings, but to the efforts that have been taken to reduce the city's impact on the environment.

Copenhagen aims to be carbon neutral by 2050. To achieve this, there are many changes being made to the way that energy is generated and used in the city.

Changing energy generation

Copenhagen is moving away from burning coal, oil and gas for energy because these fuels produce carbon dioxide, which contributes to climate change. Instead, the Danes have looked towards other ways of generating energy. One key example of this is the use of wind turbines, which produce a large amount of renewable energy. In Denmark around 20% of their total electricity is produced by wind turbines. Many homes and buildings also have solar panels on their rooftops, which use energy from the sun to generate electricity. This is known as solar power.

Source 1 Copenhagen's new power plant is not only one of the world's cleanest, it is also a tourist attraction. It includes an 85-metre-high climbing wall, a roof-top restaurant and bar, and a 450-metre ski slope.

A remarkable new power plant has also been built on the edge of Copenhagen (pictured in Source 1). It receives most of the city's waste and automatically sorts it by removing plastics and dangerous chemicals. The rest, known as biomass, is burnt in special incinerators that produce very little carbon dioxide. The heat generated from this process is then used to heat around 160,000 homes. It also generates enough electricity to power 60,000 homes.

Reducing energy use

As we know, cars and buses produce a large amount of pollution. By 2050 the city of Copenhagen aims for at least three-quarters of all trips to be made without using cars or buses. This means they must be made on foot, on public transport or by bike.

While this might seem a very ambitious target, the city is already regarded as one of the most bike-friendly in the world. More than 60% of all trips to university and work are already

5.14

◀ undertaken by bike. This figure has already increased since 2012 when it sat at just 36%. The increase is due to the new bike paths that have been built throughout the city. Cycle lanes have been built on existing roads, as well as brand new paths that link the suburbs to the CBD. These cycle paths are known as superbike trails and cover a total of 850 kilometres within the city. Many workplaces include bike storage and showering facilities in their design to encourage their employees to cycle to work. Many trains also have space for bikes in each carriage.

In the public transport sector, diesel-powered buses are being replaced by electric and hydrogen-powered buses. New buildings are required to be highly energy efficient and older buildings to be improved by adding insulation and other measures to reduce energy use, particularly for heating.

Source 2 Copenhagen's superbike paths include bike repair stations and pumps.

Explore it! A virtual field trip to Copenhagen

Legend
— Existing
— Coming
⋯⋯ Not funded

0 — 5 km

N

Source 3 Copenhagen's superbike trails

Provisioned to Campion Education (Aust) Pty Ltd on 20/06/2025 under licence.

5.14

Check your learning 5.14

Check your learning 5.14

Review and understand

1 **Describe** how Copenhagen is a bike-friendly city.
2 What is biomass? What happens to Copenhagen's biomass?
3 **Identify** three features of Copenhagen's new power plant that make it unique.

Apply and analyse

4 Look closely at Source 3.
   a **Identify** the type of scale that has been used.
   b Use the scale and a ruler to **estimate** the length of the longest existing bike trail.
   c Use the scale and a ruler to **estimate** the length of the shortest existing bike trail.
   d **Describe** the pattern of all the superbike trails in Copenhagen.
5 **Explain** why it is important to focus on both how energy is generated and how it is used.
6 Have the strategies used by Copenhagen been effective? In your answer, draw on some of the statistics provided in this topic.

Evaluate and create

7 Copenhagen has shown that it is possible to be both liveable and environmentally friendly. **Suggest** two reasons why other cities have not made the same changes as Copenhagen.

Lesson 5.15
Responses to improve liveability for young people

Introduction

When trying to improve the liveability of a town or city, planners need to consider the needs of people of different ages. The needs of children and young people are obviously very different from the needs of older, retired people. Each of these groups benefits from having special attention paid to their needs. Here, we will look specifically at responses to improving the liveability of places for children and young people.

Learning intentions and success criteria

Public transport

As most young people do not have a drivers licence, they are the community group most likely to depend on public transport. Public transport needs to be safe and reliable to encourage young people to use it. Public transport routes also need to be designed to meet the needs of young people, with services regularly going past local schools, shops, and entertainment and sports facilities. In Victoria, about 35% of secondary school students travel to and from school using public transport every day.

5.15

Green spaces

With housing density increasing, the need for access to green spaces is also increasing. Public parks and playgrounds provide healthy natural environments for children who are living in housing without gardens. These playgrounds also provide opportunities for children to develop their coordination and physical strength while enabling them to make friends and socialise.

During Victoria's lockdowns to combat the spread of COVID-19, playgrounds were sometimes closed. Parents and children across the state eagerly returned to play once they were reopened, showing how important playgrounds are for the physical and mental health of children.

A wide range of recreational environments

One of the keys to improving liveability for young people is providing good public spaces. Public spaces should be designed to cater for the specific needs and interests of young people. These include sportsgrounds and facilities such as skate parks and skating rinks where young people can exercise and socialise. Entertainment facilities, including cafes, cinemas and music venues, are also important to make sure that young people have places to gather and have fun. Community festivals and events can be organised to include activities specifically designed to interest young people. For example, each year the Melbourne Youthfest takes place, a festival created by young people for young people. On the day of the festival, young people gather to enjoy a wide range of live entertainment, battle of the bands competition, food trucks and market stalls.

Source 1 Venues designed for young people can increase youth participation in the community.

Services for young people at risk

As with all vulnerable people in our community, vulnerable young people need support. Young people who are at risk from homelessness, substance abuse or dangerous circumstances need support from the community to make sure they are not disadvantaged and can reach their potential. Community services can provide support through counselling and mentoring, or by arranging alternative accommodation.

In Victoria there are many services available to young people. Melbourne Youth Services is a program funded by the City of Melbourne, which supports young people aged 12–25. They particularly focus on young Aboriginal and Torres Strait Islander peoples, culturally diverse young people, LGBTQI+ young people and young people experiencing homelessness.

Key skill worksheet: Communicating: Proposing a response

Source 2 Melbourne Youth Services provides support for young people aged 12–25, including LGBTQI+ people.

Case study Geelong Youth Activity Area

Geelong's waterfront area has been redeveloped in recent years. Part of this redevelopment is the Geelong Youth Activities Area (GYAA). Built as a series of cascading terraces, it includes performance stages, basketball hoops, interactive screens, a bouldering wall, free wireless internet and LED strip lighting. Its main function is as a skate, BMX and scooter park. It attracts keen riders from around Australia.

The location of this site was chosen for several reasons. It is close to Deakin University and is walking distance from the main bus interchange and Geelong Railway Station. The area was already popular with families, but there was little for teenagers to do at the waterfront. The local council involved young people in the design process and in meeting with the designers and builders.

Source 3 Geelong Youth Activities Area

Quiz me! Responses to improve liveability for young people

Check your learning 5.15

Check your learning 5.15

Review and understand

1 **Identify** three factors that make a place more liveable for young people.
2 **Outline** the importance of playgrounds in the community.

Apply and analyse

3 **Explain** how the GYAA has improved the liveability of Geelong for young people.
4 **Explain** how access to public transport contributes to liveability for young people.

5 Some of the residents close to the GYAA were concerned that this development would reduce the liveability of this area. Why do you think they thought this?

Evaluate and create

6 Design, label and annotate a diagram of a place that could be built in your local community to improve the liveability of the area for you.
7 **Rank** the responses outlined in this lesson in order of most important to least important. Give reasons for your answer. Discuss your rankings as a class.

5C Skills in context
Improving liveability in your local area

Introduction

Lysterfield Lake Park is located in the outer south-eastern suburbs of Melbourne, at the foothills of the Dandenong Ranges. Centred on a large lake that was once a Melbourne Water reservoir, the park is a popular destination for Melburnians. Each weekend, locals and those from all over Melbourne travel to Lysterfield Lake Park to sail, kayak or canoe on the lake. Others enjoy hiking along the large network of bush tracks around the lake.

In 2006, the park hosted the Commonwealth Games mountain bike event. There are a range of bike trails, including easy green trails and more difficult black trails for experienced riders.

The park includes several picnic and barbecue areas. Visitors can spot wildlife, such as kangaroos and wallabies as they enjoy the park.

A key step to improving your local area is to identify the issues that threaten liveability. A good place to practise identifying issues is at a local leisure facility, such as the picnic area at Lysterfield Lake Park.

The photograph in Source 1 shows one of these areas. It has been annotated to show some of the features that make this location a desirable place to visit, as well as some features that threaten this desirability.

Sealed paths allow easy access

Information board indicating walks and trails

Picnic tables and seats

Native trees provide shade and habitat

Lake for swimming and canoeing

Trampled grass and bare dirt from high volume of visitors

Barbecues are free to use

Rubbish dropped on ground by visitors

Barbecue not properly cleaned by visitors

Legend

Features that reduce the desirability of the park

Features that increase the desirability of the park

Source 1 An annotated geographical photograph

Source 2 Lysterfield Lake, Melbourne

Key skill Conducting fieldwork

Capturing and annotating a geographical photo

Geographical photos are an example of primary evidence. When they conduct fieldwork, geographers collect primary evidence. Other examples of primary geographical evidence include water sampling, field sketching and conducting a survey.

Primary evidence is collected firsthand and is the most helpful evidence for geographers to understand the environment they are studying. A geographical photograph is an important piece of primary evidence, as it captures the environment in detail for you to study. It is not enough to simply take the photograph, you must label and annotate what you see. This will help you form your conclusions and make recommendations.

Follow the steps below to capture and annotate a geographical photograph.

- **Step 1** Select a location that you know well, preferably in your local area. Choose an area that you know has a range of desirable and undesirable features.
- **Step 2** Take a photograph of the area you have selected to study. Geographers focus on identifying and solving issues, so geographical photographs are different to the usual types of photographs. Take your photo from a viewpoint that allows you to show both desirable and undesirable features of your study area.
- **Step 3** Use labels and lines to annotate the features of the area you wish to highlight.

For each feature, describe what it is (for example, "native trees") and its significance (for example, "provide shade and habitat").

- **Step 4** Create a legend to show which labelled features reduce the desirability of the area and which ones increase desirability.
- **Step 5** Add a title, including the date and a legend.

For more information on conducting fieldwork, see Conducting fieldwork in Lesson 1.4 Collecting information page 14.

Practise the skill

1 Select a local area that has both desirable and undesirable features. This could be part of your school grounds. Follow the steps above to photograph it. Label and annotate the photograph.

Extend your understanding

1 **Propose** (put forward) two strategies that could be used to increase the desirability of the picnic area in Source 1.

2 The number of visitors to this park increased significantly during the lockdown period in response to the COVID-19 pandemic in 2020. During this time, people in Melbourne could not move more than 5 kilometres from their home.

   a Why do you think visitor numbers increased during this time?

   b How would this increase in visitors change the desirability of the park?

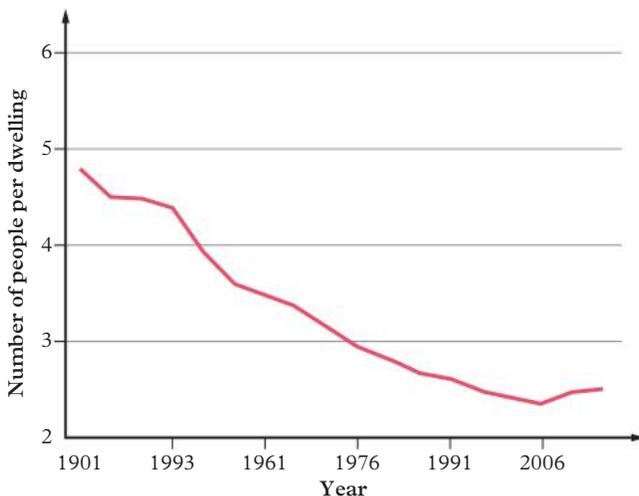**Lesson 5.16**

Review: Liveable cities

Review activity

Examine the sources and answer the questions that follow.

Interpreting and creating graphs

Geographers use data and statistics to examine trends and changes that are occurring. This is often presented as graphs that allow us to easily see the trends and changes. There are different types of graphs and they are all used for different things. For example:

- line graphs and column graphs are usually used when showing change over time
- bar graphs are best for comparing data from different places.

Source 1 and Source 2 show us data relating to the changes that have occurred to Australian houses over time.

1 **Identify** the type of graph being used to display the data in Source 1. (1 mark)
2 **Describe** the changes over time in the average number of people living in each house in Australia since 1901. (2 marks)
3 **Suggest** two reasons why the number of people per dwelling has changed since 1901. (2 marks)
4 Using the data provided in Source 2, **create** a graph. (5 marks)
5 Now that you have created your graph, answer the following questions by interpreting the data.
   a **Explain** what type of graph you have used to represent this data and why.
   b **Describe** the pattern of living in row or terrace/townhouses over time.
   c Has the number of people living in separate houses changed dramatically since 2001? **Justify** (give reasons for) your answer. (10 marks)

(Total: 20 marks)

Source 1 The number of people per dwelling (i.e. the number of people who live in a house)

Source 2 Census results for separate houses (on their own block of land) and row or terrace houses/townhouses in Victoria.

Type of dwelling	2001 census results	2006 census results	2011 census results	2016 census results
Separate house	78%	76.4%	76.9%	73.2%
Row or terrace house/ townhouse	8.3%	9.2%	9.6%	14.2%

Source 3 The number of people in separate houses is gradually reducing, according to census results.

Module checklist: Liveable cities

Module review quiz: Liveable cities

Part 2

History

Overview

Concepts and skills

Aboriginal and Torres Strait Islander Peoples' knowledge and understandings (Deep time to the modern era)

Ancient societies (10 000 BCE–600 CE)

Modules available exclusively on Oxford Digital.

Module

6

The history toolkit

Sub-strand: Historical concepts and skills

Overview

History is a process of inquiring into the past. Historians are interested in all aspects of the past and seek to piece together accurate pictures of what life was like in days gone by.

A historian uses a range of tools to discover the past. These tools are the historical concepts and skills you will learn about in your study of history.

Historians are curious. They investigate artefacts and want to know more about them. Despite these investigations, certain facts about many ancient artefacts remain a mystery. Uncovering the secrets of the past is not always easy and historians do not always agree. These mysteries drive historians to continue their important work.

Source 1 Ancient ruins, such as those pictured above, allow historians to understand what life was like in the past.
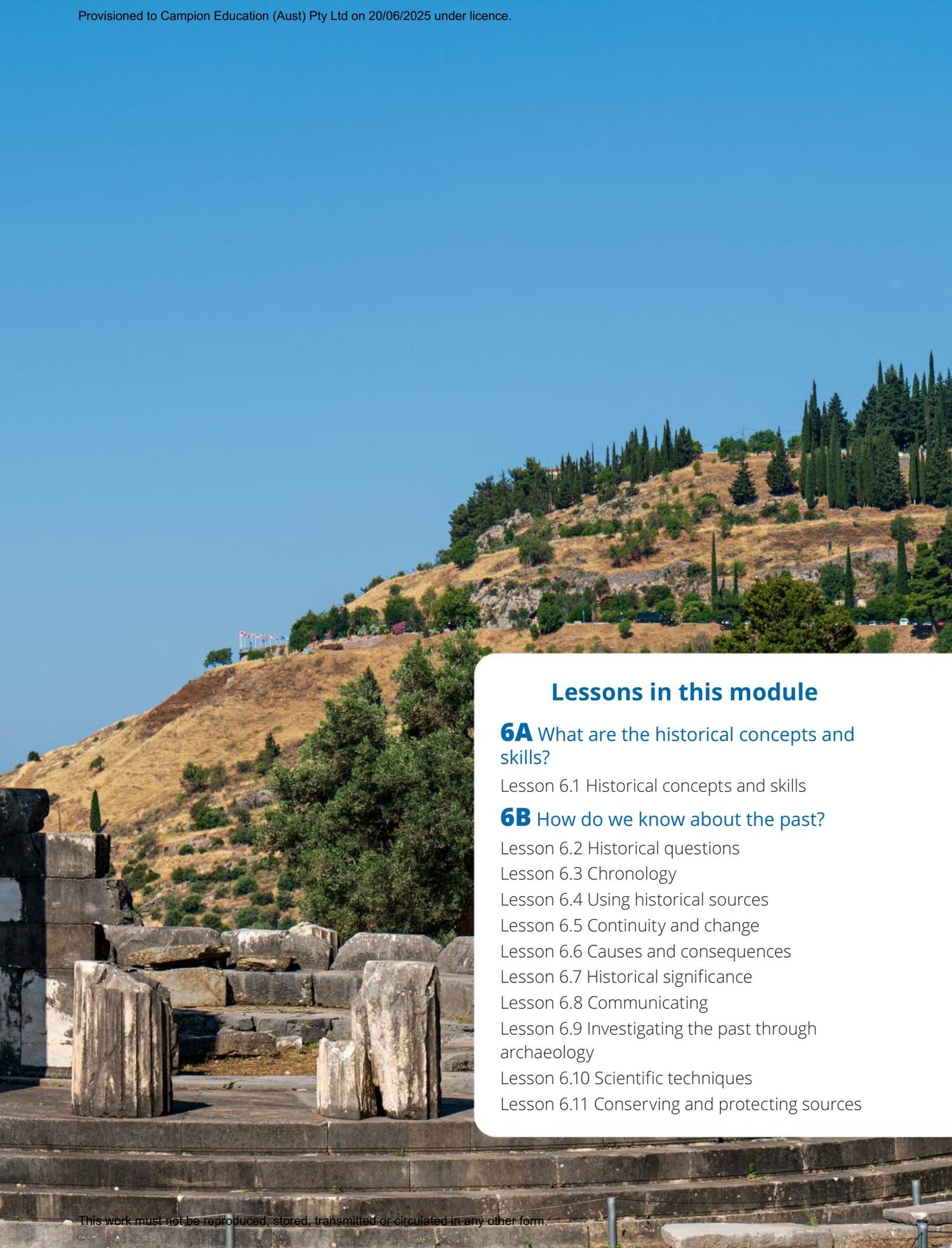
Lessons in this module

Lesson 6.1
Historical concepts and skills

Introduction

Historians use a variety of concepts and skills to investigate and understand the past. As you learn to apply the concepts and skills listed below, you will begin to think like a historian and learn how to conduct your own historical inquiries:

1 historical questions
2 chronology
3 using historical sources
4 continuity and change
5 causes and consequences
6 historical significance
7 communicating.

These concepts and skills will be covered in more detail in the following lessons. By studying history, you will gradually master each and gain another important tool for understanding and explaining the events and people that have shaped our world. It might help you to think of each of these concepts and skills as individual tools in your toolkit.

Source 1 Historians use several concepts and skills to investigate the past.

4 Continuity and change
3 Using historical sources
5 Causes and consequences
2 Chronology
6 Historical significance
1 Historical questions
7 Communicating

Lesson 6.2
Historical questions

Introduction

hypothesis a considered theory or statement, based on research and evidence, about something that has not been proven (hypotheses is the plural form)
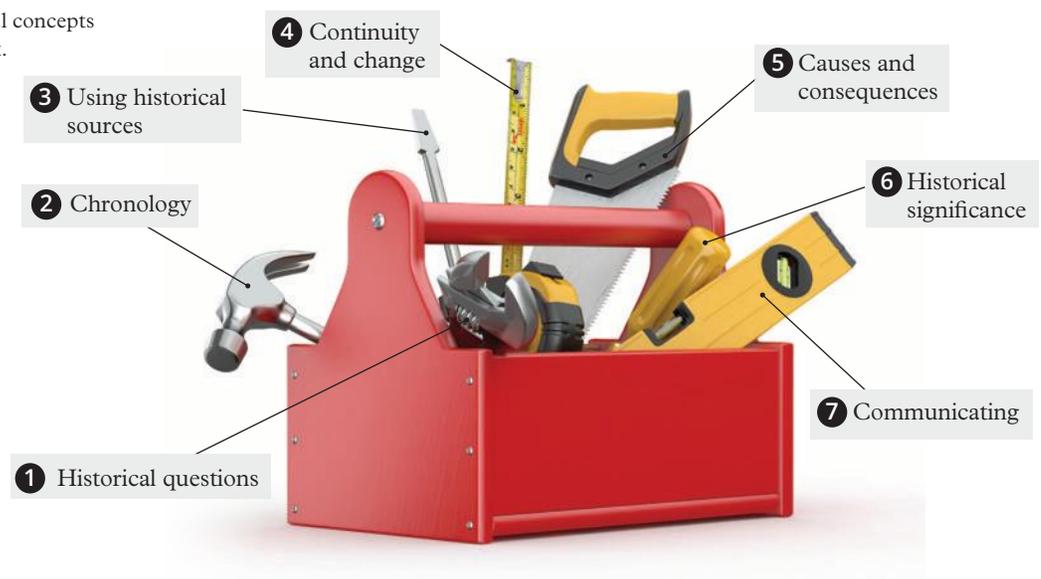
Developing historical questions is one method historians use to understand the past. This process requires finding and analysing sources, using information from them as evidence to develop an informed explanation or argument. Historians begin any historical inquiry by asking big questions about the past. From research in response to these big questions, historians develop a **hypothesis** (a theory) about who, what, where and why certain events took place.

Key content video: Developing historical questions about the past

Oxford University Press

Key concepts & skills Historical questions

Developing historical questions

Look closely at Source 1. This visitor to the Great Sphinx at Giza in Egypt is asking some important questions. You can learn to do this too by starting your questions with the words "who", "what", "where", "when", "why" and "how", also considered the 5Ws and H of History. For example:

- What is the Great Sphinx?
- Who built it?
- When was it built?

The best questions open up exciting areas for you to explore. For example, the visitor might ask a simple question, such as "What does the Sphinx look like?" This is a question with a relatively simple answer. A better question for the visitor to ask might be "What is the Sphinx meant to represent?"

Practise the skill

1 Generate four big questions of your own that will help guide your research into the Great Sphinx.
2 Once you have generated your questions, **identify** the information you will need to answer these questions and where you might be able to locate it.
3 The mystery of the Great Sphinx has puzzled historians for many years. Are there any questions you have not been able to find reliable evidence or answers for? What reasons might there be for this?

Source 1 The 5Ws and H of History will help you to develop your own historical questions.

What is the Great Sphinx made of?
What is the Great Sphinx doing here?
How long has the Great Sphinx been here?
What is the Great Sphinx supposed to be?
Why is the Great Sphinx important?
Who built the Great Sphinx?

6.2

Locating relevant sources

artefact an object that is made or changed by humans

Sources provide information for historians. They can take many different forms, from historical **artefacts** to written records in books or online. Some examples of sources include human remains, coins, cave paintings, textbooks, journals, online databases, newspapers, letters, cartoons and diaries.

Locating a range of relevant sources is a valuable skill, usually involving different research methods, such as:

- checking catalogues at your school and local library
- using online search engines, such as Google
- visiting museum and government websites
- looking at newspaper and magazine archives
- contacting local historical societies
- interviewing older family members about the past and examining family antiques and keepsakes.

Locating relevant sources online

Books and newspapers are valuable sources of information. Research is also conducted online. Your teacher or librarian can help with guidance on developing good research skills. In addition, to make sure that sources gathered online are accurate, reliable and relevant, follow the guidelines below:

- When using search engines, use keywords and be as specific as you can.
- Use reputable websites to find reliable information. The domain name in the URL (internet address) is a quick way to tell if the website is reliable or not. Some common domain names are listed in Source 3. Avoid blogs or social media posts created by unknown authors. If you do find information relevant to your investigation on a blog or social media site, be sure to verify it by using a more reliable source.
- Never cut and paste information you find online straight into your own work. Taking someone else's work, ideas or words and using them as if they were your own is called plagiarism. Plagiarism is unethical and if you plagiarise, your work can be rejected.

Source 2 Research is an important part of history. Your teacher or librarian can help you develop your research skills, both for the library and online.

Source 3 Common domain names

Domain name	Description
.gov	The site is linked to a government institution. These sites are generally very reliable.
.net	The site is linked to a commercial organisation or network provider. Anyone can purchase this domain name. As a result, these sites may be unreliable.
.org	The site is linked to an organisation. Generally, these organisations are not for profit (e.g. Greenpeace, World Vision International, British Museum). If the organisation is reputable, it generally means the information provided has been checked by that organisation. You need to be aware of any special interests the organisation may represent (e.g. particular religious, commercial or political interests) as this may influence what they have to say on a particular issue.
.com	The site is linked to a commercially based operation and is likely to be promoting certain products or services. These domain names can be purchased by anyone, so the content should be carefully checked and verified using another, more reliable source.

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6.2

Recording relevant sources

▶ **Key content video:** Recording relevant resources

As you identify and locate relevant sources, it is essential that you record details to include in your reference list or bibliography.

When citing (mentioning) a book in a bibliography, include the following, if available, in this order:

1 author surname(s) and initial(s)
2 year of publication (in brackets)
3 title of book (in italics)
4 edition (if relevant)
5 publisher
6 place of publication.

Author family name(s) and initial(s)   Year of publication (in brackets)   Title of book (in italics)

Easton, M., Saldais, M., Coleman, S., Dumovic, V., Carrodus, G., Davey, K., Machar, C., (2023), *Oxford Humanities and Social Sciences 7 Australian Curriculum*, 2nd Edition, Oxford University Press, Melbourne.

Edition   Publisher   Place of publication

Source 4 Example of how to cite a book
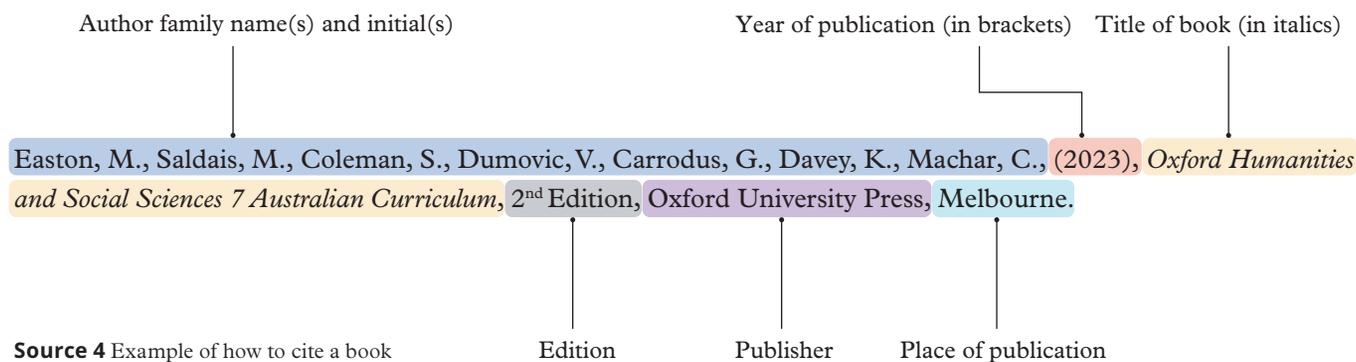
When citing an online source in a bibliography include the following information, if available, in this order:

1 author surname(s) and initial(s) or organisation name
2 year of publication or date of web page (last update)
3 title of document (article) enclosed in quotation marks
4 date of posting
5 organisation name (if different from above)
6 date you accessed the site
7 URL or web address enclosed in angle brackets <…>.

Author family name(s) and initial(s)   Year of publication   Title of article enclosed in quotation   Date of posting

Gershon, L., 2020, 'Well-preserved remains of two Vesuvius victims found in Pompeii', 23 November 2020, The Smithsonian Magazine, accessed 12 January 2023, <https://www.smithsonianmag.com/smart-news/remains-two-men-one-rich-and-one-enslaved-found-pompeii-180976383/>.

Organisation name   URL enclosed in angle brackets <>   Date you accessed the site
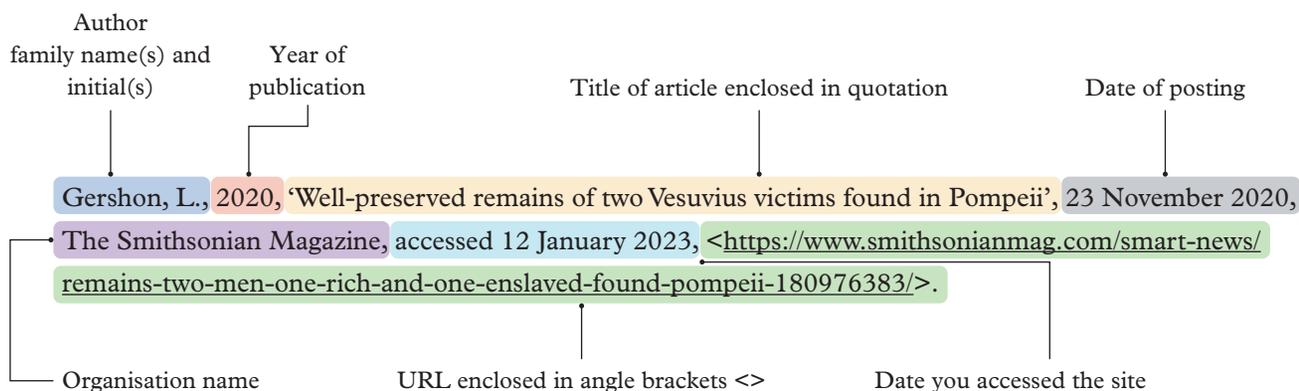
Source 5 Example of how to cite an online source

▣ **Check your learning 6.2**

History

Lesson 6.3
Chronology

Introduction

One of the most helpful things historians can do to get a better understanding of the past is to organise events in the order that they happened. This is known as **chronology**. Chronology can help us organise things that happened over a small period of time, such as a day or week; or huge periods of time, such as hundreds of thousands of years. We can also use chronology to look at events that happened in one place or society, or to compare events across many different places and societies.

Sequencing time

Examples of how historians sequence time are shown in Source 1 and Source 2. Each table shows how 2,100 years have been divided into smaller periods of 100 years. These periods are known as centuries.

Because there is no zero used in the Common Era (CE) calendar, we have to begin from the year 1. This means that the years from 2001 to 2100 are actually part of the twenty-first century. These tables will help you as you work through Year 7 history. Refer to them as often as you need to.

▶ **Key content video:** Sequencing significant historical events

Source 1 More than 2,000 years of history Before the Common Era (BCE) divided into centuries. When ordering time BCE, remember to count backwards to 1.

Century BCE	Time period	Century BCE	Time period	Century BCE	Time period
21st century BCE	2100 to 2001	14th century BCE	1400 to 1301	7th century BCE	700 to 601
20th century BCE	2000 to 1901	13th century BCE	1300 to 1201	6th century BCE	600 to 501
19th century BCE	1900 to 1801	12th century BCE	1200 to 1101	5th century BCE	500 to 401
18th century BCE	1800 to 1701	11th century BCE	1100 to 1001	4th century BCE	400 to 301
17th century BCE	1700 to 1601	10th century BCE	1000 to 901	3rd century BCE	300 to 201
16th century BCE	1600 to 1501	9th century BCE	900 to 801	2nd century BCE	200 to 101
15th century BCE	1500 to 1401	8th century BCE	800 to 701	1st century BCE	100 to 1

Source 2 More than 2,000 years of history in the Common Era (CE) divided into centuries. When ordering time CE, remember to count forwards from 1.

Century CE	Time period	Century CE	Time period	Century CE	Time period
1st century CE	1 to 100	8th century CE	701 to 800	15th century CE	1401 to 1500
2nd century CE	101 to 200	9th century CE	801 to 900	16th century CE	1501 to 1600
3rd century CE	201 to 300	10th century CE	901 to 1000	17th century CE	1601 to 1700
4th century CE	301 to 400	11th century CE	1001 to 1100	18th century CE	1701 to 1800
5th century CE	401 to 500	12th century CE	1101 to 1200	19th century CE	1801 to 1900
6th century CE	501 to 600	13th century CE	1201 to 1300	20th century CE	1901 to 2000
7th century CE	601 to 700	14th century CE	1301 to 1400	21st century CE	2001 to 2100

Key concepts & skills Chronology

▶ **Key content video:** Creating and understanding timelines

Creating a timeline

Timelines are used by historians to sequence time and order important events chronologically. They help divide large sections of time into smaller periods so that events (such as the births and deaths of important people, wars and discoveries) can be arranged in the correct order.

Timelines can look quite different, but they all work in the same way. There are some basic steps you need to follow when constructing timelines. Source 3 provides a simple example for ancient Egypt which you can use to create your own timelines.

Step 1: Work out the length of time you want to represent on your timeline, such as from 3000 BCE to 1000 BCE. Then divide the timeline evenly into suitable blocks of time – in this case 500-year blocks. A timeline showing what you did yesterday might be divided into hours; one showing key events in the 20th century might be divided into decades.

Step 2: Mark specific dates onto the timeline. These dates need to be accurately plotted so that they appear in chronological order. If an exact date is not known, the abbreviation c. (from the Latin word circa, meaning "around") is placed in front of it (e.g. c. 3100).

Step 3: Provide a brief description of the dates plotted on the timeline, describing the events that took place.

Step 4: Note that sometimes, sections on a timeline are shaded in different colours and labelled to indicate a period or block of time, such as the different kingdoms in ancient Egypt.

Step 5: To represent a huge span of time, you may need to break your timeline into sections using a jagged line. This break shows that a section of time has been left out and will ensure that your timeline will fit on the page! Just make sure no important events fall in the time you are leaving out.

Now that your timeline is complete, you can also add images and captions for some of the entries.

timeline a sequence of related historical events shown in chronological (date) order

6.3

◀ **Source 3** A step-by-step guide to creating a timeline

Step 1
Length of time

BCE → **3000** **2500** **2000** **1500** **1000** BCE

Step 2
Important dates

c. 3100   2528   2150   1504

BCE → **3000** **2500** **2000** **1500** **1000** BCE

Step 3
Brief description of events

Step 4
Colours and labelling for sections

c. **3100**
Kingdoms in upper and lower Egypt unite.

2528
The Great Pyramid built.

2150
Last pyramids built.

1504
Pharaohs started to be burried in the Valley of the Kings.

BCE → **3000** **2500** **2000** **1500** **1000** BCE

Old Kingdom (2686–2180 BCE) | Middle Kingdom (2055–1730 BCE) | New Kingdom (1550–1069 BCE)

Step 5
Breaks in your timeline

c. **3100**
Kingdoms in upper and lower Egypt unite.

2528
The Great Pyramid built.

2150
Last pyramids built.

1504
Pharaohs started to be burried in the Valley of the Kings.

BCE → **3000** **2500** **2000** **1500** **1000** **1** CE

Old Kingdom (2686–2180 BCE) | Middle Kingdom (2055–1730 BCE) | New Kingdom (1550–1069 BCE)

30 BCE
Egypt becomes part of the Roman Empire.

Practise the skill

1 **Create** your own timeline based around one of the following topics:
   – important events that have taken place in your life so far
   – events in the life of someone important in your life (e.g. a family member, close friend or someone you admire).

Your timeline should have at least five entries and feature at least one image (with a caption). You may need to conduct some research online to complete this task.

Check your learning 6.3

Lesson 6.4
Using historical sources

Introduction

Evidence is the information gathered from historical sources that can be used to develop, revise or support an argument or challenge an interpretation. Evidence can come from many different sources; for example, interviews from people who lived at the time, letters, diaries, films, maps, newspapers, artefacts and objects, buildings, paintings, song lyrics, clothing and even cartoons.

Evidence can be gathered from two types of sources with distinctive features:

- **primary sources** – things that existed or were made during the time being investigated; for example, during an event or very soon after. Examples of primary sources include human remains; artefacts; buildings or ruins; paintings; official documents, such as laws and treaties; and personal documents. These original, firsthand accounts are analysed by historians to answer questions about the past.

- **secondary sources** – accounts about the past that were created after the time being investigated and often use or refer to primary sources to present a particular interpretation. Examples of secondary sources include writings of historians, encyclopaedia entries, documentaries and websites.

Historians do not always agree on evidence, even when it is gathered from the same source. They evaluate how useful or relevant it may be to their history inquiry. This is why historians are constantly searching for new sources of evidence. They need to use a range of different sources to help them gain a more complete picture of the past.

The concept of evidence refers to the information obtained from historical sources that can be used in a historical argument. Understanding this concept will help you when using historical sources.

primary source a source that existed or was made in the time being studied

secondary source a source created after the time being studied

Source 1 This spearhead is a primary source that provides evidence about Aboriginal peoples who lived in the past.

▶ **Key content video:** Understanding evidence and sources

Understanding the content and context of sources

Both primary and secondary sources are useful, but it is important to understand where they came from (origin) and what the creator of the source hoped to achieve (purpose). This establishes the historical context of a source and investigates its creation and intended audience. It is also important to understand why the source was created (motive). All sources reflect the author's own point of view, and in some cases the author may have intentionally ignored certain facts because of their own views. This is referred to as **bias** and is often aimed at persuading the reader to agree with the author's point of view. This is why historians must carefully analyse and evaluate sources.

bias a pre-set view about someone or something that is not altered by the presentation of facts and opinions to the contrary

Asking questions is a way to begin examining sources. Analysing sources by asking "who", "what", "when" and "why" questions will help you identify the historical context of sources. Source 2 provides a guide to asking questions to analyse the context of sources.

Source 2 Questions to help analyse the historical context of sources

Who	Who wrote, produced or made the source?	• Is the creator a member of a particular group, religion or organisation?
What	What type of source is it?	• Was the source created at the time of the event or afterwards?
When	When was the source written, produced or made?	• How old is the source? • Is it an eyewitness account or is it written by someone at a later date? • Is the source complete?
Why	Why was it written or produced? What did the creator hope to achieve by producing this source? Did the creator want to change people's minds about something?	• Was it designed to entertain, persuade or argue a point of view? • Does the creator have anything to gain personally from the source? • What other events may have been happening at the time that might have influenced the author or source? • Was the creator motivated by a personal agenda? • Was the creator influenced by events at the time? • Was the creator paid to produce the source?

Evaluating sources as evidence

While researching, you will have located and collected a variety of different sources and types of information. Now it is time to compare and select the most relevant information to use as evidence.

Organisation charts are useful tools for collecting, comparing and selecting suitable resources you have located. Follow these steps and refer to Source 3 when constructing a source evaluation chart.

Step 1: In the first row of the chart, outline your historical question, inquiry topic or hypothesis.

Step 2: In the first column, summarise the key content or main argument relevant to your topic that is mentioned in the first source you collect. Some sources may have a more relevant context than others.

Step 3: In the second column you will assess the context of the source and note down the pros and cons. In this step consider its origin, motive, intended audience and potential bias.

Step 4: In the third column, you can outline the features of the source, such as the type of source and its form (for example, written, visual, object, oral).

Step 5: In the final column, record the reference information to ensure you can create a reference list or bibliography of those sources used as evidence. Repeat steps 2–5 for all sources collected.

Step 6: In the final row of the table, **evaluate** how useful the sources are by comparing them and listing the top five in order of relevance.

Source 3 A source evaluation chart showing an example of how you might compare and select sources

Research topic: Tutankhamun – how did he die? Hypothesis: Tutankhamun died as a result of a fall from a hunting chariot.			
Key content	**Context of source**	**Features of source**	**Reference information**
Source 1: 'King Tut "died from broken leg"' BBC news website	**Pros:** • Article is based on scientific evidence such as a CAT scan • Written by a reputable organisation – BBC news • Very detailed explanation and quotes from leading historians in Egypt **Cons:** • Not all the team of historians agree on the conclusion. • Article uses words like "suggests", "may have" and "some", so they could be wrong.	• Secondary source • Scientific article	http://news.bbc.co.uk/2/hi/science/nature/4328903.stm (Accessed 13/11/24)
Source 2:	**Pros:** **Cons:**		
Source 3:	**Pros:** **Cons:**		
Source 4:	**Pros:** **Cons:**		
Source 5:	**Cons:**		
Recommended sources in order of relevance/usefulness: 1 2 3 4 5			

Drawing conclusions about the reliability and usefulness of sources

A useful source, whether primary or secondary, is one that will add to your understanding of history. The source needs to be relevant to the topic or question asked and reliable. The following are good questions to ask to determine the usefulness of a source:

• Is it a reliable source?
• Is there enough information and sufficient detail to help me answer the research question?
• Does the information support and reinforce evidence from other sources?
• Is it balanced or does it present one point of view (bias)?
• Does it present facts, opinions or both?
• Is the information current?

6.4

Source 4 The origins and purposes of these primary (A, B) and secondary (C) sources are very different even though they are both linked to ancient Egypt. What are the pros and cons of each of them as a source in studying history?

Separating fact from opinion

The conclusions you draw about the sources you have found will determine their usefulness. In many cases, this means separating fact from opinion. A fact is something that can be proved: when an event took place, what happened and who was involved. An opinion is based on what a person, or persons, may believe to be true. A simple way to detect whether a statement is fact or opinion is to look closely at the language used. The use of words like "might", "could" and "think" all indicate that an opinion is being expressed. For example:

• fact: Tutankhamun was a pharaoh who died.
• opinion: Tutankhamun might have been murdered.

Analysing sources using DAMMIT

The term "source analysis" is used a lot in the study of history. There are different ways to analyse sources, or different "things" that you can look for and discuss in any given source. These include the date, author, material, motive, intended audience and tone (DAMMIT) of a source.

Imagine you have been asked to analyse the statue in Source 6. Between the source itself and the information contained in the caption, there is a lot to interpret and analyse, but it can be difficult to know how to start.

Using an acronym (such as "DAMMIT") can make it easier for you to know what to look for and what questions to ask. Read the steps in Source 5 closely to see what each word means and how it can help you begin analysing the source.

Source 5 The DAMMIT acronym is a helpful way to remember the questions to ask yourself when approaching any source.

Letter of the acronym	Word	Questions to ask when looking at sources
D	Date	When was the source created? If it was created during the time you are studying, it is a primary source, but if it was created after that then it is a secondary source. A primary source may show attitudes or describe an experience whereas a secondary source if often a factual interpretation.
A	Author	Who is the author of the source? Think about the gender, age, social status and profession. For example, they could be a historian, a leader, an aristocrat, a soldier or a prisoner.
M	Material	Is the source written, oral or visual? It could be a newspaper, letter, diary, photograph, textbook, blog or tweet, or even statistics in the form of a graph or map.
M	Motive	Why did the author produce this source? Was it for official government use, a religious affiliation, the media, or personal reasons? A historian tries to establish the context of the source to help understand the perspective of the person who created it.
I	Intended audience	For whom was the source produced? Was the source for public or private use, was it for academia or the general public? Was it intended to be viewed, or was it intended to be private?
T	Tone	How is the information in the source expressed? How does it make you feel? Words to describe tone can include persuasive, critical, questioning, funny or reflective. Often primary sources are more emotional than secondary sources, which tend to be factual as they are written in hindsight.

History

Now that you have looked at Source 5 and asked a range of questions, it is time to put your source analysis into a paragraph. When writing your response, the "DAM" (date, author, material) can be summarised in one to three sentences, whereas the "MIT" (motive, intended audience, tone) will require a bit more detail. You should provide examples from the source to support your analysis in the "MIT" section.

For a written source, use a short quote from the source and explain its meaning. For a visual source, such as Source 6, refer to a feature or symbol in the source and explain why it is relevant. In general, a historical source analysis should form a paragraph of eight to ten sentences.

Source 7 is an example of a source analysis in response to the bronze statue in Source 6. Annotations have been provided to show you how to turn your questions into a written response.
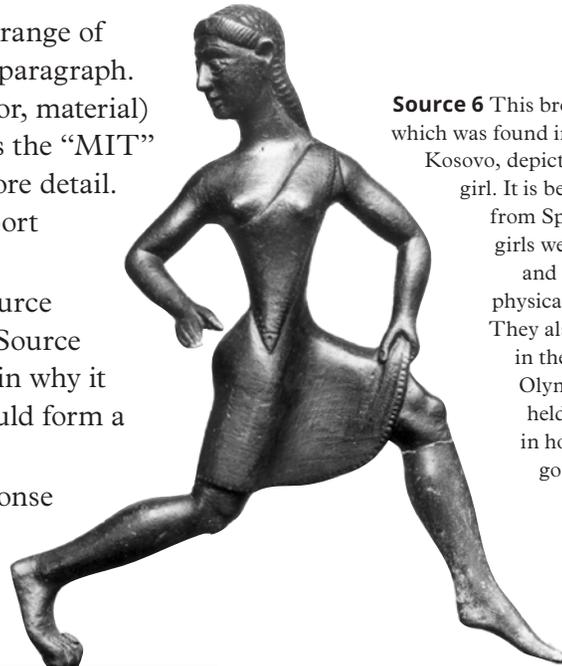
Source 6 This bronze statue, which was found in Prizren in Kosovo, depicts a running girl. It is believed to be from Sparta, where girls were schooled and took part in physical education. They also took part in the Heraia, an Olympic Games held for women in honour of the goddess Hera.

Date

Author

Tone

This bronze figurine of the girl running was created between 520 and 500 BCE. Based on the style, it is believed to have been made by a Spartan person. The motive of this source is to show that women in ancient Greece were athletic. This is conveyed through the short tunic she is wearing and holding up with one hand, and the wide stance of her legs in a running pose. The intended audience for the statue may have been the winner of a female running race, as a type of trophy. The back foot suggests it was once attached to something else, possibly as a decorative statue. The tone of the source portrays her as strong and tough. This is seen through her muscular shape, and running stance of her body. Her face is neutral but looking back perhaps to see how close her opponents are in the race.

Material

Motive

Intended audience

Source 7 A sample response, written using the DAMMIT approach

Identifying perspectives

Perspective is the position from which people see and understand events going on in the world around them. In history, we use primary sources to uncover insights into the beliefs, attitudes and values of people living in the past. Research allows us to uncover different points of view from people about a particular event, person or society, which has been shaped by their age, gender, social position or beliefs and **values**. Despite our own beliefs and attitudes, as historians we must try to understand the different values and beliefs that affected the lives of people who lived in the past. Historians may further categorise perspectives into personal, social, political, economic or religious points of view.

value a quality of character that a society or community regards highly

Source 8 This Roman floor mosaic shows young slaves carrying food for a banquet. It dates back to around the second century CE. Many people today would share the belief that slavery is wrong, however from the perspectives of the slaves themselves and society in general, it was an accepted part of life in ancient Rome.

For example, the Greek historian Herodotus visited Egypt in 450 BCE and wrote an account of how the Great Pyramid of Giza was constructed (see Source 9). For many years, this account was believed to be true, along with Herodotus' claim that more than 100,000 slaves had been forced to build the pyramid.

Source 9

> [Then] Cheops [the pharaoh] succeeded to the throne ... he closed the temples and forbade the Egyptians to offer sacrifice, compelling them instead to labour in his service. A hundred thousand men ... ten years, oppression of the people to make the causeway for the conveyance of the stones [ramp to move the stones] ... the pyramid itself took twenty years ... built in steps.
>
> Translated extract from *The Histories*, Book II, by Herodotus, a Greek historian (*c*. 450 BCE)

However, historians now know that Herodotus' account is incorrect – at the time of his visit, the pyramid had been standing for over 2,000 years. Modern historians have excavated skeletons and believe the pyramid was built by Egyptian labourers, not slaves, who worked on it during flood time when they were unable to work on farms. They lived in specially constructed villages near the worksite. Graffiti etched into stonework indicates that at least some of the workers took pride in their labours, calling themselves "Friends of Khufu".

When analysing Herodotus' perspective, you should ask yourself these kinds of questions:

- What could have motivated Herodotus to deliberately write this false account?
- Did Herodotus' experience as a citizen of Athens mean his view of the world was different to that of the Egyptians?
- Was Herodotus trying to make his account more interesting and exciting for readers?
- Did Herodotus dislike the pharaoh and his rule over ancient Egypt?

Using empathy

Empathy helps us to understand the impact of past events on a particular individual or group, including an appreciation of their historical context and the motivations, values and attitudes behind their actions. Put another way, empathy is the ability to "walk in someone else's shoes" – to be aware of, and sensitive to, their feelings, thoughts and experiences.

Empathising brings history to life. It connects us as human beings regardless of how much time has passed.

Analysing historical interpretations and debates

Historians use sources from the past to give meaning and order to the events of the past. In other words, they interpret sources to explain the why and how of past events. These explanations or **interpretations** can differ among historians and people more generally. Historians see events from different perspectives, which can influence their interpretation of the past and the way they write about it.

Source 10 The ancient Chinese practice of foot binding was carried out for around 1,000 years. Foot binding was the painful practice of breaking the bones in a young girl's feet and tightly binding them until she was fully grown. Tiny feet were considered beautiful and improved a woman's social status, helping to ensure a "good" marriage. Using empathy helps us to understand the pain these women went through, and what motivated their families to do this.

Historians may have access to the same sources but draw different conclusions or provide different interpretations about what these sources tell us about the past. This is called **contestability**. Contested interpretations must be reasonable interpretations based on the available sources. The ancient past, in particular, is an area of history that is open to contest. Lack of sources often makes it difficult to be certain about what happened in the ancient past and why.

When historians present varied interpretations or when new evidence leads to a revision of previous interpretations, a historical debate may follow. To evaluate or decide our own opinion, it is important to consider a range of perspectives and interpretations. This allows us to form our own stance on a debate.

interpretation the assumption and conclusion historians make about an event after the fact; interpretations are formed by examining evidence

contestability refers to explanations or interpretations of past events that are open to debate

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6.4

Source 11 Historians interpret sources (such as coins) to explain past events.

The development of historical understanding about the past relies on the primary sources available to historians. The sources can be written sources like inscriptions, laws, histories, memoirs and plays; or they can be artefacts, such as statues, coins, mummies and buildings. Oral accounts of the past, passed down from generation to generation, are also primary sources. These sources can be fragmented, and there may even be an excess of sources. The role of the historian is to give meaning and order to the events of the past by interpreting the sources so that the why and the how of the past are explained.

If there is a lack or shortage of sources, historians' interpretations are likely to be more tentative or cautious. Differences in interpretations do not make one historian's interpretation wrong and another one's right. A historian's interpretation of a source from the past must be a reasonable one, but there can often be different ways in which events can be understood and interpreted. For example, people in the past have not always made clear what the motives for their actions were, so historians need to interpret their actions to determine their motives. Students of history need to be able to analyse these interpretations and recognise their differences in their own historical arguments.

For example, the discovery of Tutankhamun's tomb in 1922 was a significant historical event. It helped historians uncover many important details about life in ancient Egypt. The discovery of this tomb sparked fierce debate among historians because they interpreted the evidence from the discovery differently. Some believed he was murdered, while others believed his death was an accident. As technology advances, evidence can be discovered that continues debates like these. For example, tests conducted in 2010 showed Tutankhamun had malaria in his system when he died. Some historians believe this contributed to his death. Other historians believe Tutankhamun died due to an infection from a broken leg. Therefore, we would call this issue a "contested" debate.

Check your learning 6.4

Source 12 Egyptian archaeologist Zahi Hawass (centre) supervises the removal of Tutankhamun's mummy from the stone sarcophagus in his tomb. The exact cause of Tutankhamun's death has been contested by historians since the discovery of his tomb in 1922.

Lesson 6.5
Continuity and change

Introduction

Historians recognise that over time some things stay the same, while others change. This is referred to as **continuity and change**, and it is about observing the patterns and turning points in events, ideas, people and developments.

Historians refer to aspects of the past that have remained the same over time as continuities. Aspects of the past that do not stay the same are referred to as changes. Change can occur within a certain civilisation or specific time period, but also across a range of civilisations and time periods. Historians research the pace, scale and extent of change to help understand why some aspects of a society stay the same over time (continuity), while other aspects develop and transform (change).

Examples of continuity and change can be seen across every ancient society and any given period of time. This can be seen in aspects of everyday life that have continued across centuries, or in changes in politics, technology or religious beliefs that have affected an entire society's culture.

Organising and understanding continuity and change

To identify continuity and change, you need to understand the sequence (order) of events and the significance of these events or people, groups or ideas. Timelines can be used to sequence events in chronological order. Ordering events (or people, groups or ideas) on a timeline will help to make it clear when things changed. Timelines can also be used to understand how long things continued without changing. Once you have identified when a change in a society or civilisation occurred, you can assess the extent, pace and scale of the change to determine its significance. For example, was the rate of change gradual (occurring slowly over time), or did it occur quickly?

Changes that occurred in a society or civilisation can be listed and ranked in order of significance. When ranking changes, you should use evidence to justify how significant (or not) these changes were to the society. It is important to look at several different examples of continuity or change within an ancient society to be able to see any patterns or turning points. To understand the significance of an event, see Lesson 6.7 Historical significance (page 235).

Key content video:
Continuity and change

continuity and change the historical concept that explains that while some aspects of a society stay the same over time (continuity), others will develop and transform (change)

History

Source 1 The remains of a stadium used in the Olympic Games in the ancient Greek town of Epidaurus. The Olympics are an example of continuity and change.

6.5

Key concepts & skills Continuity & change

Exploring continuity and change and the Olympic Games

The first ancient Olympic Games were held in 776 BCE. They were held in the city-state of Olympia in Greece. Sporting events took place alongside ritual sacrifices to honour the god Zeus.

The Olympic Games began with the sacrifice of an animal. Athletes trained hard and competed for a wreath of olive leaves. In later Games, Olympic champions also enjoyed fame across Greece.

Participating in the Olympic Games was seen as a duty. Even involvement in wars was halted to allow participation in the Games. The five-day Olympic Games were held every four years until 394 BCE, when they were stopped by the Christian Roman emperor Theodosius I. The first modern Olympic Games were held in 1896 CE in Athens, Greece and continue to this day.

Practise the skill

1 In your own words, **define** the term "continuity".

2 Draw a timeline that shows the following, sequenced in chronological order (by date):
   – when the ancient Olympic Games started
   – when the ancient Olympic Games stopped
   – when the modern Olympic Games started.

3 **Identify** the characteristics of the ancient Olympic Games (for example, ritual animal sacrifice). For each characteristic, identify if this is still present in the modern Olympic Games.
   – If it is not present, then this characteristic is an example of change. For example, ritual animal sacrifice is no longer part of the modern Olympic Games.
   – If it is still present, then this characteristic is an example of continuity.

4 Choose one characteristic that has changed and **explain** why it has changed. For example, ritual sacrifice no longer occurs in the Olympic Games because the Olympic Games are now secular (not religious). You may need to conduct research to explain these changes.

Check your learning 6.5

Source 2 The sport of discus is a historical continuity. Discus originated in ancient Greece, and is now a part of every modern track-and-field competition. Picture A is a copy of a famous Greek statue, Myron's *Discobolus*, created around 460–450 BCE. It shows a discus thrower about to release his throw. Picture B is Australian athlete Dani Samuels competing in the discus event at the 2016 Rio Olympic Games.

Lesson 6.6
Causes and consequences

Introduction

Causes and consequences are used by historians to identify chains of events and developments, both in the short term and in the long term. Causes and consequences aim to identify, examine and analyse the reasons why events have occurred, whether or not they were intended and the resulting consequences or outcomes. It helps to think of causes and consequences as the "why" and "what" of history.

Sometimes the link between causes and consequences is clear. For example, heavy rain over many weeks (cause) leads to flooding (event) and the destruction of crops (consequence). Consequences can be short-term or long-term. For example, one of the short-term consequences of flooding can be damage to property and loss of life. A long-term consequence of flooding might be that although the floods cause damage, they also leave behind deposits of fresh and fertile soil that result in better crops.

Sometimes the link between a cause and consequence is less obvious. Generally, there are many causes that lead to an event. There can also be many consequences. Some may not be observed until long after the event.

causes and consequences the link between what causes an action and the outcome of that action; understanding that events that take place are linked and can have effects on people and places for many years to come

History

▶ **Key content video:** Describing cause and consequences

Analysing causes and consequences

The first step in analysing causes and consequences is to identify the event, development or change, then what may have caused the event/development/change, and then the consequences. Different causes might be social, economic or political, or a cause might be sudden, and act as a catalyst (a trigger) for change. Once the causes of the event have been identified, consider the consequences. Explain how each consequence is linked to your identified event.

When analysing causes and consequences, it can be helpful to organise the information in a way that helps you see the links between the event or change, the cause and the consequences. Graphic organisers, such as a fishbone diagram (see Source 1), are a good way to analyse this. Sometimes, causes and consequences are part of a cycle, and one consequence is the cause of another consequence.

Timelines can also be used to organise events, people and movements in a way that helps you identify links between the causes and consequences of an event or change.
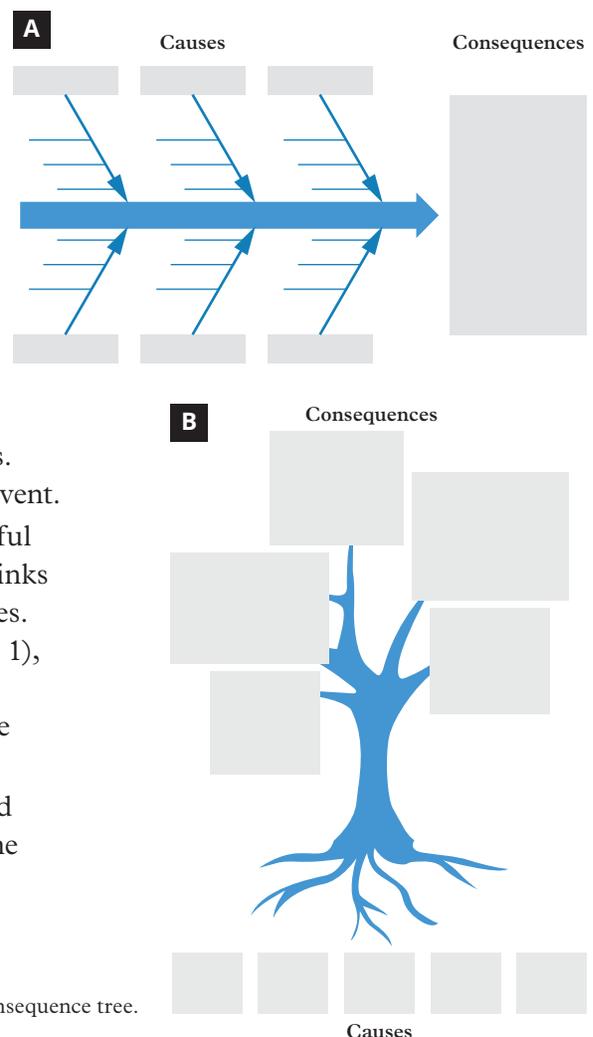
Source 1 A) A fishbone diagram; B) a cause and consequence tree.

6.6

Key concepts & skills Causes & consequences

Exploring causes and consequences and the Great Wall of China

One of the strongest defensive structures in the world is the Great Wall of China. The Great Wall began as a set of separate mudbrick structures that were joined together and extended under the rule of China's first emperor, Qin Shi Huang. This work was carried out in order to prevent northern invaders (known as Mongols) from entering and conquering China (cause). The wall was successful in preventing a Mongol invasion (consequence); however, over 100,000 Chinese labourers died during the construction of the wall (consequence).

Source 2 The Great Wall of China is one of the strongest defensive structures in the world.

Practise the skill

1 **Identify** the cause for the construction of the Great Wall of China.

2 Do you think there might have been more than one cause for the construction of the Great Wall of China? Why do you think Qin Shi Huang wanted to extend the Great Wall?

3 **Describe** one short-term effect of the construction of the Great Wall of China.

4 Choose a graphic organiser to use. Record the causes and consequences of the construction of the Great Wall of China. Can you think of any more possible short-term or long-term effects? For the fishbone diagram, try to categorise causes using labels for the larger bones (such as political, environmental, economic, social or technological) and also for the smaller bones. You can also list reasons within each category.

Check your learning 6.6

Lesson 6.7
Historical significance

Introduction

Historical significance relates to the importance assigned to aspects of the past, such as events, developments, discoveries, movements, people and historical sites. History is full of events, significant people and interesting places. We need to make a judgment about which of these to study. To determine if an event, development, discovery, movement, person or site is historically significant, historians may ask:

- How important was this to people who lived at that time?
- How did this affect people's lives?
- How many people's lives were affected?
- How widespread and long-lasting were the impacts?
- Can the impacts still be felt today?

Depending on your age, gender, ethnicity, religious beliefs and nationality, different events and people from the past will be more or less significant to you.

historical significance the importance given to a particular historical event, person, development or issue

▶ **Key content video:** Identifying perspectives

▶ **Key content video:** Interpretations and contestability

The concept of historical significance refers to the widespread changes caused by an event, person or development in the past and the continuing consequences of those changes today. For this reason, historical significance relates closely to the ideas of continuity and change, and causes and consequences. When analysing the historical significance of an event, development, issue, person, group or society, you should ask the questions listed below. For example, how does the event/individual/group or people (in the past) affect the lives of people today? One way to remember the sorts of questions you should ask to decide the significance of something is to use the "5Rs" of historical significance. Source 2 outlines each of the 5Rs of historical significance.

Source 1 Architecture is a significant legacy of the ancient Romans. They invented concrete and building techniques such as domed roofs. Domed roofs – like the one shown here at Flinders Street Station in Melbourne – would not be possible had it not been for the ancient Romans.

History

Source 2 The 5Rs of historical significance

5 Rs of significance	Questions to ask to decide on significance
R - Remarkable	What was the most notable thing about the event/individual/group of people?
R - Resulted in change	What happened as an immediate result of the event/individual/group of people? (Think about short-term effects.)
R - Revealing	What does the event/individual/group of people tell us about the time period?
R - Resonates	How does the event/individual/group of people (in the past) affect the lives of people today?
R - Remembered	How is the event/individual/group of people remembered today? (Think about evidence that still exists.)

Socrates (470–399 BCE) was a remarkable Greek philosopher who was admired for his honesty and public-speaking skills. Socrates taught his many followers how to think with logic rather than emotion. He also encouraged them to question the morals and order of society, which resulted in change. This reveals that the ancient Greeks valued knowledge and their rights in society, such as freedom of speech and democracy.

His teachings have resonated over time in many ways. For example, our legal system is based on fact, fairness and reason. To this day, he is remembered as the founding father of Western philosophy.

Remarkable

Resulted in change

Revealing

Resonates

Remembered

Source 3 A sample analysis of the significance of Socrates from ancient Greece. The 5Rs have been used to analyse his significance.

Check your learning 6.7

Lesson 6.8
Communicating

Introduction

Key content video:
Using historical terms

Just like scientists, historians communicate using a common language. They use historical terms and concepts to develop their interpretations as part of a historical inquiry and share their findings. Source 1 lists and defines some commonly used historical terms.

Source 1 Some useful historical terms

Term	Definition
AD	An abbreviation of the Latin *Anno Domini* – "in the year of our Lord"; a term used for any time after the birth of Christ (i.e. any time after 1 CE); this term has now largely been replaced by CE (see entry below)
age	A period of history with specific characteristics that make it stand out from other periods (e.g. the Stone Age, the Bronze Age)
BC	An abbreviation of Before Christ, a term used for the period of history before the birth of Christ (i.e. any time before 1 CE); this term has largely been replaced by BCE (see entry below)
BCE	An abbreviation of Before the Common Era, a term used for the period of history before the birth of Christ (i.e. any time before 1 CE); this term has largely replaced BC, because it is culturally neutral
CE	An abbreviation of Common Era, a term used for any time after the birth of Christ (i.e. any time after 1 CE); this term has largely replaced AD, because it is culturally neutral
century	A period of 100 years
chronology	A record of events in the order they took place
circa	A Latin word meaning "around" or "approximately" (abbreviated as *c.*)
decade	A period of 10 years
era	A period of time marked by distinctive characteristics, events or circumstances (e.g. the Roman era, the Victorian era)
millennium	A period of 1,000 years
prehistory	The period of history before written records
time period	A block of time in history
timeline	A sequence of related historical events shown in chronological order; a timeline is generally scaled with years marked at equal distances
year	A period of 365 days

Historical writing

Historical writing requires you to describe and explain using information from a range of sources as evidence. You will often be required to outline the significance of a past event while providing reasons for the event and referring to relevant evidence.

How to write a description

The purpose of descriptions is to give clear information about people, places or objects at particular moments in time. They focus on the main characteristics of particular people or things.

Key content video: Writing a description in history

6.8

Descriptions must always follow a set structure, and events must be organised in **chronological order**.

Source 2 Structure of a description

Introduction	• Introduces the subject.
	• States the name of the person or event.
	• Outlines why the topic is important.
Body	• Provides details about the person or event (including dates and important facts).
	• Information must be organised in paragraphs, with a new paragraph for each detail.
	• Quotations and descriptive words should be used where relevant.
Conclusion (optional)	• Revisits the most important details and provides a concluding statement.

Key content video: Writing an explanation in history

How to write an explanation

The purpose of explanations is to tell how or why something happened. They provide the reader with a greater understanding of the causes and consequences of past events. Explanations must be clear and factual. They should not contain opinions or emotional language. There must be supporting evidence from a variety of sources.

How to reference in an explanation

When you use information from a source within an explanation, either by a direct quote or an indirect reference, the source needs to be acknowledged. This can be done in various ways, depending on the referencing system you are using. One of the simplest referencing systems is the Harvard referencing method, where quotes and indirect references are acknowledged within the text. This is done by placing basic information about the source after the quote or the indirect reference. In brackets, write the name of the author, the year the source was published and the page number where it occurs, for example (Smith 1999:234). Whichever method you use, it is important that you use that method consistently.

Source 3 Structure of an explanation

Introduction	• Clearly states the main idea or aim.
	• Briefly outlines the reason/s why an event occurred and its consequence/s.
Body	• Each idea must be supported by evidence. The evidence should be analysed to explain its significance or importance.
	• Information must be organised in paragraphs, with a new paragraph for each idea or argument.
	• Language should be precise and not contain emotional words.
	• Personal opinions should be avoided.
Conclusion (optional)	• Provides a short and clear overview of the main ideas presented in the body.
	• States a conclusion drawn from evaluating the evidence.

How to write a paragraph using TEEL

When writing a paragraph – either by itself or as a part of an essay – it is important to structure your thoughts logically. The acronym TEEL is a helpful way of remembering how to do this. Read Source 4 carefully to familiarise yourself with each of the steps of TEEL. Then read Source 5 to see an example of a paragraph that has been written using TEEL.

Key content video:
Writing a paragraph using TEEL

Source 4 The steps of TEEL

T	Topic	Introduce your main idea in the first sentence.
E	Explain	Provide some background knowledge on your main idea.
E	Examples	Be sure to use two or three examples in a paragraph. Examples are important in a history essay, as they act as your evidence. Examples include facts and figures, dates, names, places, events, statistics and sources. Use words such as "firstly", "secondly" or "another" to move between examples.
L	Link	Sum up your paragraph by providing some analysis or evaluation on the topic. Do this by providing your opinion on the matter. Some ideas for a good link include: • How useful is the evidence you have used? • Did any changes take place because of the example you have used? • Do you need any more evidence to make a proper judgment on the topic? • In your link, use linking words such as "overall" or "ultimately" to help make your final statement.

Prompt: "How did people in ancient India perceive women in society?" Below is a response to this prompt that follows the TEEL structure.

feminism a belief that women and men are equal

Source 5 Written response example using TEEL

T	Historians believe there was a transition in the status of women in ancient India.
E	Historians suggest that **feminism** was prominent during the Vedic period, as women were regarded with due respect and equality. They pursued knowledge and education to uphold wisdom and emotional strength in the society. Vedic women had authority and freedom over their life, they were allowed to choose who they married and participate in spiritual rituals.
E	Evidence to support this theory has been discovered in one of the oldest Vedic books – the Rigveda, which mentions two women who were honoured for their intelligence and spirituality. Also, Hindu philosophy viewed women as the human form of various goddesses that included Shakti, the divine power or creator of the universe. However, the legal text called Manusmriti, dating back to 100 CE, is believed to have transformed these views towards women; it suggested that men should watch over women because they require constant protection and guidance. It also suggested that unmarried women were untrustworthy and that a good woman would never displease a husband whether he was alive or dead.
L	Overall, it appears that Manusmriti is a very significant text that shaped ancient Indian society. Historians consider it the cause of many noticeable changes in the perspectives held towards women. Such shifts during the early Vedic periods, from equality and honour to distrust and passive obedience, led to lasting consequences for women. These included early and arranged marriages from around 12 years of age and women no longer being allowed to share their opinions in public. Ultimately, the social status and perceived value of women as wise caretakers was entirely removed from the Indian culture.

Source 6 Woman engaging in spiritual practices with female deity.

Check your learning 6.8

History

Lesson 6.9
Investigating the past through archaeology

Introduction

History is an investigation. As part of their investigations, historians try to understand and explain the past by examining sources, which include fossils, bones, books and ruins. Historians cannot just rely on one source of evidence for an investigation; they need to act like detectives, constantly searching for clues about the past to gather as much evidence as possible.

When conducting investigations into the ancient past, historians rely on the work of many other experts, including biologists, **geneticists**, **palaeontologists** and **archaeologists**.

Archaeologists uncover sources of evidence of past peoples. This includes not only skeletons but also the places where they lived and travelled, such as the ruins of towns, temples and tombs; artefacts they made, such as pottery, weapons, tools and coins; inscriptions and stone reliefs they carved; even rubbish dumps (middens) and fire sites. Some sources are so old that they have turned into fossils or remain only as a "shadow" or crust in the soil. Some archaeologists work underwater, looking for sources on or beneath the sea bed, such as old shipwrecks.

geneticist a scientist who specialises in the study of genetics

palaeontologist a scientist who studies life in the geological past by examining the fossils of plants and animals

archaeologist a person who uncovers and interprets sources from the past, such as the remains of people, buildings and artefacts

Source 1 Aboriginal art at Injalak Hill, Northern Territory, provides evidence of Australia's ancient Aboriginal peoples. A historian might investigate the age of these paintings, who painted them and why.
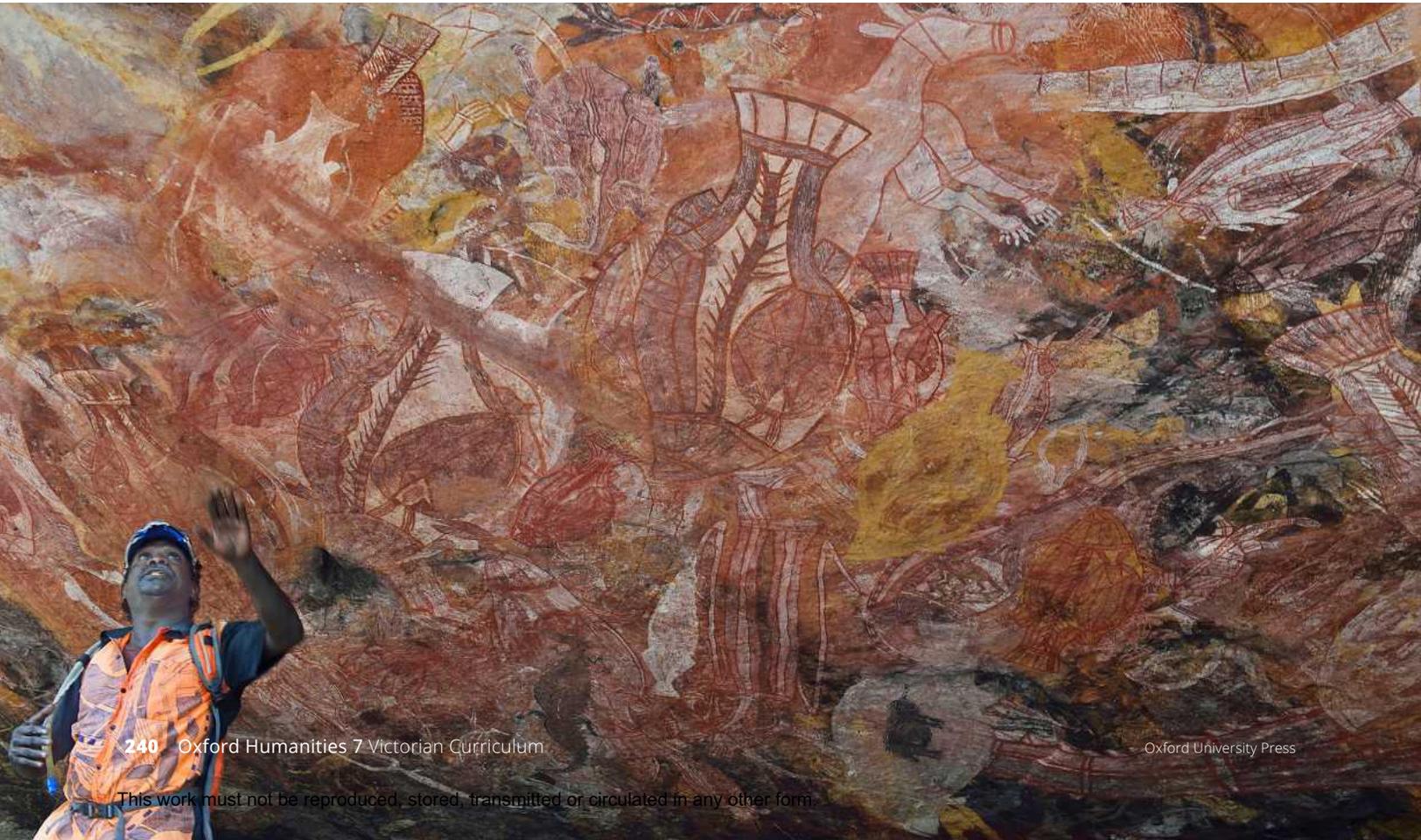
Most sources found on land are buried. They might be covered by the silt of past floods, sand blown by the wind, or forests that have grown over them. Some, like the ancient Aztec capital of Tenochtitlan, lie beneath more recent cities or settlements that have been built over the top of them.

Source 2 Examples of historical sources. Some can be found at archaeological digs. Others can be used to make sense of objects found at digs.

Sources of evidence
Archival material (e.g. letters, reports, documents, voice recordings, newspapers, official documents) found in libraries, archives and on specialised internet sites
Textbooks and journals by experts relating to the subject matter under investigation
Portable artefacts (e.g. tools) and other sources (e.g. a skull) in places such as museums, libraries and art galleries
Cemeteries, caves, beach middens, historic sites (e.g. with ruins)

Source 3 Some archaeological excavations can be quite deep because the sources being excavated may be covered by many layers of sand, dirt, rock or debris. This image shows the mudbrick walls of the 3,400-year-old city of Aten, which was uncovered in Egypt in 2020.

Ötzi the Iceman

In 1991 the preserved corpse of a man who had lived 5,300 years ago was found accidentally by tourists in the Ötzal Alps, in northern Italy. Ötzi the Iceman is the oldest natural mummy in Europe. At first, the people who found him did not realise the significance of their find. A jackhammer was used to chisel the corpse out, damaging part of the body. Later, the body was treated with much more care.

The mummy provided many different types of evidence that showed what life was like when Ötzi was alive. For example, his lungs were blackened, probably from breathing in campfire smoke, and his stomach contained remnants of what he had been eating. Scientists could tell what kind of environment he had lived in from pollen found in his intestine, and they could see what sort of lifestyle he had led from his bones. He also had a tattoo. With the corpse were clothes, tools and equipment, which presented further clues to his life. Ötzi gave historians new insights into the lives of ancient Europeans.
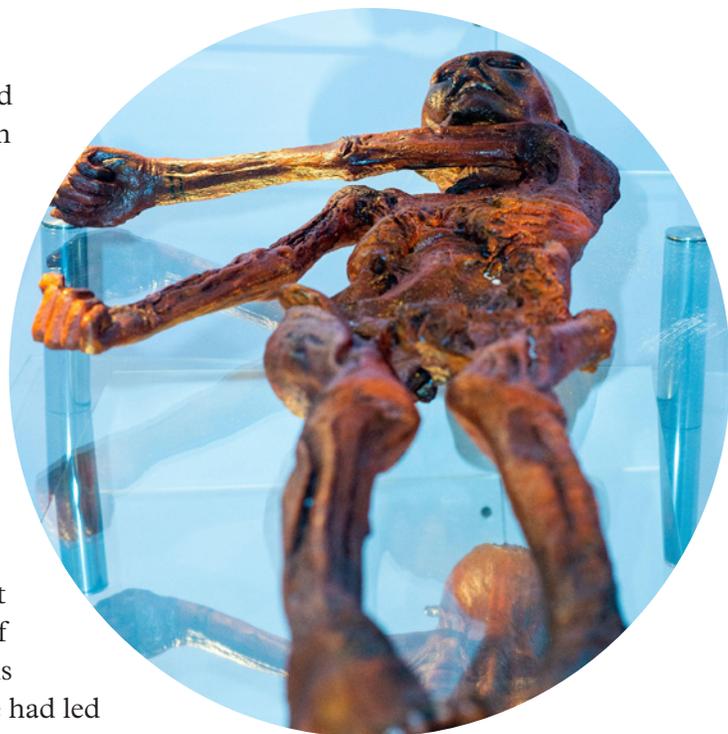
Source 4 The remains of Ötzi the Iceman

Check your learning 6.9

Lesson 6.10
Scientific techniques

Introduction

When archaeologists and historians find objects from the past, they often seek help from scientists who use the latest techniques and machinery to gather more information. Many of these techniques – known as scientific techniques – are used to assess the likely ages of sources. They can tell us, for example, the ages of the skulls in Source 2. Scientific techniques like the ones described below need to be used in combination with other historical techniques and evidence to provide a complete explanation of the past.

Scientific dating techniques

Many scientific dating techniques are used to investigate the past. Some are absolute dating techniques, which allow the age of an object to be stated as precisely as possible (in years). Others are relative dating techniques, which can only determine whether an object is of an earlier or more recent date relative to (compared with) another object.

Source 1 Some scientific techniques used to investigate the past.

Some scientific techniques used to analyse historical sources
Stratigraphy (analysis of soil or rock layers)
Fluorine dating (analysis of the age of bones)
Radiocarbon dating
Thermoluminescence dating
Dendrochronology (analysis of tree rings)
DNA analysis
Palynology (analysis of microscopic organic compounds)

Stratigraphy

stratigraphy a method used to determine the approximate (or likely) age of remains from the past based on the strata (or layer) of earth or rock in which they were found

Stratigraphy involves analysing sources found in the different strata of earth. Strata are layers marking different geological time periods. Since the layers of rocks are generally youngest on top and oldest on the bottom, items found in the lowest strata will usually be the oldest. In an archaeological dig, scientists may know that a particular stratum (the singular form of the word "strata") is 1,000 years old. This means that the items excavated from that stratum will probably be of a similar age.

Natural disasters and geological events can change the way strata are arranged, so it is not an exact science. Stratigraphy is a relative dating technique.

Fluorine dating

Bones can be dated using **fluorine dating**. Bones absorb the chemical element fluorine from the soil where they are buried. The longer they are there, the more fluorine they absorb. Like stratigraphy, this is a relative dating technique.

fluorine dating a scientific method used to estimate the age of objects by measuring the amount of fluorine they contain

Source 2 Three skulls – front: *Homo habilis* (Kenya, 1.88 million years old); centre: *Homo erectus* (Kow Swamp, Victoria, 13,000 years old); back: *Homo sapiens* (Keilor, Victoria, 13,000 years old)

Radiocarbon dating

Radiocarbon dating is a complex technology that is more accurate than stratigraphy and fluorine dating. It is an absolute dating technique. All living things contain a particular type of carbon called C14, which is why we are called carbon-based life forms. This carbon is continuously renewed while an organism is alive. Living things stop absorbing C14 when they die. C14 is radioactive, which means that it gradually breaks down at a known rate into a different type of carbon. Scientists use special equipment to work out how much C14 is still present in once-living organisms. Using that information, they can work out how long ago the organism died, and therefore how old it is.

radiocarbon dating a method used to estimate the age of something that was once alive; the amount of radioactive carbon in the remains of the object is tested and gives a good indication of age because carbon breaks down over time at a known rate

Thermoluminescence dating

Thermoluminescence dating is used to date objects that contain particles of crystal, such as clay pots and stone items. Scientists heat the objects to very high temperatures and measure the light that is released. They can then use the measurements to work out the relative age of the material.

thermoluminescence dating a method used to estimate the age of objects; it involves heating an object to help experts measure how much radiation the object can store and therefore judge its age

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Dendrochronology

Dendrochronology refers to tree-ring dating. Scientists can date a tree by studying the growth rings in a cross-section of its trunk (see Source 3). Each year in a tree's life, a new ring forms. It varies in shape and width according to the conditions that year. It has two parts: a light part (spring growth) and a dark part (summer/autumn growth). Scientists can study these rings and can compare rings between trees to determine their age.

Sometimes experts can calculate the relative age of wooden artefacts, such as bowls or floorboards. This is possible if they can match the ring patterns in the wood with those of local trees of the same species.

Source 3 Trees grow a new ring every year.

dendrochronology a method used to estimate the age of trees by counting the rings in the cross-section of a tree trunk

palynology the study of microscopic organic matter in soil

Other scientific techniques

All living organisms (except some viruses) contain deoxyribonucleic acid, or DNA. It holds the genetic code that determines how a living thing develops and operates. It is comparable to the ones and zeros that make up computer code and tell your software what to do. DNA is sometimes preserved in the remains of once-living organisms. Scientists can learn a lot from studying DNA. They can tell what type of organism it is, and how closely related it is to other species and to other individuals of the same species. For example, they can study the DNA of ancient remains and determine how closely related they are to modern humans.

Palynology

Palynology is the study of microscopic organic compounds (such as pollen) that are found in soil. Taking soil cores enables scientists to analyse fossilised pollen and find out how plant life in an area has changed over thousands of years (see Source 4).

Check your learning 6.10

Source 4 Analysis of the fossilised pollen in this soil core allows researchers to find out how plant life in a particular area changed over thousands of years.

Lesson 6.11
Conserving and protecting sources

Introduction

Historical sources, which include human remains, can be very fragile. Once exposed to the open air, weather, pollution and humidity, many items will quickly deteriorate. In addition, sources may be stolen or broken by careless handling.

Tourist numbers are growing rapidly in places such as Pompeii and the Aboriginal art caves in the Kimberley. Too much trekking over the same ground, too much touching and breathing in a confined space can damage sources, especially if they are very old and fragile. In addition, such actions may cause offence or be disrespectful of others' beliefs.

Conservators are now taking a range of measures to protect certain objects and places from overexposure. For example, Aboriginal art found in caves is often fenced off. Such an action respects the spirituality of Aboriginal peoples, but also protects this ancient art from damage. Another example is the inclusion of certain old buildings in Australia and around the world on heritage lists, which ensures their protection and conservation.

Many sources are stored in libraries, archives, art galleries and public museums where they can be cared for and preserved. Valuable, fragile or very important sources can usually be viewed, but not borrowed, touched or removed.

Venues such as museums and galleries provide security and proper storage facilities. Their design also sets the right environmental conditions. Some items, for example, must have muted light or low humidity. In addition, these institutions have staff who know how to restore and repair damaged items. They also know which artefacts are the most important to conserve, because conservation can be expensive.
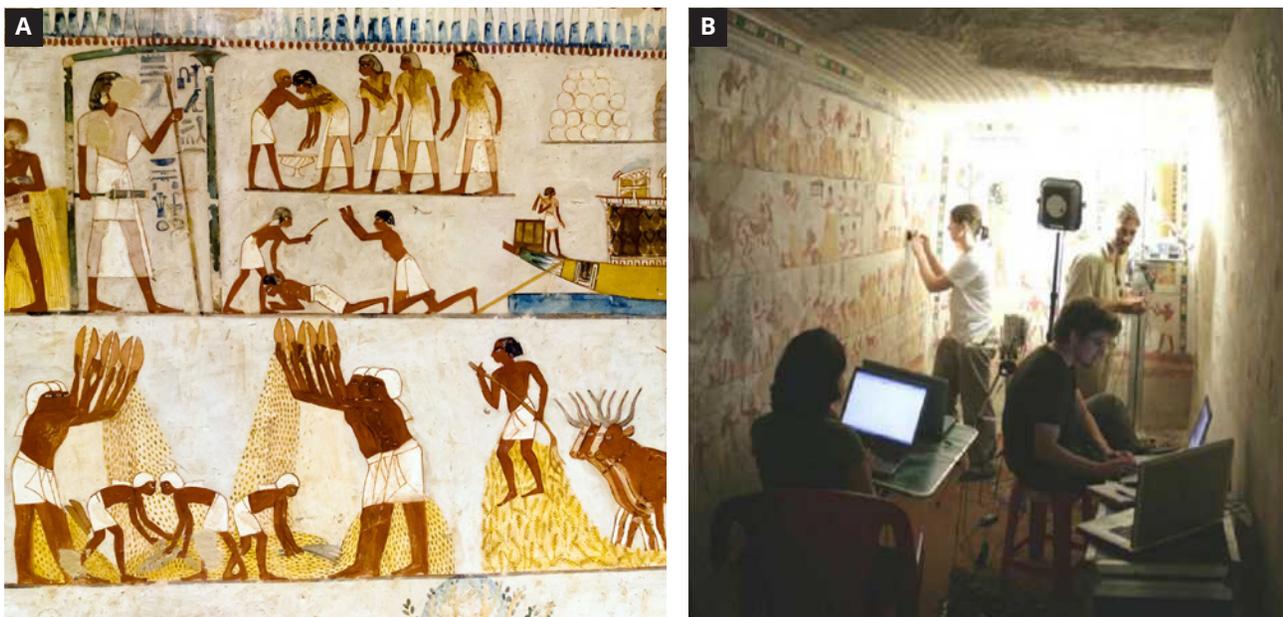
Source 1 Restoration began in the Tomb of Menna in Egypt in 2006. Photo A shows a painting on the wall of the tomb. Photo B shows a team of experienced scientists, historians and archaeologists working together to restore the tomb.

The World Heritage List

One of the ways that significant sites are protected is through the **World Heritage List**. **UNESCO** identifies important places around the world to help safeguard them for future generations, and places them on the World Heritage List. Sites are nominated by countries that have signed an international agreement on the protection of the world's cultural and natural heritage. There are more than 1,150 sites on the World Heritage List.

Australia has 20 sites on the list that have been identified as cultural, natural or mixed sites, including the Sydney Opera House, the Great Barrier Reef, K'gari (Fraser Island) and the Willandra Lakes Region.

In 2019, a new Australian site was added to the list: the Budj Bim Cultural Landscape in Victoria. This site provides evidence that the Gunditjmara people used a system of waterways to trap, store and harvest eels, making it one of the world's oldest and most extensive aquaculture systems.

Source 2 The Budj Bim Cultural Landscape, Victoria

How are World Heritage sites protected?

The World Heritage List has actively helped to avert threats to some sites. For example, a proposed highway near the Giza Pyramids was not built after negotiations between UNESCO and the Egyptian government in 1995. A planned aluminium plant near the archaeological site of Delphi in Greece was moved elsewhere.

Angkor Wat in Cambodia is an example of a successful restoration that has saved one of the most important sites in South-East Asia from threats, including unauthorised excavations, theft and landmines.

In the 1960s, UNESCO led an international, multi-million-dollar campaign to relocate the Abu Simbel temple and monuments in Egypt to save them from being submerged by a dam being built on the Nile River. Abu Simbel is one of Egypt's most popular tourist destinations and is a significant part of Egypt's, and the world's, heritage.

Threats from war

In recent times, important sites in Iraq and Syria have been lost or permanently damaged by warfare and looting. In Iraq, the once-great city of Babylon has been used as a military base. Artefacts and archaeological fragments were destroyed when areas were levelled for car parks; heavy vehicles crushed artefacts buried near the surface; and sandbags were filled with soil that included archaeological fragments.

One of the greatest examples of destruction in recent times is Palmyra, a city on the Silk Road that had some of the best-preserved ancient ruins until the militant group ISIS occupied and destroyed important parts of the site. In August 2015, the Temple of Baal Shamin and the Temple of Bal were blown up, and the Arch of Triumph was also destroyed in October 2015. When ISIS lost control of the city in 2016, archaeologists were able to save some artefacts and move them to safety. However, ISIS reclaimed Palmyra and destroyed more of the site in 2017.

In times of war, the focus is on establishing safety and security for civilians, and archaeological sites become vulnerable.

Source 3 Satellite images of Palmyra, before and after the destruction by ISIS.

Check your learning 6.11

Module 7

Overview: Early societies in Australia

Sub-strand: Investigation: Aboriginal and Torres Strait Islander peoples' knowledge and understandings (Deep Time to the modern era)

Overview

Australia is home to many different groups of Aboriginal peoples who have their own languages, cultures and histories. This module will explore how Aboriginal and Torres Strait Islander peoples first came to the continent we now call Australia, as well as providing an overview of the people and culture of the Kulin Nation in Victoria.

The Kulin Nation is made up of five different language groups, who are the custodians of a large part of central and southern Victoria. These language groups are Wathaurong, Dja Dja Wurrung, Taungurung, Woiwurrung and Boonwurrung. In ancient Australia, the Kulin people carefully managed the land, which was their source of food, shelter, clothing and Dreaming stories.

Source 1 Figures in possum skin cloaks by William Barak, of the Wurundjeri people in Victoria, was painted in the late 1890s. It shows pairs of Elders wearing patterned cloaks.
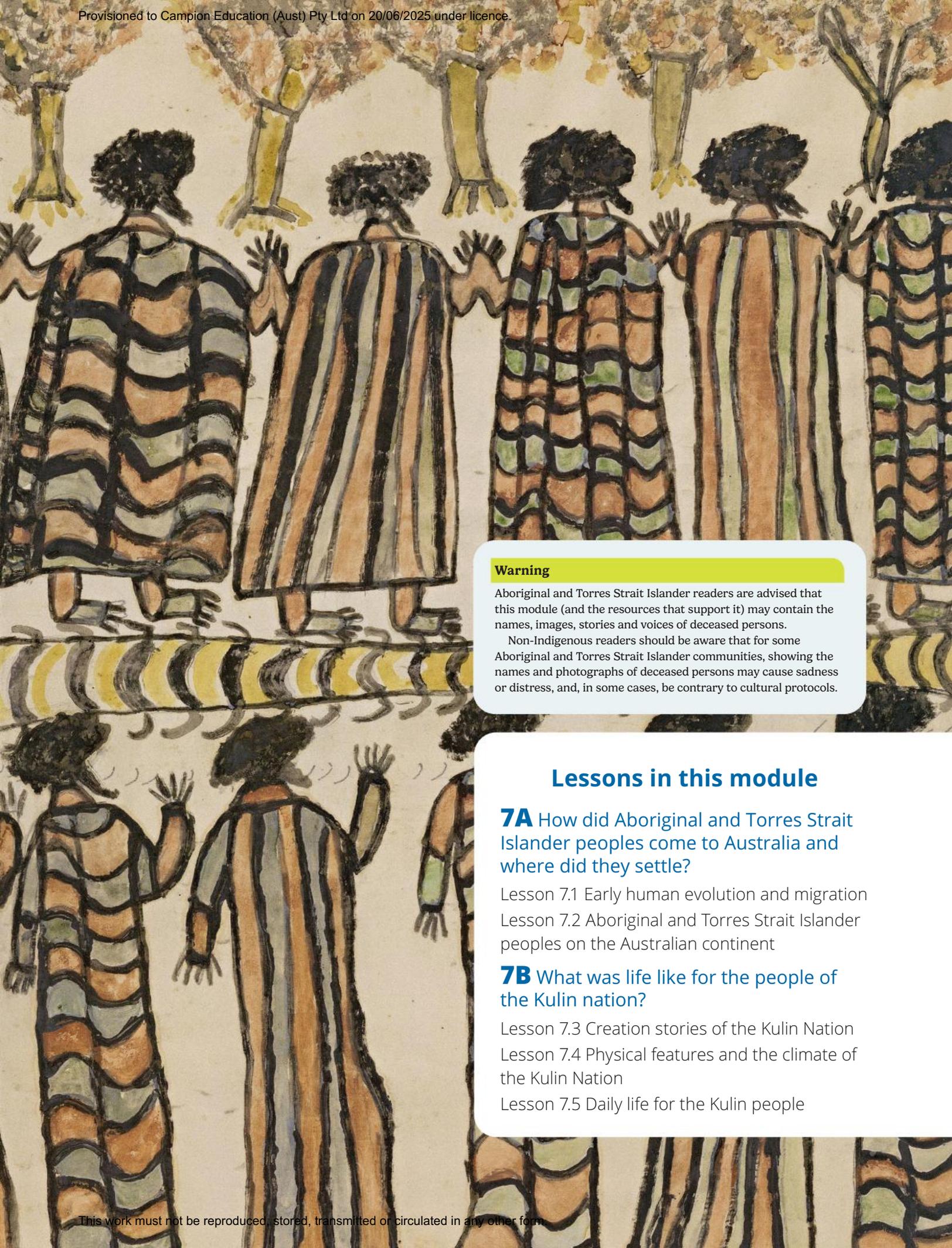
Warning

Aboriginal and Torres Strait Islander readers are advised that this module (and the resources that support it) may contain the names, images, stories and voices of deceased persons.

Non-Indigenous readers should be aware that for some Aboriginal and Torres Strait Islander communities, showing the names and photographs of deceased persons may cause sadness or distress, and, in some cases, be contrary to cultural protocols.

Lessons in this module

7A How did Aboriginal and Torres Strait Islander peoples come to Australia and where did they settle?

Lesson 7.1 Early human evolution and migration

Lesson 7.2 Aboriginal and Torres Strait Islander peoples on the Australian continent

7B What was life like for the people of the Kulin nation?

Lesson 7.3 Creation stories of the Kulin Nation

Lesson 7.4 Physical features and the climate of the Kulin Nation

Lesson 7.5 Daily life for the Kulin people

Lesson 7.1
Early human evolution and migration

See, think, wonder

Look at Source 1.
- What do you see?
- What do you think?
- What do you wonder?

Introduction

The Earth is 4.5 billion years old, but modern humans have only been around for a few hundred thousand years (see Source 1). Life on Earth began as microscopic organisms. Over billions of years, life forms gradually developed to become the complex plants, animals and humans that we know today.

Paleozoic era

345 m.y.

Life emerges on to land

280 m.y.

250 m.y.

The age of the fishes

395 m.y.

415 m.y.

1,000 m.y.

200 m.y.

500 m.y. Complex life evolves in the seas

570 m.y.

Precambrian era

140 m.y.

Mesozoic era

Single-celled life develops in the sea

65 m.y.

1.8 m.y.

2,000 m.y.

Legend
m.y. = million years ago

The Earth forms 4,500 million years ago

Pleistocene epoch

Holocene epoch

Cenozoic era
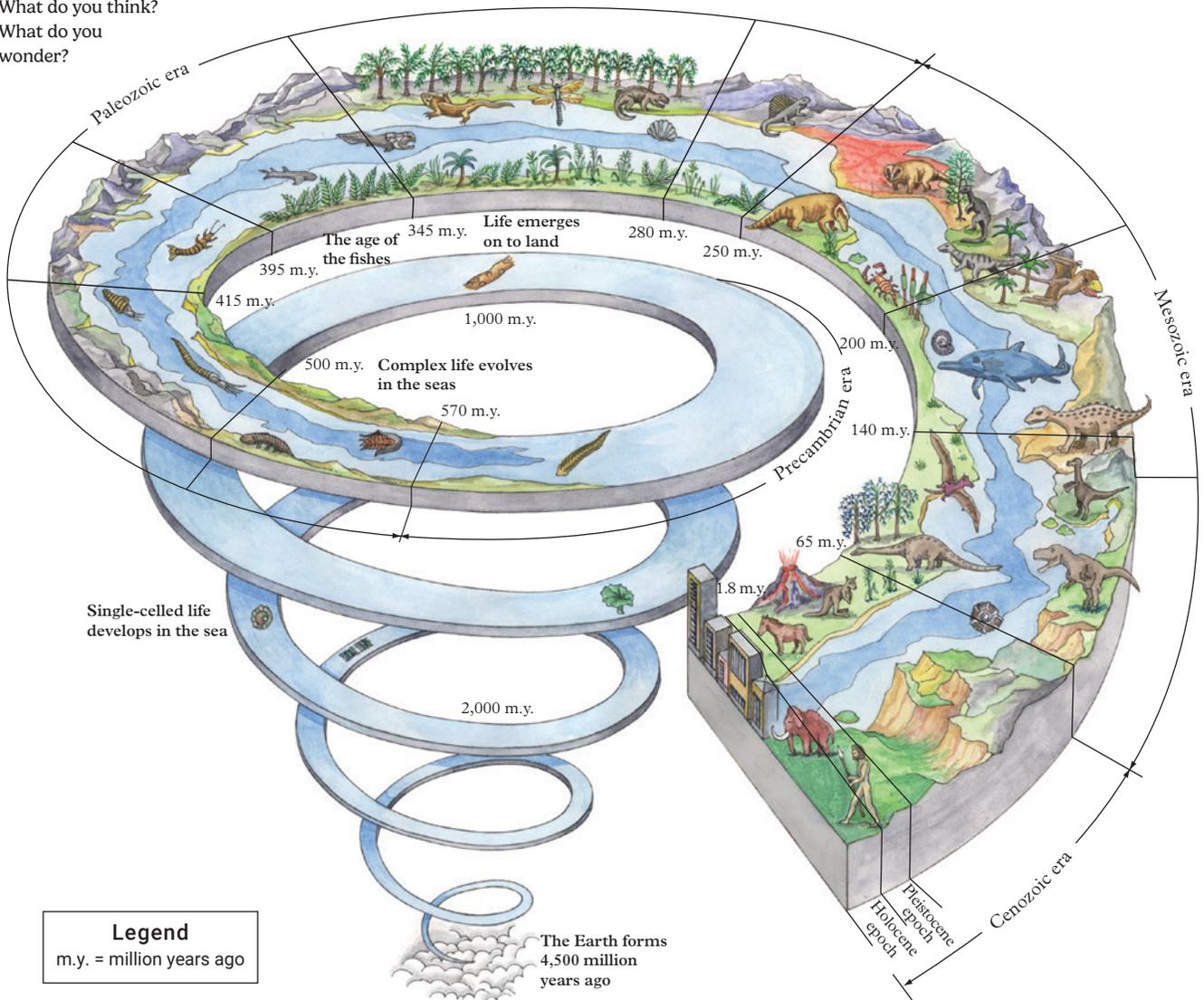
Source 1 This geologic time spiral is a way of showing how life has developed since the Earth began about 4,500 million (4.5 billion) years ago. Modern humans emerged late in the Pleistocene epoch, which began about 2.5 million years ago. We are living in the Holocene epoch, which began about 11,600 years ago.

▶ **Key content video:** Evidence of early human evolution

Where did humans come from?

Scientists today generally agree that the modern human **species** emerged in Africa 200,000 to 300,000 years ago. This understanding is based on the study of fossilised remains of human ancestors, particularly from East Africa. Some of these remains are 4.4 million years old! By studying these remains, scientists can see that various species changed – or evolved – over millions of years. This theory of change is called **evolution**.

The scientific name for modern humans is *Homo sapiens*. Humans belong to a group of **primates** called **hominids**, and *Homo sapiens* is the only species of hominid still in existence. Other now-extinct hominids lived up to 15 million years ago, and included:

- *Homo neanderthalensis*
- *Homo erectus*
- *Homo habilis*
- *Australopithecus*.

Like these other hominids, humans have the following characteristics:

- They can stand up straight.
- They use two legs for walking, rather than four (see Source 2).
- They have larger brains than other species.
- They can use specialised tools.
- They can communicate in sophisticated ways, including through signals and language.

Early ideas about humans

Many remains of these hominid species were found in Europe in the nineteenth century. This led many people at the time to believe that humans must have developed in Europe. Today, scientists agree that humans developed in Africa.

The discovery of these remains led to early discussions about evolution. The most famous of these was Charles Darwin's book *On the Origin of Species*, which was published in 1859.

Charles Darwin

Darwin was an English naturalist (a person who studies the natural world). He left England in 1831 aboard a ship called *The Beagle* where he spent more than five years travelling the world, making notes and collecting specimens of plants and animals. During this voyage, Darwin began to develop his theories of evolution. He observed similarities and differences in species across the globe, leading him to believe that the origins of humans may have been in Africa.

One of Darwin's theories was natural selection, which states that populations of living things change, or adapt to survive. Those that do not adapt become extinct. Darwin believed that favourable traits – those that helped the species to survive – were passed down through generations.

species a group of living things that look similar and can breed with each other

evolution the theory by which different living things have developed from early forms; evolution occurs very gradually over many thousands or even millions of years

primates a group of mammals that includes monkeys, apes and humans

hominids a group of primates that includes humans and their ancestors

History

Source 2 This trail of fossilised hominid footprints found in the modern-day nation of Tanzania, Africa, shows that hominids walked on two feet.

Source 3 Charles Darwin

Darwin's theory of natural selection led to the development of the Modern Theory of Evolution in the mid-twentieth century. This combines Darwin's theory with modern scientific knowledge about **genetics**. It says that the physical and behavioural changes that allow for natural selection occur in **DNA** and are passed on from parents to their offspring.

The legacy of the Leakeys

It was not until the mid-twentieth century that the origins of human evolution were scientifically linked to Africa. This was largely due to the work of **paleo-archaeologists** Louis and Mary Leakey, which supported Darwin's belief that human evolution began in Africa. This is called the **Out of Africa theory** (see Migration waves). This theory is rejected by many Aboriginal peoples as it differs from many Creation stories.

Beginning in the 1930s, the Leakeys undertook extensive research and excavations in the Olduvai Gorge in Africa's Great Rift Valley in modern-day Tanzania. They chose this site because of the geological make-up of the area. Movement in the Earth's crust over millions of years had exposed the rock in the Valley. This revealed the remains of the settlements, people and animals that once lived in the area.

During the decades spent in the Valley, Louis and Mary uncovered many tools and extinct animals. It was not until 1959 that Mary uncovered a skull that dated to 1.75 million years **BP (Before Present)**. In 1964, Louis found the hand and foot bones of a young girl, who he classified as *Homo habilis* – the first classification of this species of hominid. It was this discovery that led the movement to examine the history of human origins in Africa.

Source 4 The Olduvai Gorge in Tanzania, where much of the Leakeys' important work was carried out

Finding "Lucy"

Ten years later in 1974, fossils of another hominid – a female *Australopithecus afarensis* – were uncovered in Ethiopia by American **paleo-anthropologist** Donald Johnson and French geologist Maurice Taieb. This is one of the oldest known human ancestors. The researchers named her "Lucy". She was 3.2 million years old and just one metre tall!

Discoveries such as these, as well as advances in modern science and genetic testing, showed that the remains in Africa were much older than those found in Europe. This suggested that the African hominids came first and that *Homo sapiens* therefore originated in Africa.

genetics the study of genes; our genes carry information that gets passed from one generation to the next

DNA short for deoxyribonucleic acid; DNA is found in the cells of all living organisms and holds the genetic code of how a living thing develops

paleo-archaeologist a scientist who studies human evolution and the remains of hominids

Out of Africa theory one model in the theory of how modern humans spread around the world, hypothesising that they developed in Africa before spreading outwards. This theory is rejected by many Aboriginal peoples because it differs from many Creation stories.

BP (Before Present) a dating method involving radiocarbon dating; used by archaeologists to indicate the number of years before the present, e.g. 10,000 years BP is 10,000 years before the present date

paleo-anthropologist a scientist who studies human evolution by examining the archaeological record

Source 5 An illustration of "Lucy" – one of the oldest known human ancestors

Research continues in Africa

Today, anthropologists, archaeologists and **palaeontologists** continue to work in this area of Africa (see Source 6). The Turkana Basin Institute in Nairobi, Kenya, founded by the Leakeys' youngest son, Richard, continues to do important research into human evolution.

palaeontologist a scientist who studies life in the geological past by examining the fossils of plants and animals

The movement of peoples from Africa

The oldest recorded **evidence** of *Homo sapiens* in Africa is Herto Man Source 6. Discovered in 1997 in Ethiopia, Herto Man is approximately 160,000 years old according to **argon dating** in 2003. In Australia, evidence suggests that Aboriginal and Torres Strait Islander peoples have been here for more than 65,000 years. So, when did people start leaving Africa – and why?

evidence a key concept in history; information provided by a source that supports a given interpretation, or provides support for possible answers to inquiry questions

A changing climate and environment

Early humans were hunter-gatherers, who found their food by gathering wild plants and hunting wild animals. They were therefore dependent on a stable climate for their food sources.

Scientists believe that during the last **Ice Age** – about 100,000 years ago – there were a number of "climate swings". At this time, extremely cold and drought-like conditions were broken up every 20 000 years or so by warm northern hemisphere summers.

Landscapes changed as the Earth warmed and cooled, and **desertification** affected different parts of the globe. This changing of land into desert was caused either by drought or the spreading of ice and snow (called glacial waves) over vast areas.

argon dating a method of determining the age of rocks

Ice Age a cooler period in the Earth's history when ice covered much of the northern hemisphere and sea levels were much lower than they are today

desertification the process by which fertile land becomes desert

North-Eastern Africa: Significant sites

Legend
⚜ Significant archaeological site

Source 6

While changes to the climate and environment forced people to move from the places where they had been living, such as Africa, they found other places where changes had created better conditions.

Migration waves

The Out of Africa theory originally suggested that the movement from Africa happened in a single mass migration. However, it is now thought to have been a series of waves of migration as the changing climate put pressure on early societies, beginning about 100,000 years ago.

There is also evidence showing that people moved into southern Asia and Oceania via the Middle East and India. This is called the Southern Dispersal Model.

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It is important to note that when the migrations of early humans happened, it was not one single genetic line that populated the entire planet. *Homo sapiens* would have bred with other human species; however, as shown in Darwin's theory of natural selection, the stronger species overtook the weaker, now-extinct hominid lines.

Interpreting evidence from deep time history

In the study of deep time history, there are many different interpretations of events and archaeological remains. Archaeologists have no written records to support their investigations, but they have **oral histories** to help their study. However, as technology has developed, many of the theories established in the twentieth century have increasingly been supported by factual evidence. This is because better scientific methods of dating allow historians to be more precise in their evaluation and interpretation of findings.

oral history historical information collected through interviews with or recordings of people telling their story or memory of the past

How do we know how old things are?

There are several scientific techniques used to determine the age of an **artefact**, or of human and animal remains. They can be organised into two categories:

artefact an object that is made or changed by humans

- relative dating, which determines the age of an object in comparison to other items; it does not offer specific dates
- absolute dating, which gives more specific dates and enables the age of an object to be stated as precisely as possible.

Source 8 lists some of the scientific techniques used to investigate the past. There is more information about scientific dating techniques in Lesson 6.10 Scientific techniques (page 242).

Locations and movements of early humans

Source: Oxford University Press

Source 7 Modern humans are believed to have originated in Africa and spread around the world as climate and environmental conditions changed

LEGEND

Archaeological evidence

- *Homo sapiens neanderthalensis* 100 000 to 35 000 years ago
- *Homo sapiens sapiens* 35 000 years ago to present
- Movement of early humans
- 40 000 BP 40 000 years before present day

Source 8 Some scientific dating techniques used to investigate the past

Technique	Description	Dating type
Typology	Estimates the age of an item (e.g. a stone artefact, weapon or piece of pottery) by comparing it with similar types of items.	Relative
Stratigraphy	Analyses items found in different layers of the Earth. Since the layers are usually youngest at the top and oldest at the bottom, items found in the bottom layers will usually be the oldest.	Relative
Fluorine dating	Estimates the age of objects that contain the chemical fluorine. For example, bones that are buried absorb fluorine from the soil. The longer they are there, the more fluorine they absorb.	Relative
Radiocarbon dating	Estimates the age of something that was once alive by measuring the amount of radioactive carbon (carbon-14) in the organism. All living things contain carbon-14. Scientists can determine when something died because carbon breaks down at a known rate.	Absolute
Dendrochronology	Estimates the age of trees by counting the rings in the cross-section of tree trunks once they have been cut down.	Absolute
Thermoluminescence dating	Estimates the age of objects that contain particles of crystal (e.g. pottery or ceramics) by heating the object to measure how much radiation the object has stored and, therefore, how old it is.	Absolute
Argon dating	Dates volcanic rock by measuring the ratio of argon gas in the rock to estimate how long ago the rock cooled and solidified. This technique is very useful in dating human evolution in areas of high volcanic activity, such as Olduvai Gorge.	Absolute
Optically stimulated luminescence (OSL)	Dates minerals by measuring how long ago grains in the mineral were last exposed to sunlight. This tells us how long ago the grains were buried and therefore how old they are.	Absolute

Radiocarbon dating, also known as carbon-14 dating, was developed in the late 1950s. With radiocarbon dating, scientists no longer needed to rely on their estimates because they could more accurately identify the time period of the evidence and understand the environment in which it was found. When genetics and DNA testing became more frequently used in the study of human remains, even greater accuracy was possible.

Quiz me! Early human evolution and migration

Source 9 This skull was found by Mary Leakey at Olduvai Gorge in 1959. It was dated to 1.75 million years BP.

Check your learning 7.1

Check your learning 7.1

Review and understand

1 In your own words, **define** the term "evolution".
2 According to the "Out of Africa" theory, when do scientists believe modern humans migrated out of Africa?
3 **Identify** three ways in which scientists can accurately date fossilised remains.

Apply and analyse

4 **Summarise** the environmental factors that led to modern human migration out of Africa.
5 **Summarise** Darwin's theory of natural selection and how it can be applied to human evolution.
6 **Explain** how the development of better dating techniques has helped our understanding of human evolution and migration.

Evaluate and create

7 **Evaluate** the significance of the Leakeys' contribution to understanding human evolution. Remember, when you evaluate something, you should talk about its strengths and weaknesses. Be sure to give your overall opinion.
8 **Research** the work of the Turkana Basin Institute. Write a paragraph or create a poster explaining the contribution of the organisation to our understanding of human evolution.

Lesson 7.2
Aboriginal and Torres Strait Islander peoples on the Australian continent

The mega-continent Sahul

Before the end of the last Ice Age, Australia was part of a mega-continent that included mainland Australia, Tasmania and New Guinea. This mega-continent was called Sahul (see Source 1). To the north-east of Sahul was the continent of Sunda, which included the modern-day islands of Java, Bali, Borneo and Sumatra. These islands were all connected to each other and to South-East Asia. It is from there that people first arrived on the continent.

Evidence found in the Fuyan Cave in southern China shows that modern humans were in Asia by approximately 80,000 years ago. From there, they moved through South-East Asia, and eventually into Australia at least 65,000 years ago.

The arrival of humans in Australia

It is believed that changing climatic conditions played a significant role in the migration of early humans. The seas that separated Sunda and Sahul meant it would have been necessary to travel by some kind of vessel, such as a boat, to move from one landmass to the other. There was no single **land bridge** that enabled early humans to walk the whole way from one location to the other.

However, in some places, lower sea levels had exposed large land bridges that connected some of the islands and reduced the distance between others. This enabled people to first migrate to Sahul by vessel.

When the last Ice Age ended, the ice sheets melted, causing sea levels to rise. The land bridges disappeared under the rising sea waters and the distances between islands increased, making movement between landmasses difficult. As shown in Source 1, this is similar to how the islands appear today.

No physical evidence has been found of the vessels used by these people. The vessels commonly used by early peoples in ancient times were not built for large open water voyages. It is believed they were small and designed for use in shallower, more sheltered waters. It is possible that the rising sea levels resulting from the Ice Age destroyed any evidence of the very first settlements on Sahul.

Learning intentions and success criteria

History

Sahul and Sunda
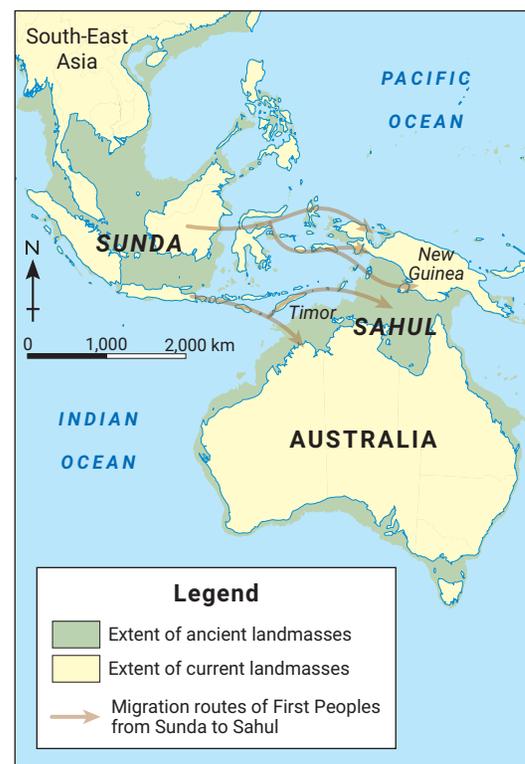
Source: Oxford University Press

Source 1

land bridge an area of land that was exposed during the last Ice Age, allowing people and animals to cross areas that are now under water

▶ **Key content video:** Aboriginal and Torres Strait Islander peoples on the Australian continent

Key concepts & skills Using historical sources

Aboriginal and Torres Strait Islander perspectives

A person or group's historical perspective is the position from which they see and understand the world. Perspectives are shaped by factors such as age, gender, culture, beliefs, social position and values.

It is important to recognise that the examination of "how" early humans came to Australia is usually seen from the perspective of non-Indigenous people. Aboriginal and Torres Strait Islander peoples do not trace their ancestors back to when their families came to Australia or the Torres Strait Islands in the same way that someone of non-Indigenous heritage might. Aboriginal peoples assert that they have been here since Creation, and the land was created as part of **the Dreaming**. This viewpoint is supported by Quandamooka Elder Aunty Val Coombs in the following statement.

Source 2

> Whitefellas like theorising we come from somewhere else other than Australia to lessen our connection to **Country**. We are from here. Our knowledge of our history is embedded in our blood and our Country. Whitefellas knowledge of our history is only as good as their technology.

Aunty Val Coombs, Quandamooka Elder, https://www.nma.gov.au/defining-moments /resources/evidence-of-first-peoples

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

the Dreaming the belief system central to many Aboriginal cultures; the Dreaming also provides a moral code and guidance on interacting with Country; the Dreaming is not fixed in time – it is in the past, present and future

Country the physical environment that a particular Aboriginal and Torres Strait Islander peoples' group has a spiritual relationship with; this includes lands, waters and the sky. For Aboriginal and Torres Strait peoples, Country both owns and is owned by the people

How do we know about early settlements?

The earliest physical evidence of human occupation in Australia dates back to 65,000 years ago from sites in the Northern Territory. Given how close northern Australia is to the prehistoric land bridges of Sahul, it makes sense that we would find such settlements there. Scientific research, including genetic studies and archaeological data, also suggests that people first arrived in Sahul about 65,000 years ago.

It is likely that the earliest settlements were close to the land bridges and coastlines where food was more plentiful, and it was even possible that trade was carried out. However, scientific evidence of these settlements has been drowned, along with the ancient Sahul coastline.
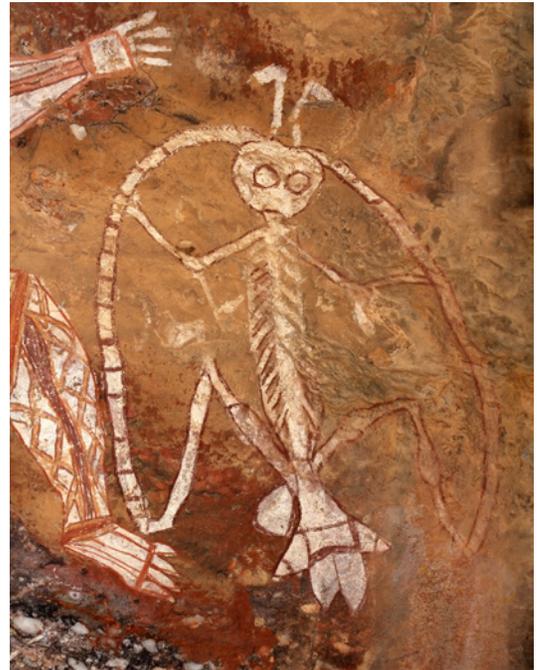
Source 3 This rock art in Kakadu National Park in the Northern Territory dates back 20,000 years. It shows Namarrkon, a Creation ancestor who helped create the land during the Dreaming. He is also known as Lightning Man or Spirit and is responsible for the violent lightning storms that occur in summer in the northern tropics.

Evidence in stories and songlines

Historians, archaeologists and anthropologists have increasingly been studying the stories and **songlines** of coastal Aboriginal and Torres Strait Islander cultures to understand the impact of rising sea levels on communities. In various coastal areas all around Australia, the stories of a coastline that looked vastly different are still held in the cultural stories handed down today. These oral histories are a significant source of information for those studying deep time history.

Migration across the continent

Archaeological evidence helps archaeologists understand the movement of peoples once they settled on Sahul. The physical evidence of human activity that has been found includes:

- human remains
- stone, bone, shell and wooden tools
- rock art and **ochre**
- shell **middens** and mounds
- charcoal deposits (indicating fire had been used)
- stone arrangements
- scar trees
- quarries
- fish traps
- earth mounds.

These physical remains can all be accurately and scientifically dated, using processes such as **radiocarbon dating** and **optically stimulated luminescence dating**, as well as genetic and biological studies.

The dates of human occupation across the continent suggest that migration happened relatively quickly, because evidence has been found of human remains dating to 42,000 years old. This means that within a few thousand years after crossing from Asia, people had settled as far south as the area we now call south-western New South Wales, where they established thriving communities, social structures and rituals. The discovery of Mungo Man and Mungo Lady in the Willandra Lakes region of New South Wales suggests the site was occupied 47,000 years ago. There is more information about Mungo Lady and Mungo Man in 8A Skills & concepts in context Mungo Lady and Mungo Man (page 281).

songlines travel routes across the Australian landscape that link important locations with ancient stories of Country, and often refer to landscape features, such as trees, waterholes and creatures

ochre a natural pigment found in the earth; often used in artwork created by Aboriginal and Torres Strait Islander peoples

middens Aboriginal and Torres Strait Islander occupation sites that contain the remains of meals such as shells and bones

radiocarbon dating a method used to estimate the age of something that was once alive; the amount of radioactive carbon in the remains of the object is tested and gives a good indication of age because carbon breaks down over time at a known rate

optically stimulated luminescence dating a method used to date mineral grains by measuring how long it is since they were exposed to sunlight

History

Source 4 Willandra Lakes used to be a thriving Aboriginal community.

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7.2

Sahul: Ancient migration patterns

Legend

- Today's cities
— Migration super-highways
-- Secondary travel routes
♣ Archaeological sites
▨ Landscape features
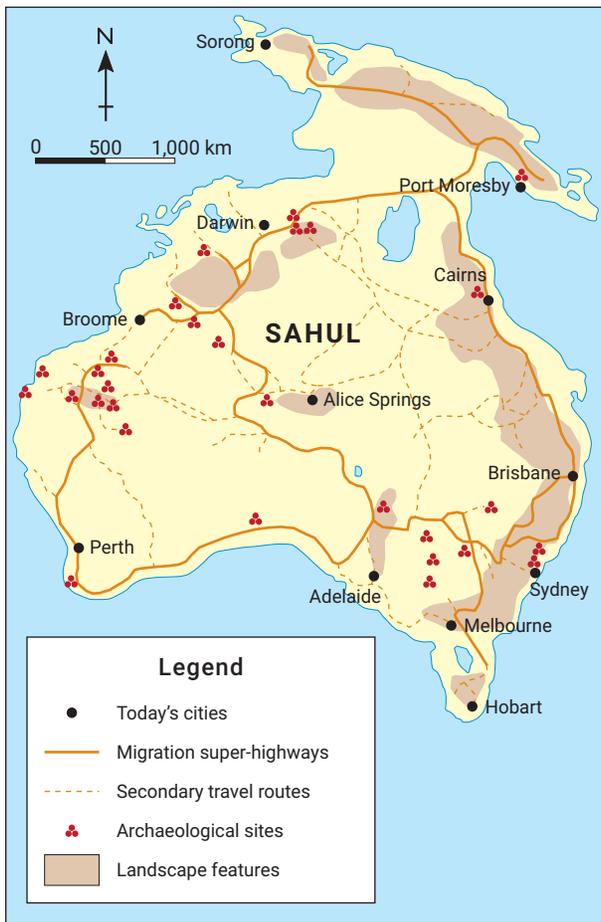
Mapping migration routes

Archaeologists and scientists have been able to understand the movement patterns of early peoples in Australia by mapping sites where extensive remains of human settlements have been found. The evidence suggests clear travel routes across the continent were used by early Aboriginal and Torres Strait Islander peoples.

In 2021, a team of Australian-led international scientists used a supercomputer in the United States to develop a map of migration paths used in Sahul. Using information from archaeological sites, the computer tested 125 billion possibilities to develop the map. The resulting map (Source 5) showed migration "super highways" as well as secondary travel routes. Using this sort of technology, researchers can undertake further work along these routes, including in the now submerged areas of the continent.

Source 5 This map has been redrawn from the one that scientists created in 2021 using a supercomputer to map the migration paths used in Sahul about 50,000 years ago.

Quiz me! Aboriginal and Torres Strait Islander peoples on the Australian continent

Check your learning 7.2

Check your learning 7.2

Review and understand

1 **Identify** when scientists believe early humans first arrived on the mega-continent of Sahul.
2 Name five types of physical archaeological evidence.
3 **Describe** how scientific techniques have helped us tell when early humans reached Sahul.

Apply and analyse

4 **Explain** how scientists created the 2021 map of the migration routes of early Aboriginal and Torres Strait Islander peoples across Sahul.

5 **Analyse** the information in this lesson and explain how scientific techniques have helped us understand the movement patterns of ancient Aboriginal and Torres Strait Islander peoples in Australia. Remember, when you analyse something, you must break it down into smaller parts and explain how they relate to each other.

Evaluate and create

6 **Research** the Dreaming story of Namarrkon. Summarise the story in your own words.

Lesson 7.3
Creation stories of the Kulin Nation

The Kulin Nation

Hundreds of Aboriginal cultures developed on the Australian continent over thousands of years. Different Aboriginal groups that shared similar languages and cultures would sometimes form nations. The Kulin Nation covers a large part of central and southern Victoria where Aboriginal peoples have been living for at least 40 000 years. The Kulin Nation is made up of people from five different language groups:

- Wathaurong
- Dja Dja Wurrung
- Taungurung
- Woiwurrung
- Boonwurrung.

The Aboriginal people who lived around Melbourne were the Wurundjeri people from the Woiwurrung language group.

Source 1 A reference guide to the key terms in this area of study

Nation	A term for a group of Aboriginal peoples. A nation can be made up of a single culture or language group, or many cultures and language groups.
Language group	A term for a group of Aboriginal peoples who share the same language. This can include smaller groups or clans who do not live together but speak the same language.
Mob	A term for a group of Aboriginal people associated with a particular Place or Country. "Mob" can be used to identify who an Aboriginal person is and where they are from.
Woiwurrung	A language, or the name of the language group, in central to eastern Victoria. The Woiwurrung are part of the Kulin Nation.
Wurundjeri	The group of peoples that speak Woiwurrung. They are made up of smaller groups or clans who mostly lived separately but who shared many customs and socialised together.

The peoples of the Kulin Nation believe the land was created as part of the Dreaming. The Creation stories Aboriginal peoples pass from generation to generation are part of the Dreaming and describe how their spiritual Ancestors created the landscape and all its living creatures. The Dreaming and its meaning changes between mobs throughout Australia, as different mobs have different spiritual Ancestors, for example. One of the spiritual Ancestors of the Kulin people is Bunjil the eagle. It is said that Bunjil created the land, the sea, the rivers, the mountains, the animals and the trees.

Learning intentions and success criteria

History

7.3

The story of Bunjil the eagle

Source 2

Bunjil the great creative spirit, having formed the Earth and carved its features, decided to bring humanity into existence. Bunjil gathered up a quantity of clay from a river bed, divided it into two and placed both portions on large sheets of bark cut from a gum tree. He worked the clay into the shape of two men and took stringy bark from the trees to use as hair.

Bunjil was pleased with his work and danced around the figures he had made. He blew air into their mouths, nostrils and navels and filled them with life.

Creation story told by William Barak, Wurundjeri-willam Elder, to William Howitt, a British government official, who recorded Wurundjeri-willam history at the time

Source 3 To the people of the Kulin Nation, Bunjil the eagle is the creator of all living things and seen as the "great protector"
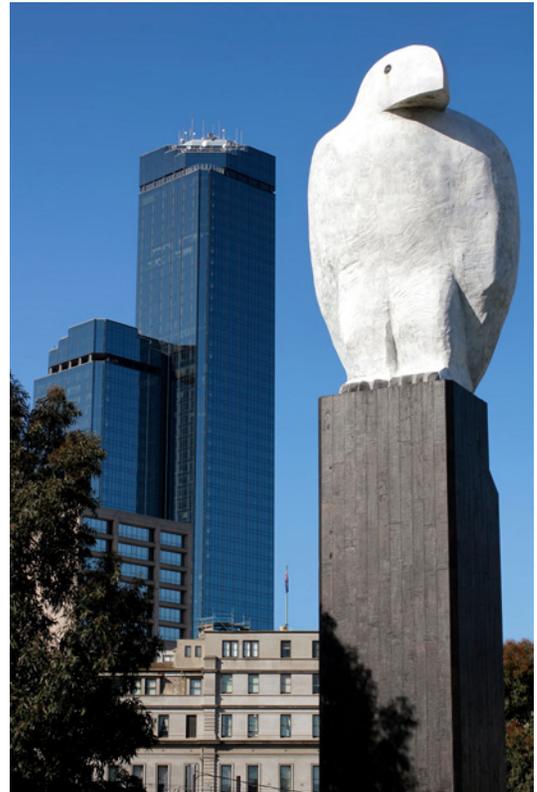
Source 4 This large sculpture of Bunjil the eagle, by Bruce Armstrong, was unveiled in Melbourne in 2002. It looks out over the Docklands and Wurundjeri Way.

The story of Birrarung (the Yarra River)

The Yarra River is known as Birrarung to the Wurundjeri people. Birrarung means "river of mists". In 1835, European settler and surveyor John Helder Wedge named the river "Yarra Yarra", because he thought it was the Wurundjeri word for the river. In truth, "yarra" means waterfall or flowing, and Wedge had made a mistake.

Source 5

It's nice to tell people about the Yarra, how it was blue running, that it was an eel breeding ground, that it had dolphins and sharks and stingrays. And then we use the early settlers' records to show some of the historical changes to the river. The most important part … is understanding the impacts of change on the river, and the impact on the Aboriginal community, particularly on the Wurundjeri. This [the Yarra River] was their main food source. The community would have roo running past, they go down to get flake out from where the aquarium is now. When [the first Europeans] came up the Yarra, it was green, very verdant, but then sheep and cattle decimated our traditional bush tucker sources. When the waterfall was removed and the salt water inundated the fresh running river, the eel breeding stopped, the dolphins and sharks stopped coming. My ancestors would have started starving.

Stephen Tregonning, a Gunai/Kurnai man, describing how the Birrarung (the Yarra River) has changed

Quiz me! Creation stories of the Kulin Nation

Source 6 Birrarung (the Yarra River) has always been an important part of Wurundjeri life.

Check your learning 7.3

Check your learning 7.3

Review and understand

1 **Outline** why Bunjil is important to the Kulin Nation.

Apply and analyse

2 Using Source 5, **summarise** how the Yarra River has changed since European colonisation.

3 The Yarra River is called "yarra" because a European settler did not understand the local Aboriginal language. What might this suggest about relying on information from non-Indigenous settlers about Aboriginal peoples and cultures?

Evaluate and create

4 **Research** one other Creation story from another Aboriginal language group or nation. In pairs, **compare** the story to the Creation story of Bunjil the eagle. Remember, when you compare two things, you must talk about how they are the same and how they are different.

Lesson 7.4
Physical features and the climate of the Kulin Nation

Introduction

People of the Kulin Nation relied on Country for everyday life. To get the best out of the environment, the Kulin people needed to understand the changes of the seasons and the features of the land. People of the Kulin Nation worked with the cycles of nature, rather than against them, to develop a way of living that was in harmony with Country.

The Aboriginal people who lived around Melbourne were the Wurundjeri people from the Woiwurrung language group. The Wurundjeri people's diet, shelter, clothing and customs developed as a result of their understanding of the land and the climate of the area.

Seasons of the Wurundjeri people

The Wurundjeri people identified up to seven seasons in their territory (see Source 1). These seasons were marked by changes in the weather, life cycles of plants and animals, and the position of stars in the night sky.

Think, pair, share

- Think about the seven seasons outlined in Source 1. How closely do these descriptions of weather match the weather you are currently experiencing?
- Discuss your ideas with a partner.
- Share your thoughts with the class.
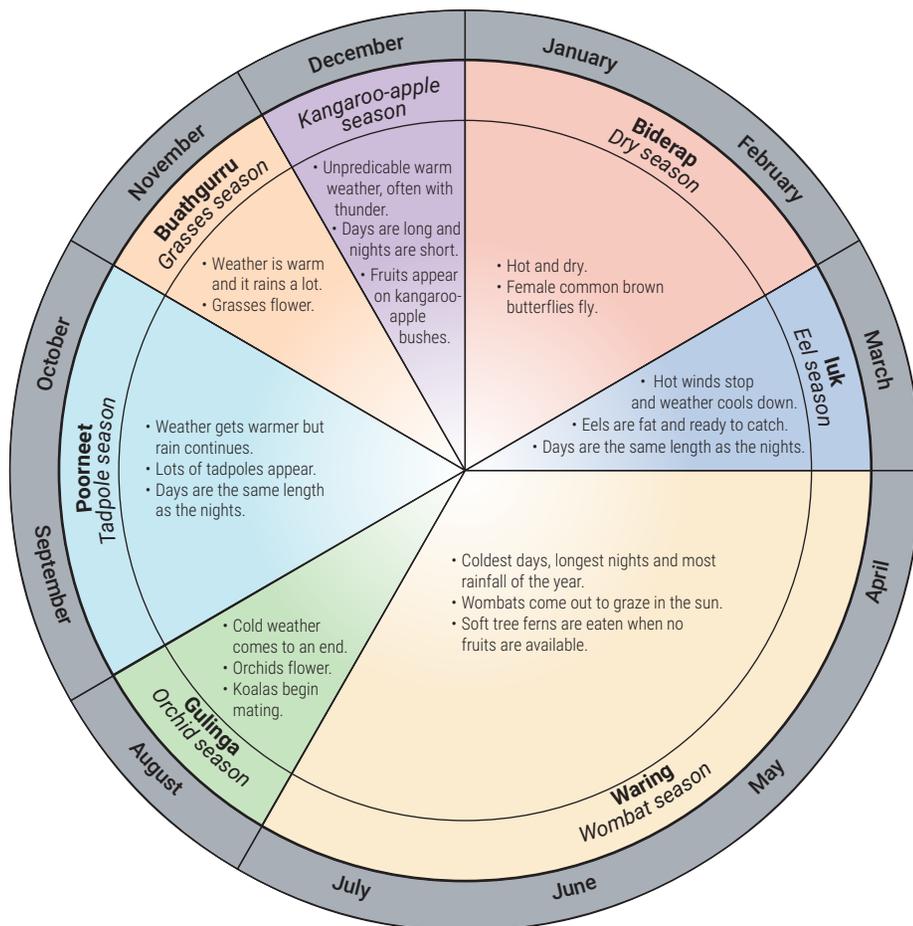
Source 1 The seven seasons identified by the Wurundjeri people.

The Wurundjeri people had to survive dry heat and hot north winds in summer, and cold frosts and occasional floods in winter. Because the weather could reach such extremes, the Wurundjeri people lived in different areas throughout the year. Some people would spend the coldest months in areas such as the Dandenong Ranges, where they sheltered in caves and kept warm with rugs or cloaks made of possum skins. In the hottest months, the Wurundjeri people could camp on the coast, taking advantage of the abundant supplies of fish and other seafood.

The types of foods the Wurundjeri people ate would depend on the season. Nectar-rich banksia flowers, starchy root plants and mistletoe berries were all foods that became available after the first rains following the hot, dry season. As the land warmed after the coldest months, there were plenty of animals to hunt, plenty of root vegetables to dig up, and many different types of berries and seeds to collect.

Source 2 Gunditjmara peoples in western Victoria wearing traditional possum-skin cloaks.

Quiz me! Physical features and the climate of the Kulin Nation

Check your learning 7.4

Check your learning 7.4

Review and understand

1 **Outline** two ways that the lives of the Kulin people were affected by the climate and geography of the region.

Apply and analyse

2 **Explain** what impact the seasonal nature of food supplies would have had on the diet of the Wurundjeri people.

Evaluate and create

3 Think about the area where you live. **Create** a seasonal chart that reflects climatic and environmental changes similar to the diagram shown in Source 1.

Lesson 7.5
Daily life for the Kulin people

Introduction

As we have seen, the Kulin Nation drew on Country for their daily needs, including food, medicine, hunting, aquaculture, crafts, tools and shelter. We will look at each of this in more detail in this lesson. It is important to note that the Kulin Nation is made up of different mobs, who had their own traditions, customs, language groups and trades.

Food

Mobs within the Kulin Nation harvested their food from the environment around them. Men hunted large animals, including kangaroos and emus, while women hunted mostly smaller animals. Women also collected plants, eggs, seeds and fruits. In coastal areas and near rivers and lakes, people could fish for eels, harvest shellfish and trap fish.

The manna gum was particularly important to the Wurundjeri people, and it is where their name comes from. *Wurun* is the name for the manna gum and *djeri* is the name of a grub found on the tree. The Wurundjeri people used wattle trees to create boomerangs and spear throwers for hunting. Wattle branches were often bent at the perfect angle for a boomerang. Wurundjeri people also used the sap from the wattle as a drink, and wattle seeds were ground into flour by the women using grinding stones to make damper (a kind of bread).

Another important food was the yam daisy, or *murnong* in Woiwurrung. Women would gather the tubers (the fleshy stems growing underground) of these plants using digging sticks. Tubers could be eaten raw, but they were much sweeter when roasted in the coals of a fire. The Wurundjeri would also find ant eggs on the red stringybark. These could be mixed with the powdered bark of the stringybark to be eaten as a sweet treat that tasted like butter and sugar.

Source 1 Grinding stones have many uses, including turning seeds into flour for baking. Fragments of grinding stones dating over 30,000 years have been found in archaeological sites in NSW.

Source 2 Examples of bush tucker in the Kulin Nation.

Plant	Manna gum	Yam daisy (*murnong*)	Wattle	Honey pots	Common apple berry	Prickly currant bush
Uses	• The sap is good for drinking. • *Djeri* (grubs) can be found in the bark.	• Their tubers are good for eating.	• Branches can be made into boomerangs. • The sap is good for drinking. • The seeds can be ground into flour for damper.	• Nectar can be sucked from the flowers.	• The fruit can be eaten after it is dropped by the plant.	• The fruit, which tastes like currants, can be eaten in summer.

megafauna a number of large animal species that lived in Australia during ancient times

Hunting

People of the Kulin Nation developed many techniques for hunting and trapping animals and fish. For example, controlled burns were used to flush out animals such as kangaroos. The animals could then be hunted using spears and boomerangs.

Spears in the Woiwurrung region were often made from tea-tree branches and were about 3 metres long. A straight stem would be chosen and crafted with a stone scraper. The spear tip could have a sharpened point or a stone flake attached to it. These spears could be thrown with amazing accuracy when used with a throwing stick.

It is likely that the Kulin mobs would have also hunted **megafauna** when they existed thousands of years ago. Megafauna in Australia were giant animals that have mostly become extinct. In particular, giant marsupials called *Diprotodon* were believed to have lived in Victoria around 50,000 years ago (see Source 3).

Aquaculture

Wurundjeri people living along the Birrarung (Yarra River) fished with spears and used woven traps to catch eels. They would also set traps along the coast to catch fish and eels. This was a common practice for many groups who lived near rivers or the coast.
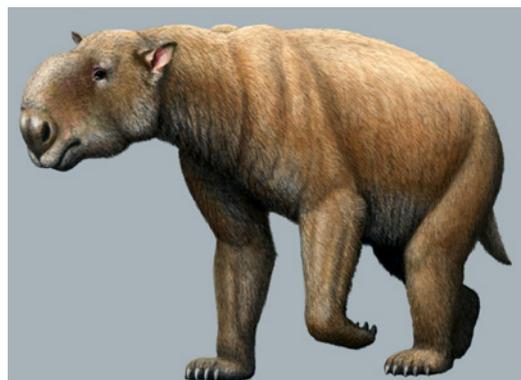
Source 3 *Diprotodon* lived in Victoria around 50,000 years ago.

Source 4 Part of the Budj Bim eel trap site, showing a holding pond for eels, built by the Gunditjmara peoples.

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7.5

Source 5 Examples of bush medicine from the Kulin Nation.

Medicine	Uses
River red gum	The sap is used to seal burns. Mixed with water, it can treat diarrhoea.
River mint	Leaves are crushed and inhaled to treat coughs or colds.
Woolly tea-tree	Leaves can treat breathing problems.
Manna gum	The smoke of older leaves can reduce fever.
Grubs	These are crushed and applied to the skin to soothe irritation or burns.
Kangaroo apple	The fruit is pulped and crushed to make a paste to treat joint pain.

In 2019, the Budj Bim eel trap site in south-western Victoria was added to the UNESCO World Heritage List. This was because the site is one of the world's oldest aquaculture (seafood farming) systems. Ancient lava flow from volcanoes in the area created lava canals and wetlands. Thousands of years ago, the Gunditjmara people of this area used these features to develop a system of channels and dams to trap and harvest eels. Trapped eels could be stored in pools of fresh water until they were ready to be eaten.

Medicine

The Kulin people also relied on the land for bush medicine if they were sick or hurt. This was developed from knowledge handed down through generations and taught the people of the Kulin Nation how to treat sickness or injury. For example, crushed grubs could be applied to skin irritations and burns.

Traditional crafts and tools

The Wurundjeri had sophisticated techniques for creating tools and other items needed for everyday activities. For example, Wurundjeri people wove baskets, bags, mats and nets from reeds, root fibres or bark. This is a cultural practice that continues to this day. They also used human hair and animal fur, twisting these materials into string. These items were sometimes decorated with things such as echidna spines and kangaroo teeth, which were also used to make necklaces or to decorate clothing.

Shelter

The kind of shelter that different mobs would build depended on the environment they lived in. Aboriginal peoples often moved around, occupying different areas of Country throughout the year. But this was not always the case.

Some groups within the Kulin Nation built strong shelters of timber and bark and stayed for a long time if there was enough food to collect and hunt. Some groups also used the caves and rock

formations of the region for shelter. Other groups who moved around more frequently built shelters out of tree branches and bark. They would build a sturdy frame from wattle tree branches and cover it with thick slabs of bark. Piles of bracken ferns covered in soft possum-skin rugs would serve as mattresses.

More permanent shelters were built in the Tae Rak (Lake Condah) region in the Budj Bim area in western Victoria. There is evidence that thousands of local Gunditjmara people lived in villages there around 8000 years ago. The shelters consisted of circular stone foundations on which dome-shaped huts were built.

Source 6 Remains of a stone shelter at Tae Rak (Lake Condah).

Quiz me! Daily life for the Kulin people

Source 7 The branches of wattle trees had many uses in ancient Australia.

Check your learning 7.5

Check your learning 7.5

Review and understand

1 **Identify** three examples of bush medicine used by peoples of the Kulin Nation.

2 **Outline** why mobs in the Kulin Nation would build different types of shelter.

Apply and analyse

3 **Explain** why the manna gum was so important to the Wurundjeri people.

4 **Summarise** the different methods for harvesting food, as discussed in this topic.

Evaluate and create

5 Using what you have learnt in this lesson, **create** a Venn diagram on the similarities and differences of the roles of men and women in harvesting food for the community.

Module

8

Australia: Deep time to the modern era

Sub-strand: Investigation: Aboriginal and Torres Strait Islander Peoples' knowledge and understandings (Deep Time to the modern era)

Overview

Many thousands of years before civilisations developed in Egypt, Greece, Rome, China and India, Aboriginal and Torres Strait Islander peoples were living on what we now call the Australian continent. Historians and scientists now call this time – at least 65,000 years ago – "deep time". It was during this time that Aboriginal and Torres Strait Islander peoples established cultures that continue to this day, making them the oldest living cultures in the world.

Throughout Australia there is evidence of the histories, cultures and traditions of Aboriginal and Torres Strait Islander peoples in archaeological sites, such as rock paintings, bora rings and middens, in the Dreaming stories and songlines of the landscape and its people, and in the continued connection to and care of Country.

Source 1 *Seven Sisters Songline* (1994) artwork by Josephine Mick, a Pitjantjatjara woman. This artwork depicts songlines, which were sung into being at Creation and cover Australia, showing the routes that Creator beings took during the Dreaming. Songlines are one of the ways we know about the histories, cultures and traditions of Aboriginal and Torres Strait Islander peoples.

Lessons in this module

Lesson 8.1
How we know about people in ancient Australia

How we know about ancient Australia

To gain an understanding of what life was like in the ancient land we now call Australia, non-Indigenous historians and people should listen to and read accounts from Aboriginal and Torres Strait Islander peoples. Aboriginal and Torres Strait Islander peoples should always be considered the best source on Aboriginal and Torres Strait Islander history.

A combination of other primary and secondary sources can also be used to gain an understanding of Australia's history. Historians study a range of historical sources to gain information about the past. Some of these sources were created during the time being studied and provide direct evidence about this period. These are known as **primary sources**. Other sources were created after the time being studied and can attempt to explain primary sources. These are known as **secondary sources**.

primary source a source that existed or was made in the time being studied

secondary source a source created after the time being studied

▶ **Key content video:** How we know about people in ancient Australia

Challenges in studying ancient Australia

The study of deep time history can be challenging, as many of the primary sources of evidence that we use to study more recent history do not exist. Accounts by Aboriginal and Torres Strait Islander peoples are an excellent primary source of evidence. However, the **colonisation** of Australia by the British resulted in the deaths of many thousands of Aboriginal and Torres Strait Islander peoples through disease and violent conflict, including massacres. Many families were separated, and traditional languages were not allowed to be spoken. This led to Aboriginal and Torres Strait Islander cultures being severely disrupted and stories and knowledge were lost or hidden. However, many cultural practices still exist today.

colonisation when a country, kingdom or empire sets up an outpost in another land, taking control of that land from its people, often for social, economic or military reasons. Many Aboriginal peoples use the phrase "invasion" instead

In early contact between Europeans and Aboriginal and Torres Strait Islander peoples, stories were often documented in written records by Europeans. However, these secondary sources may not have been accurate transcriptions of the stories.

Over time, physical evidence can also be destroyed. In the early days of Australia's colonisation, human remains, and cultural artefacts were sent around the world as curiosities, without acknowledging their significance and value for the people from whom they were taken.

Primary sources

Primary sources from ancient Australia can be divided into three categories:
- oral traditions
- rock paintings and traditional works of art
- archaeological evidence.

Oral traditions

The Aboriginal and Torres Strait Islander societies of ancient Australia had an **oral tradition**, in which the records and histories of Aboriginal and Torres Strait Islander peoples were passed on by Elders through stories, **songlines**, art, song and dance. It is through these methods, along with ceremony and ritual, that shared cultural knowledge was passed down from generation to generation.

Rock paintings and traditional art

Rock art, including painted and carved forms, has survived for more than 30,000 years detailing the lives and beliefs of ancient Aboriginal peoples. Paintings were usually crafted using natural pigments (dyes) in the form of ochre, and they document **the Dreaming** stories and histories of Aboriginal peoples.

The Kimberley region in north-western Australia has one of the largest collections of rock paintings on the continent. The paintings found in the Kimberley are more than 17,000 years old. There are three categories of rock art in the Kimberley. From earliest to most recent, these are:

- naturalistic art
- Gwion and painted handprint **motifs**
- Wandjina paintings.

Naturalistic art

Naturalistic art shows nature or the natural world through depictions of animals, fish, plants and some human forms, mostly in mulberry and red colours. The main period for naturalistic paintings in the Kimberley was at least 13,000 to 17,000 years ago. One of the most significant pieces is called the "kangaroo painting", a 2-metre "naturalistic" figure (see Source 1) painted in red ochre on the surface of a collapsed rock shelter ceiling on the Unghango estate in Balanggarra Country.

In 2021, Dr Damien Finch and Dr Sven Ouzman used a radiocarbon dating technique to accurately date this figure. The painting was so old that the organic material in the ochre pigment – required for the absolute dating process – had completely broken down and could not be used. Instead, the scientists used scrapings from ancient wasp nests found around the painting, which gave a more accurate result. The painting was dated at 17,500 to 17,100 years BP, making it the oldest known painted figure in Australia.

Source 2

> [The kangaroo image] is visually similar to rock paintings from islands in South-East Asia dated to more than 40 000 years ago, suggesting a cultural link, and hinting at still older rock art in Australia.
>
> Dr Sven Ouzman, University of Western Australia

oral tradition the passing on of law, culture, history and lore through speaking – storytelling, song and dance

songlines travel routes across the Australian landscape that link important locations with ancient stories of Country, and often refer to landscape features, such as trees, waterholes and creatures

the Dreaming the belief system central to many Aboriginal cultures; the Dreaming also provides a moral code and guidance on interacting with Country; the Dreaming is not fixed in time – it is in the past, present and future

motif a symbol or image, especially one that is repeated to form a pattern

Source 1 The "kangaroo painting" in the Kimberley region (left) and an illustration of it.

8.1

Source 3 Gwion painting from Ngula (Jar Island), on Wunambal Gaambera Country, in the Kimberley, Western Australia

Gwion and painted handprint motifs

The Gwion paintings are made up of human-shaped figures and painted handprints. They are dressed decoratively, and carry items such as dilly bags, spears and boomerangs. They are mostly painted in ochre, in dark red through to black colours. Gwion paintings were most common around 12,000 years ago until 1,000 to 5,000 years after the naturalistic period.

Wandjina paintings

The Wandjina paintings (see Source 4) represent spirit ancestors called Wandjina in their human form. Wandjina are identified by halo-like headdresses and mouthless faces with large round eyes, which make them appear ghostly. The people of the northern and central Kimberley continue to identify with Wandjina spirit ancestors, which shows continuity of beliefs that are at least 4,000 years old.

Source 4 These paintings of Wandjina are located in sandstone caves at Raft Point, on Worora Country, in Kimberley, WA. The oldest Wandjina images in the Kimberley are believed to be up to 40,000 years old.

Key concepts & skills Continuity & change

Continuity and change in Kimberley rock art

Understanding **continuity and change** helps us build historical knowledge and understanding. Change refers to the way aspects of the past developed and progressed, while continuity looks at what has remained the same over certain periods of time.

Each style of painting in the Kimberley looks different, showing the changes that developed. Even though the Gwion and Wandjina paintings both show human figures, they do not look the same. However, the tradition of rock art and the use of ochre show a continuity of tradition.

The paintings of the Kimberley can be found across an area of 20,000 square kilometres, suggesting that the themes were important across the region.

For more information on continuity and change, see Lesson 6.5 Continuity and change (page 231).

continuity and change the historical concept that explains that while some aspects of a society stay the same over time (continuity), others will develop and transform (change)

History

Archaeological evidence

Much of the information available to us about ancient Aboriginal and Torres Strait Islander life has been collected by **archaeologists**. These historians find and examine a range of artefacts, such as ancient tools, animal bones, burial sites, rock carvings and middens created during this time (see Source 3).

archaeologist a person who uncovers and interprets sources from the past, such as the remains of people, buildings and artefacts

Secondary sources

Early colonists recorded many observations about how Aboriginal and Torres Strait Islander peoples lived from 1788 onwards. Until recent years, many of these writings were ignored, but historians are now re-examining these documents to create a more detailed picture of the lives of Aboriginal and Torres Strait Islander peoples in the early years of colonisation. Many of these secondary sources present a picture of Aboriginal and Torres Strait Islander peoples as clever and efficient land managers. In particular, the writings and paintings of early British colonists are being used as historical evidence. These secondary sources need to be treated critically because they only present European colonial views.

Source 5 Middens are evidence of Aboriginal and Torres Strait Islanders' occupation sites, where people disposed of the remains of their meals (such as shells and bones). This midden was found at Boulder Point, on Pyemmairrener Country, in Tasmania. The charcoal remains of fireplaces and other artefacts, such as tools, were also found at this site.

Quiz me! How we know about people in ancient Australia

Check your learning 8.1

Check your learning 8.1

Review and understand

1 **Identify** the types of sources available to archaeologists and scientists studying ancient Australia.

2 In your own words, define the terms:
   a primary source
   b secondary source
   c oral tradition
   d colonisation

3 Name the three styles of art found in the Kimberley region.

Apply and analyse

4 **Explain** how scientists were able to accurately date the kangaroo image shown in Source 1.

5 **Summarise** some of the challenges in the interpretation of deep time history.

Evaluate and create

6 **Evaluate** the archaeological evidence for understanding ancient Australia. Remember, when you evaluate something, you should talk about its strengths and weaknesses. Be sure to give your overall opinion.

Lesson 8.2
The oral traditions of Aboriginal and Torres Strait Islander peoples

Learning intentions and success criteria

Introduction

In Western societies, history, culture and tradition are largely passed down through written records. Most written sources of history are from the perspectives of those who held power. Those voices were often people in the upper classes, men and the clergy. Other voices, such as those of women, people of colour and the poorer classes, often went unheard.

In deep time societies, history, knowledge and culture were passed on through oral tradition (that is, by speaking or singing), which included songs, rhymes, stories and dance. Other non-written forms of communication are art and craft making.

Though there are many different types of stories, they all fall into four categories:

- collective histories – common histories shared by a group of people
- spiritual narratives – stories that help explain spiritual or religious ideas
- cultural practices – events, traditions and other means of communicating
- life histories – stories and histories of family groups and individuals.

Oral tradition is very important in ensuring that the knowledge, cultures and traditions of Aboriginal and Torres Strait Islander peoples are protected. Colonisation caused significant disruption to the cultures of Aboriginal and Torres Strait Islander peoples. This was largely due to government policies from the 1890s to the 1980s that forcibly removed Aboriginal and Torres Strait Islander children from their families and placed them into state or church care, or into white families. These children have become known as the Stolen Generations, and they were denied knowledge of or access to their traditions, beliefs and histories. They were also denied the right to practise cultural traditions and often faced punishment if they attempted to do so. This makes it even more important to protect oral traditions.

▶ **Key content video:** The oral traditions of Aboriginal and Torres Strait Islander peoples

Source 1

> Oral history is an integral part of Aboriginal and Torres Strait Islander culture and beliefs as it's how creation and culture stories, such those of The Dreaming, historical accounts, traditional ecological knowledge, and language are passed on from generation to generation and have been for thousands of years …
>
> Gwaktin-Higson, P. (2017) 'What is the role of oral history and testimony in building our understanding of the past?' UTS

Oral culture requires that knowledge is committed to memory; this can be done through dance and song. These oral traditions are very powerful and enable **lore** (culture) and law (the rules of society, ecosystems and navigation) to be passed down for thousands of years. An example of this is the Gedge Togia – the Moon Dance – of the Torres Strait Islands.

lore Aboriginal and Torres Strait Islander peoples' traditional knowledge, customs, beliefs and spirituality passed down through oral stories from the Dreaming

Gedge Togia

The Moon Dance – Gedge Togia – is a sacred traditional song, or kab-kar, of the eastern Torres Strait. It is an example of a collective history. The song has only three words: gedge, togia and milpanuka. These words come from two different language groups that are separated by 200 kilometres of open ocean.

Source 2 Two Meriam men perform the Gedge Togia dance.

History

- "Gedge togia" mans "rising over home" in the Meriam Mir language of Mer Island in the eastern Torres Strait. "Home" refers to Mer (or Murray) Island in the Eastern Torres Strait.
- "Milpanuka" means "moon" in the Mabuiag Island dialect of the Kala Lagaw Ya language, which is the language of the Western Island groups.

The song describes the moon rising over the east ("home"), as the Meriam people travelled home from Mabuiag to Mer. Accompanied by a dance, this song shows links between both islands and language, and reflects how navigation and trade partnerships are held in and passed on through oral traditions.

In the early 2000s, this song helped to prove that before colonisation, Meriam people moved freely through the Torres Strait, from east to west and back again. This helped the Meriam people gain sea rights and the right to continue their traditional movements through the Torres Strait.

Quiz me! The oral traditions of Aboriginal and Torres Strait Islander peoples

Check your learning 8.2

Check your learning 8.2

Review and understand

1 In your own words, **define** the term "oral tradition".
2 Name the four main categories that historians use to classify the stories of Aboriginal and Torres Strait Islander peoples.
3 **Describe** the importance of dance and song in communicating knowledge.

Apply and analyse

4 **Explain** how colonisation affected the oral traditions of Aboriginal and Torres Strait Islander peoples.
5 Consider the role of the Gedge Togia in securing sea rights. What does this suggest about the significance of oral tradition in demonstrating connection to Country?

Evaluate and create

6 **Research** a song, dance or story from the Country you are on. What information does it communicate, and why is this important?

Lesson 8.3
Aboriginal and Torres Strait Islander stories of rising sea levels

Impact of the Ice Age

When the Ice Age ended 80,000 years ago and the ice sheets melted (see Lesson 7.2 Aboriginal and Torres Strait Islander peoples on the Australian continent, page 257), the drowning of the Australian coast occurred rapidly and would have been observed by Aboriginal and Torres Strait Islander peoples. Patrick Nunn, in his study of "drowning" stories in the oral tradition of Aboriginal and Torres Strait Islander peoples, writes:

Source 1

> "It has been estimated that people living 10 millennia [10 000 years] ago on the low lying coastal plain south of the Nullarbor Desert would have witnessed the shoreline retreat landwards at a rate of one metre each week. And off the northern shore of modern Australia, ... people would have seen the shore retreat landward by 5 km every year."
>
> Extract from P Nunn, *The Edge of Memory*, Bloomsbury, 2018

Given what we know about the oral tradition of Aboriginal and Torres Strait Islander cultures, it is not surprising these enormous changes were passed down through stories in the following thousands of years. According to Patrick Nunn, there are more than 30 locations around the Australian coastline where drowning stories were collected (see Source 2). Below are two locations and "drowning" stories associated with rising sea levels.

Australia: Ancient "drowning" stories

Source: Oxford University Press, based on a map created by Professor Patrick D Nunn; recreated with permission

Learning intentions and success criteria

History
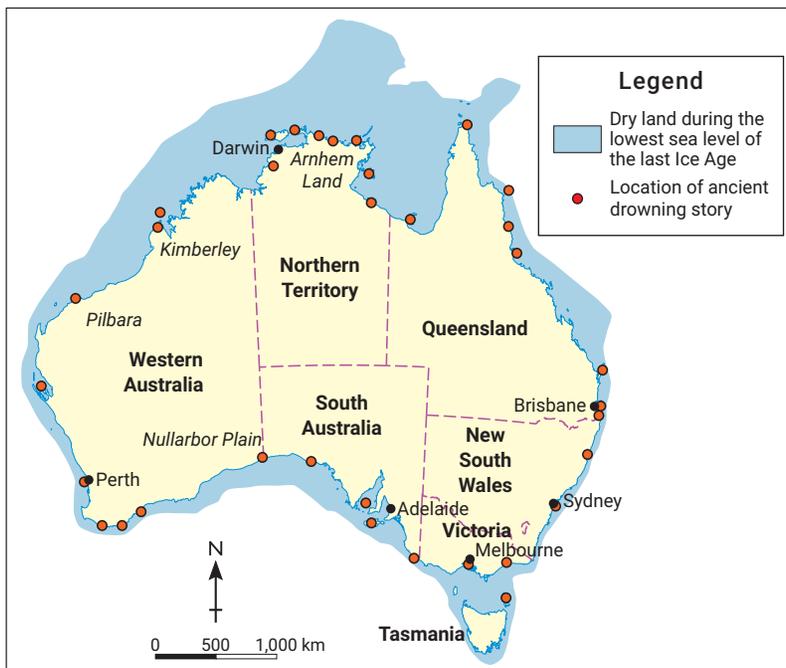
Source 2 This map shows more than 30 locations along the modern Australian coastline from where ancient "drowning" stories have been collected.

Key content video:
Aboriginal and Torres Strait Islander stories of rising sea levels

8.3

Source 4 The formation of the Great Barrier Reef is linked to the story of Gunyah.

Great Barrier Reef, far north Queensland

The story of Gunyah (see Source 3) is told by the Gimuy Walubura Yidinji people and is linked to the rising of the oceans and subsequent formation of the Great Barrier Reef. This story was recounted to David Attenborough for his documentary "Great Barrier Reef" in 2015 by Yidinji Elder GudjuGudju Fourmile.

Source 3

GUNYAH

The story starts with Gunyah going out to sea. And he saw a glitter in the water, which he thought was a fish. And when he speared it, he actually speared our sacred fish, the stingray. So the fish got angry and it started to rise up. And with its wings, it made the sea rough and it caused the sea to rise.

GudjuGudju Fourmile (Gimuy Walubara Yidinji Elder), 2015

Wellesley Islands, Gulf of Carpentaria

The earliest written version of the oral tradition was produced by Lardil Elder Dick Roughsey (Goobalathaldin), where he told the story of the formation of the Wellesley Islands (see Source 5). He explained the formation and link to oral traditions in his autobiography, *Moon and Rainbow*, published in 1971.

There is now a children's picture book called *Seagull and the Crane*, in which Elders tell this story. The book has been illustrated by students from Mornington Island State School in the Gulf of Carpentaria.

Source 5

GARNGUUR

In the beginning, our home islands, now called the North Wellesleys, were not islands at all, but part of a peninsula running out from the mainland. Geologists ... thought that the peninsula might have been divided into islands by a big flood which took place about 12,000 years ago. But our people say that the channels were caused by Garnguur, a sea-gull woman who dragged a big walpa or raft, back and forth across the peninsula.

Goobalathaldin (Dick Roughsey), 1971

Analyse this! Aboriginal and Torres Strait Islander stories of rising sea levels

Check your learning 8.3

Check your learning 8.3

Template: Double bubble diagram template

Review and understand

1 The oral traditions of Aboriginal and Torres Strait Islander peoples often include a moral to the story. **Outline** why stories of changing water levels might include a moral.

Apply and analyse

2 **Compare** the two stories that provide explanations for the change in sea levels. Show your findings on the double bubble diagram template on Oxford Digital.

- In the big circles, write the names of the stories you are comparing.
- In the middle circles, write the similarities between the stories.
- In the circles around the outside, write the differences between the stories.

3 **Apply** your knowledge of oral tradition and rising sea levels to develop a historical argument about the significance of oral tradition in helping historians understand the end of the Ice Age and its impact in ancient Australia.

Evaluate and create

4 **Research** the stories of Aboriginal and Torres Strait Islander peoples in your area to see if you can find any that refer to the formation of the sea or the waterways.

8A Concepts & skills in context
Mungo Lady and Mungo Man

Introduction

Lake Mungo is now a dry lake in the south-west corner of New South Wales. It is just one of 17 lakes in the Willandra Lakes Region. Until about 10,000 years ago, the lake was full of water. Lake Mungo is on the Country of the Paakantyi/Barkindji, Ngiyampaa and Mutthi Mutthi people. The ancestors of the Paakantyi/Barkindji, Ngiyampaa and Mutthi Mutthi people lived seasonally along the shores of the lake, which provided them with a source of food and water. Lake Mungo is a sacred site and burial ground for the Paakantyi/Barkindji, Ngiyampaa and Mutthi Mutthi peoples.

The finding of ancient human remains at Lake Mungo was one of the most significant in Australian history. Geologist Jim Bowler came across the cremated remains of the woman who became known as Mungo Lady in 1969. He also came across the bones of a man who became known as Mungo Man in 1974.

Scientists have since dated these remains as being about 42,000 years old. The findings have added to archaeologists' understanding of the way the earliest humans in Australia lived, their lifestyle, diet, health and culture.

Source 1

Metres from the site of her [Mungo Lady's] cremation, erosion of the dunes by the wind revealed yet another human burial. This was Mungo Man, who had been buried lying on his side, his body ritually prepared with ochre. Analysis of his bones showed that Mungo Man was around 50 years old when he died, and that he suffered from osteoarthritis in his right elbow – probably the result of the constant use of a spear-thrower or woomera. The care with which Mungo Man had been buried and the fact that the ochre must have been brought from over 100 km away suggested to archaeologists that he may have been an important person in his tribe. It also suggested that his people believed in an afterlife, and that they may have travelled over substantial distances and engaged in trade with other tribes.

Jim Bowler, 2010, *Heir of all the Ages*: 'The Secrets of Lake Mungo', Australian Heritage

Sand dune
Lake Mungo
Mungo Lady found here
Mungo Man found here

Source 2 The location of Lake Mungo and the area where archaeologists excavated the remains of Mungo Lady and Mungo Man.
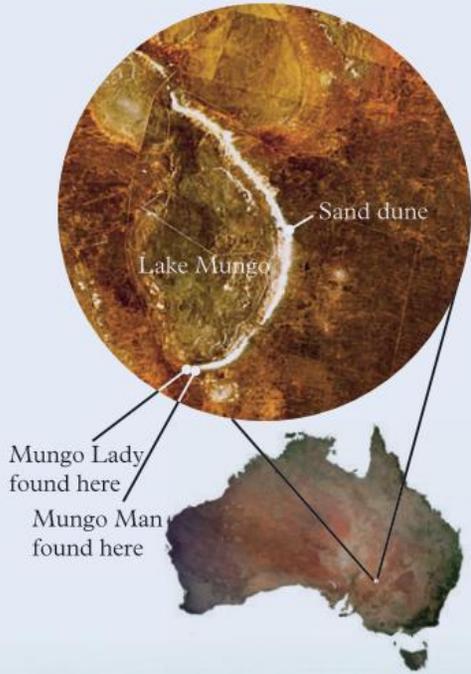
These remains showed scientists that their previous estimates of how long humans had inhabited Australia were incorrect. The remains are the oldest in Australia, and some of the oldest remains in the world.

The remains at Willandra Lakes also revealed that funerary rites were an important part of the lives of ancient Aboriginal peoples. The recent reburial of these remains demonstrates how the ceremonies for the dead continue to be an important part of Aboriginal and Torres Strait Islander cultures in Australia.

Source 3 This 1974 painting by Giovanni Caselli is his impression of daily life on Lake Mungo.
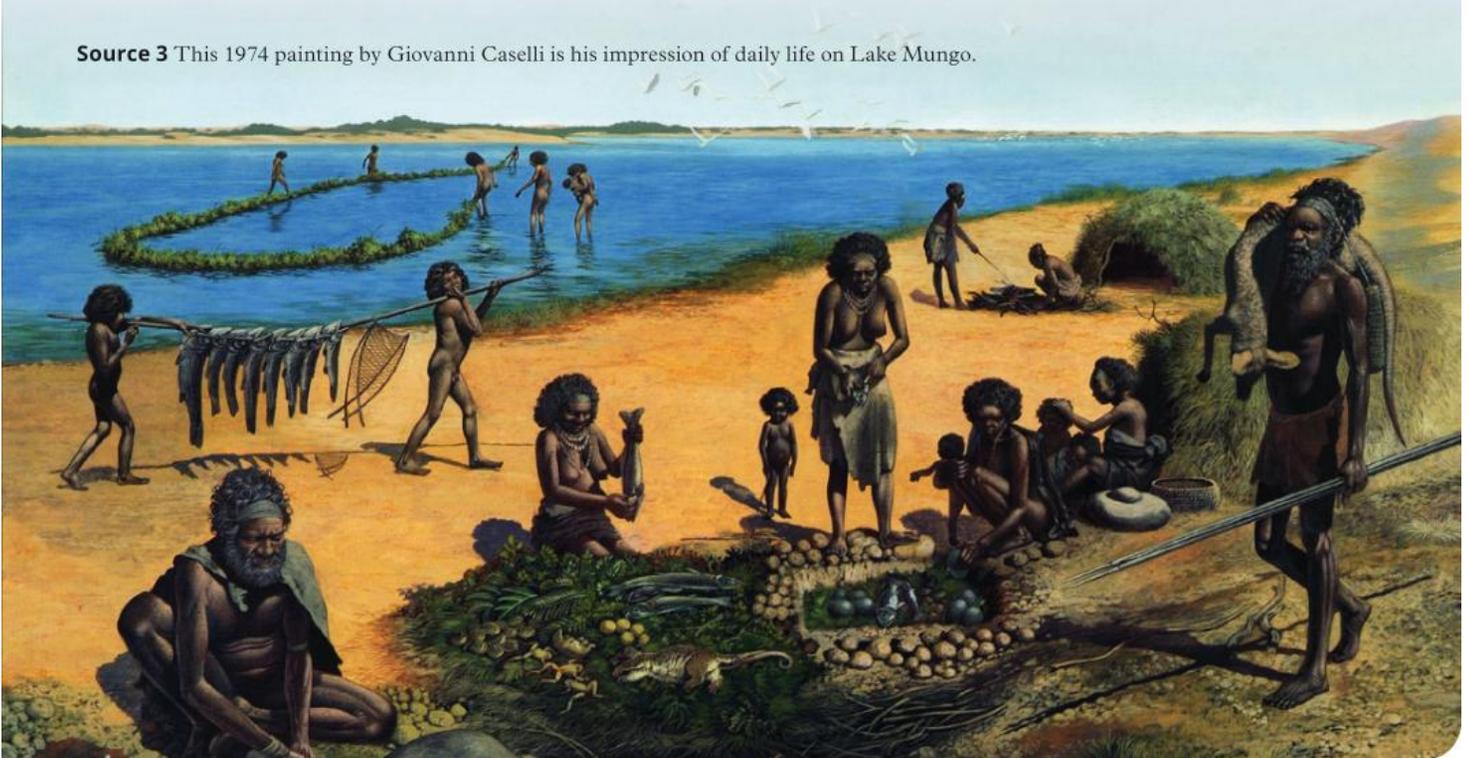
Key concepts & skills Using historical sources

Analysing primary and secondary sources

The primary and secondary sources historians use to understand aspects of the past all tell different stories. It is the job of historians to examine these sources decide their usefulness and reliability. Follow these steps when analysing primary and secondary sources.

- **Step 1:** Identify who wrote, produced or made the source. Is their personal perspective obvious in the sources?
- **Step 2:** Identify the type of source. Was the source created at the time?
- **Step 3:** Find out when the source was created. How old is it? Is it an eyewitness account or did someone create it?
- **Step 4:** Decide why the source was written or produced. Was it meant to entertain or to argue something? Does its creator have anything to gain personally from producing the source? What may have influenced its creator?

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Practise the skill

1. Assess the extent to which historians can develop a complete picture of life at Lake Mungo at the time Mungo Lady and Mungo Man were living there. **Explain** why you think this.
2. Copy the table below in your notebook. Add a row for each source number. **Examine** Source 1 and Source 2 to complete the table.
3. Apply the information from the table to write a short paragraph about life at Lake Mungo 40,000 years ago.

Extend your understanding

1. **Propose** (put forward) suggestions for two additional sources you could examine to add to your understanding about life at Lake Mungo.
2. **Research** another key archaeological site from the list below and identify some similarities and differences with the Lake Mungo site.
   - Kutikina Cave
   - Cuddie Springs
   - Madjedbebe
   - Wyrie Swamp
   - Gummingurru

Source	Is it a primary or secondary source?	What kind of source is it? (e.g. painting, written, photograph)	Who created the source?	What does the source show or describe?	How does the source tell us about life at Lake Mungo?
Source 1					
Source 2					

Lesson 8.4
The first people in Australia

Learning intentions and success criteria

Aboriginal peoples and culture

There is no single Aboriginal language term that refers to all Aboriginal people throughout Australia. In English, the term "Aboriginal peoples" is used to describe all of the different Aboriginal nations and language groups that live on mainland Australia and Tasmania as they have done for thousands of years. There is also no single Aboriginal language name for Australia. This continent was home to hundreds of diverse Aboriginal nations and language groups before the arrival of European colonisers in 1788. The name "Australia" was given to this landmass by an English navigator.

Although Australia is a single continent, the Aboriginal cultures that developed here over thousands of years are complex and very different. Aboriginal peoples are not a single group of people, but many different groups. Most groups have their own distinctive languages, cultures and beliefs. Different Aboriginal groups who shared similar languages and cultures would sometimes form larger groups, known as nations. Nations can cover large geographical areas.

Key concepts & skills Continuity & change

Changing language

Language changes over time. A word or term that was widely used in the past may no longer be considered appropriate today. For example, the term "Aborigines" was once commonly used to refer to Aboriginal and Torres Strait Islander peoples throughout Australia. This term is now considered outdated due to its links to colonial Australia, when it was used in a racist way.

Historically the word "indigenous" was used to describe Aboriginal and Torres Strait Islander peoples along with the flora and fauna of Australia. The word "indigenous" in a scientific context means "native to a place". Today, some people refer to Aboriginal and Torres Strait Islander peoples using the capitalised term "Indigenous". However, using the term "Indigenous" can suggest that Aboriginal and Torres Strait Islander peoples are a single group, when this is not the case. It is also not specific to Australia's Indigenous peoples and is a term some people use to refer to Indigenous people globally.

There is no single viewpoint on the most appropriate language to use when referring to Aboriginal peoples or Torres Strait Islander peoples throughout Australia. In this book, we have used "Aboriginal and Torres Strait Islander peoples" when referring to the collective experiences of Aboriginal and Torres Strait Islander peoples. However, using "First Nations peoples" to refer to Aboriginal and Torres Strait Islander peoples is also appropriate.

For more information on continuity and change, see Lesson 6.5 Continuity and change (page 231).

Creation stories of Aboriginal peoples

From an Aboriginal perspective, Aboriginal peoples have always been on the land that would become Australia. There are many different Creation stories throughout Australia that feature different Creator (or Ancestral) beings. Some of these include a group's Totem, usually symbolic of an animal, as the Creator (see Lesson 8.6 Customs and ceremonies, page 290). Aboriginal peoples' Creation stories tell how the world was created and how people came to walk the land. According to these stories, the ancestors of Aboriginal peoples have lived in Australia since the beginning of time. In some stories, for example, ancestor spirits came up through the earth and down from the sky in human form. As they moved through the land, they created everything that we see today, from the animals and plants to the mountains, rivers and oceans.

Creation stories are part of the most central belief system in Aboriginal life – known as the Dreaming. You will learn more about the Dreaming throughout this module.
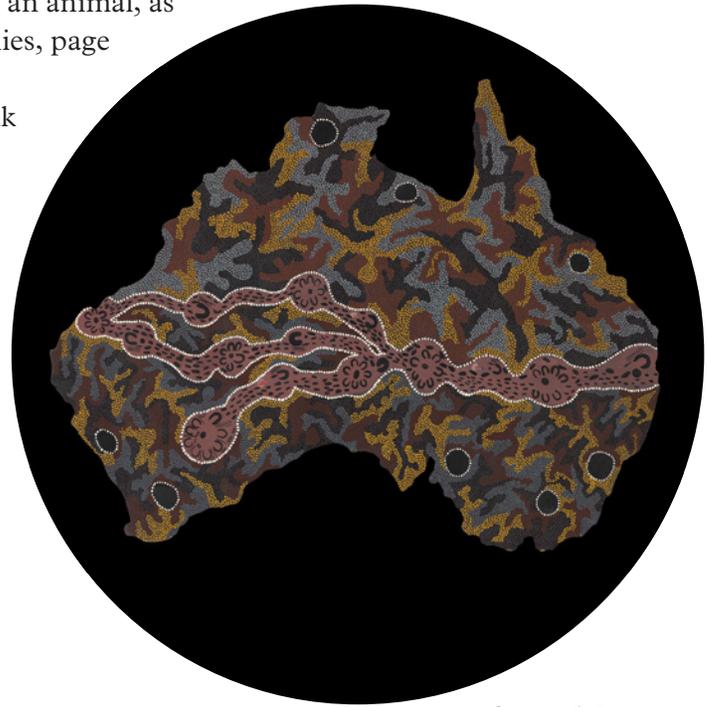
Source 1 *Seven Sisters Songline* (1994) artwork by Josephine Mick, a Pitjantjatjara woman. This artwork depicts songlines, which were sung into being at Creation and cover Australia, showing the routes that Creator beings took during the Dreaming. Songlines are one of the ways we know about the histories, cultures and traditions of Aboriginal and Torres Strait Islander peoples.

Aboriginal languages

Australia's huge land size meant that many Aboriginal groups never encountered one another. As a result, the customs of these different groups – the languages Aboriginal peoples spoke, the foods they ate, the stories they told and the art they created – were very different.

Historians believe that before European colonisation in 1788, there were approximately 750,000 Aboriginal people living in Australia. At this time, there were around 600 Aboriginal nations across Australia. Approximately 250 Aboriginal languages were spoken. Each had many different dialects, producing up to 700 varieties. Before colonisation, this land was one of the most linguistically diverse areas on the planet.

After Europeans began colonising Australia, the number of Aboriginal people declined dramatically. This was largely due to the diseases Europeans introduced and violent conflicts European colonisers caused by dispossessing Aboriginal peoples from their traditional lands.

Today, there are approximately 745,000 people in Australia who identify as Aboriginal. An estimated 150 Aboriginal languages are spoken across various language groups and in many different Aboriginal nations around Australia.

History

Source 2 Torres Strait Islander people come from the islands of the Torres Strait. Unlike Aboriginal peoples, Torres Strait Islanders are of Melanesian origin. This boy is wearing a headdress known as a *dhari*.

Torres Strait Islander peoples and cultures

The term "Torres Strait Islander peoples" is used to describe people who come from the islands of the Torres Strait – a section of ocean that stretches from the tip of the Cape York Peninsula in Queensland across to Papua New Guinea. There are more than 200 islands in the Torres Strait, but only 17 of those are populated. Between 8,000 and 10,000 years ago, there was a land bridge between Australia and Papua New Guinea that allowed ancient peoples to travel south from Asia and settle. Rising sea levels at the end of the last ice age flooded the area, leaving only the highest peaks above water. These peaks became the islands we know today.

Torres Strait Islander people are not mainland Aboriginal people who just live on the Torres Strait Islands. Instead, they are separate peoples with different cultural heritage and backgrounds. Unlike Aboriginal peoples, Torres Strait Islanders are of Melanesian origin. Melanesia is a region to the north and north-east of Australia that includes the countries of Papua New Guinea, the Solomon Islands, Vanuatu and Fiji. This means that Torres Strait Islanders are more closely related to these cultures than to Aboriginal cultures. Today, around 7,000 Torres Strait Islanders live on the islands; over 40,000 live on mainland Australia, mostly in Queensland.

Explore it! A virtual field trip to Torres Strait Islands

I used to think, now I think

Reflect on your learning about Aboriginal peoples and cultures and Torres Strait Islander peoples and cultures and complete the following sentence.
· I used to think ...
· Now I think ...
What has changed in your understanding?

Check your learning 8.4

Check your learning 8.4

Review and understand

1 How many islands are there in the Torres Strait?
2 **Outline** why Australia was considered one of the most linguistically diverse areas in the world.

Evaluate and create

3 **Research** the history of Aboriginal peoples in Tasmania. Discuss three ways in which the culture and way of life for these people was different from groups on the mainland of Australia.

Lesson 8.5
Aboriginal and Torres Strait Islander peoples' cultures and beliefs

Introduction

The Dreaming is a belief system at the centre of many Aboriginal cultures. This lesson provides a general overview of the Dreaming, however it is important to note that there are many different perspectives among Aboriginal cultures on the Dreaming and Creation. You may consider it equivalent to other religions or belief systems you might have studied, such as Christianity, Islam or Buddhism. Aboriginal peoples believe that during the Dreaming, the spirit Ancestors:

- came up out of the earth and down from the sky to walk on the land, where they created and shaped landforms such as rivers, mountains, forests and deserts. These were created while the Ancestors travelled, hunted and fought.
- created all the people, animals and vegetation, and laid down the patterns their lives would follow
- gave Aboriginal peoples the laws, customs and codes of conduct that they follow
- created the songs, dances, languages, ceremonies and rituals that are the basis of Aboriginal spiritual beliefs.

These Ancestors were spirits who appeared in a variety of forms. When their work was completed, the Ancestor spirits went back into the earth and sky, and also into the animals, landforms and rivers. The spirit Ancestors are alive in all Aboriginal peoples. The Dreaming is ongoing – it began with the creation of the Earth and continues to the present day. For Aboriginal peoples, all living things are part of the deep and spiritual tradition of the Dreaming.
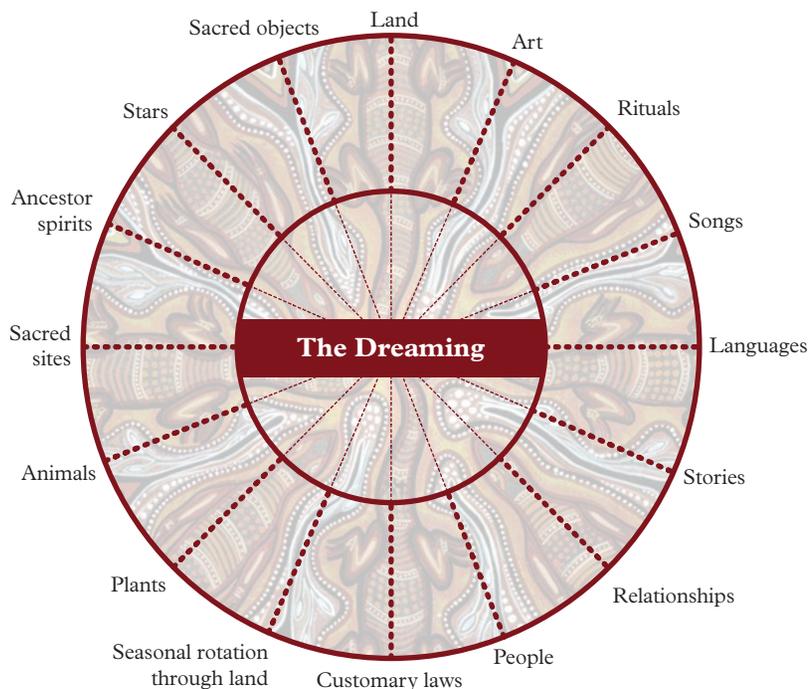
Source 1 The Dreaming is a belief system at the centre of many Aboriginal cultures. It connects all aspects of Aboriginal life, spirituality and law.

History

8.5

The Dreaming and the land

Country the physical environment that a particular Aboriginal and Torres Strait Islander peoples' group has a spiritual relationship with; this includes lands, waters and the sky. For Aboriginal and Torres Strait peoples, Country both owns and is owned by the people

Place for Aboriginal peoples, special places that exist within Country, including places of ceremony and learning, and landmarks related to the ancestor spirits and creation. For Torres Strait Islander peoples, spaces (including lands, waters and sky) that individuals or groups occupy and regard as their own

Aboriginal people do not see people as separate from the natural environment, but as part of it. The land is not just soil and rocks, but the whole environment. The land sustains Aboriginal people and is sustained by them. Aboriginal people see themselves as custodians (caretakers) of the land, rather than owners of it.

The land is fundamental to the well-being of Aboriginal people and deeply connected to the Dreaming. The Dreaming and the land are so closely connected that they cannot be separated.

Aboriginal peoples use the word **Country** to refer to both the physical and spiritual features of the land. When an Aboriginal person is on their Country, their spirit and the spirits of their ancestors live through the features of the land. Aboriginal peoples see Country as a living being that informs many complex ideas on life, including identity, customs and culture.

Place is another significant concept for Aboriginal and Torres Strait Islander peoples, and it means the special places within Country. These can include places of ceremony, initiation, birth and learning, as well as places for Sorry Business. They also include landmarks related to the ancestor spirits and creation. For Torres Strait Islander peoples, Place refers to spaces that individuals or groups occupy and regard as their own. Place may have spiritual significance. It includes lands, waters and the sky.

Source 2 The land is fundamental to the well-being of Aboriginal peoples and deeply connected to the Dreaming.

The Dreaming and the law

Stories from the Dreaming also pass on important knowledge, values and codes of behaviour for Aboriginal peoples to follow. Over time, these stories developed into a set of laws that must be followed. Traditional Aboriginal laws are referred to as **customary law**. These laws are based on stories passed down from the Ancestor spirits during the Dreaming thousands of years ago. If customary law is broken by Aboriginal peoples to whom the laws apply, punishments can be faced as decided by Elders and other community figures.

customary law traditional Aboriginal law connected to the Dreaming

Different views of the world

More than anything else, the Dreaming influences how many Aboriginal peoples see themselves and the world. There are some key differences between the way Europeans and Aboriginal peoples look at the world.

Source 3 World views of Europeans and Aboriginal peoples

European view of the world	Aboriginal view of the world
• Progress and change is valued – the world progresses. • People own the land – individuals own and use the land for their own gain. It is theirs to use however they like. • People own things – individuals or groups own property and decide whether they will share or sell it. • Things are counted, measured and analysed – science forms the basis of society. • Written culture – things are recorded and written down.	• Continuity is valued – things stay the same. • People do not own the land – individuals and groups are custodians (caretakers) of the land and then pass it to the next generation. • People share things – groups use things but do not own them. Things are shared between members of the group. • Things are spiritual, connected, cultural and environmental – the Dreaming forms the basis of society. • Oral culture – things are passed down by word of mouth.

Torres Strait Islander peoples' belief systems

Torres Strait Islander peoples are connected to their physical environment through the god Tagai. The stories connected to Tagai focus on the stars, land and sea and identify Torres Strait Islander peoples as seafaring peoples who share a common way of life. However, on some islands, such as Mer, people follow the customary lore handed down through the generations by the Meriam god, Malo. The instructions of Tagai and Malo provide order in the world, ensuring that everything has a place.

The stars of Tagai foretell the seasons, assisting the people of the Torres Strait to organise their fishing, agriculture, rituals and social life. The stars tell them when it is time to go fishing, when to plant crops, and when to harvest them.

Malo's law gave the Meriam peoples ownership of the land, which passed from one generation to another. Meriam peoples believe that in ancient times, Malo set down the law for relations between Islanders regarding their lands and seas. Today, Meriam peoples continue to practise Malo's customary law. It is a complex law that is the basis of the laws of trespass, and it also determines family or clan boundaries on the island and its waterways.

Analyse this! Aboriginal and Torres Strait Islander peoples' cultures and beliefs

History

8.5

Check your learning 8.5

Check your learning 8.5

Review and understand

1 **Describe** how the mountains, rivers, forests and deserts were created, according to Aboriginal beliefs.

2 In your own words, **define "**the Dreaming".

3 In your own words, **outline** what Malo's law sets down for Torres Strait Islander cultures.

Apply and analyse

4 In your own words, **explain** the concept of Country.

5 **Distinguish between** the world views of Europeans and Aboriginal peoples in relation to land and property. Remember, when you distinguish between two things you must talk about how they are different.

6 In your own words, **summarise** the concept of being connected to the land, with reference to Torres Strait Islander peoples.

Evaluate and create

7 **Research** some Creation stories of Torres Strait Islander peoples. In groups, discuss how these stories are different from those of Aboriginal peoples.

Lesson 8.6
Customs and ceremonies

Introduction

Learning intentions and success criteria

As we have seen, Aboriginal peoples have a strong spiritual connection to the land through the Dreaming. The Dreaming is about the knowledge, beliefs and practices that originated from Creation stories, which describe how the landforms and life on Earth came into being. The Dreaming guides the way people live on the land and how to care for it.

This lesson will mostly focus on the spiritual practices of the Wurundjeri people, the traditional caretakers of the land in the Birrarung (Yarra River) valley. For the Wurundjeri people, spiritual beliefs are present in different sacred objects and cultural practices, such as totems, sacred sites, initiation rites and funeral rituals.

▶ **Key content video:** Customs and ceremonies

Totems

totem an animal or object that has spiritual significance for Aboriginal and Torres Strait Islander peoples, including within Creation stories; different totems are given to children at birth and are considered guides and protectors

In Aboriginal cultures, a **totem** is the sacred object or symbol of a person or an entire group. When something is sacred, it means it has important religious or spiritual value. A totem was thought to be a spiritual protector. When Wurundjeri children were given a personal totem, it was usually an animal from their land, such as a wallaby or wombat. That animal was that child's spiritual ancestor throughout life,

protecting them and connecting them to Country. In return, that person would never kill, eat or disrespect their totem.

Language groups and nations can also have a totem that guides and protects them. The Wurundjeri people have two moiety totems: Bunjil the eagle and Waa the crow (or raven). Moiety indicates a person's family relationship and refers to one of two groups into which a society is divided. A person's moiety was inherited from their father and was an important part of the Wurundjeri peoples' social structure. For example, people with the same moiety were considered siblings and were not allowed to marry.
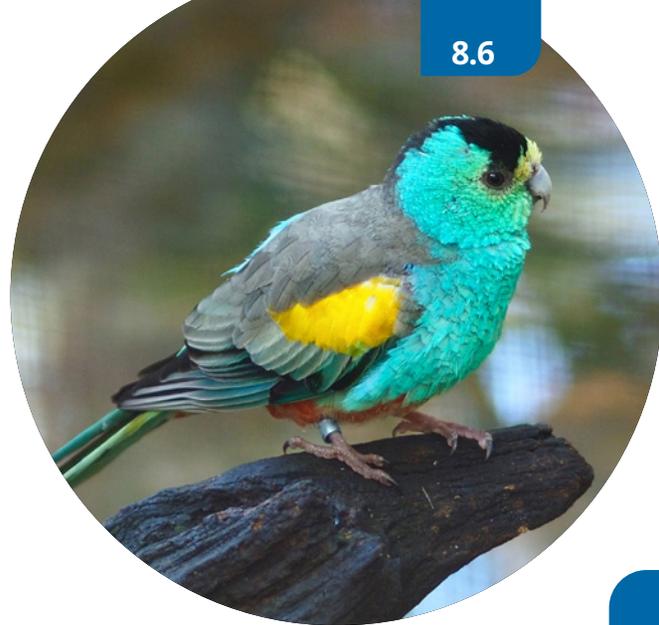
Source 1 The golden-shouldered parrot is a totem animal of the Olkola people in northern Queensland.

sacred site a place that has special importance or cultural significance to Aboriginal peoples

Sacred sites

All of Country is special to the Wurundjeri people, but some places are particularly spiritual or significant. These **sacred sites** include places where totems appeared, or where sacred rituals, ceremonial gatherings or important trading took place.

Source 2 Hanging Rock is a sacred site for the Dja Dja wurrung, Taungurong and Wurundjeri peoples of the Kulin Nation.

Sacred sites were mostly made up of natural features, such as hills, rivers, rock formations or trees. These places required complete respect from the people who went there. Some sacred sites were for men or women only. These places had great spiritual and cultural value to the Wurundjeri people that could not be shared with outsiders.

Significant Wurundjeri places or sites include Hanging Rock (a site for male initiation ceremonies) and natural amphitheatres such as the site of the Melbourne Cricket Ground.

Around Australia, other sacred sites include places such as Gariwerd in Victoria, Uluṟu in the Northern Territory, Wilpena Pound in South Australia and the Pinnacles in Western Australia.

Initiation ceremonies

The transition of children into adulthood is celebrated in many cultures. In Aboriginal and Torres Strait Islander communities, girls and boys are initiated in ceremonies that celebrate them becoming adults when the community thinks they are physically and mentally ready. They must earn the right to be initiated. Non-Indigenous people are not allowed to attend these ceremonies, so it is difficult for people who are outsiders to know exactly what happens. These ceremonies can also vary between mobs and nations.

8.6

For the Wurundjeri people of the Melbourne (Naarm) area, boys being initiated were given items to signify their manhood, such as strips of possum skin and a narrow bone for their nose. Some initiation practices are still carried out across Australia today.

In the Torres Strait, young men participate in a shaving ceremony, where the first shaving of their beard is done by their Uncles and Elders as a sign of passing into manhood.

Funeral ceremonies

Aboriginal and Torres Strait Islander communities have a deep respect for the dead. Some groups believe the spirit of the dead person remains near the place of death. Others believe the spirit of the dead will join their spiritual ancestors in the Dreaming. The nature of their mourning or grieving is meant to comfort the spirit, and ceremonies are different for each language group.

The rituals and ceremonies of Aboriginal and Torres Strait Islander peoples around funerals and **Sorry Business** have been practised for thousands of years and continue today. Sorry Business is the term used by Aboriginal peoples to describe the period of cultural practices that take place after somebody dies.

Sorry Business an Aboriginal English expression, mostly adopted from mainland Aboriginal peoples, to refer to a period of cultural practices associated with death

Aboriginal peoples have honoured and disposed of their dead in various ways, depending on where they lived across the continent. The two main forms were burial and cremation. Sometimes people were buried with possessions, such as personal items, weapons or tools. In some instances, special clothing and ornaments have been found with the deceased, and in others, ochre is sprinkled on the body. Mungo Man and Mungo Lady (see 8A Concepts & skills in context Mungo Lady and Mungo Man, page 281) were cremated, and then buried with funerary goods and marked with ochre.

Some societies had different funeral practices for men and women. It was suggested by European colonisers that among the Wurundjeri people, funeral ceremonies were far more complex for men than for women.

In some Aboriginal communities, once a person had passed away, people were not allowed to say their name again. This was to make sure the spirit was not called back to this world and was allowed to continue its journey. It was also out of respect for the family of the person who had passed. Many Aboriginal peoples still observe this practice.

Hollow log coffins (Source 3), also called burial poles, lorrkkon, larrakitj or dupun, are hollow tree trunks decorated with elaborate designs. These are a traditional burial practice of the Yolngu and Bininj peoples of Arnhem Land in the Northern Territory. The hollowed logs are the final resting place of the bones of the deceased, following a period of mourning.

Source 3 Hollow log coffins on display at the National Gallery of Victoria

In the Torres Strait Islands, a deceased person is referred to as a person who has "passed". At the funeral, the person is buried with a white cross on their grave. After 12 months, the family or families start preparing the tombstone, which will be unveiled at a "tombstone opening ceremony". The tombstone features the names of the person and their family, as well as the person's totems and moieties.

Because the connection between Aboriginal and Torres Strait Islander peoples and the land is so strong, it is very important that the deceased is laid to rest on their Country. It is believed that a person's spirits will wander if they are not able to rest with their people on their Country.

In Source 4, Yolngu Elder Djambawa Marawili, from Arnhem Land, explains how family ties and relationships are strengthened by funerals.

Source 4

> When the funerals are held here in the homelands the ceremonies all come out. It is really very important that the kinship structures are laid on, the patterns and designs are all there, we always use them, the stories beyond this country we always share to the children and also to tell the other groups that are coming to join with us … That's why they always learn when we have närra thing [important ceremony] or when we have death, that's when we get together.
>
> 'Ceremonial Economy: An Interview with Djambawa Marawili AM', Working Papers 2/8/2015, cit: Sorry Business: Mourning an Aboriginal death - Creative Spirits, retrieved from https://www.creativespirits.info/aboriginalculture/people/mourning-an-aboriginal-death

Quiz me! Customs and ceremonies

Check your learning 8.6

Check your learning 8.6

Review and understand

1 What kind of totem might a Wurundjeri person be given?
2 **Identify** what an initiation ceremony celebrates.
3 In your own words, **describe** what is meant by the terms "Sorry Business" and "sacred site".

Apply and analyse

4 **Explain** why non-Indigenous people do not know much about initiation ceremonies.

5 **Summarise** why the names of people who have died are not allowed to be spoken aloud in some Aboriginal communities.
6 **Explain** why it is important that Aboriginal and Torres Strait Islander peoples are returned to Country after they die.

Evaluate and create

7 Using what you have learnt in this unit, **create** a mind map of the different ways Wurundjeri people are spiritually connected to the land.

Lesson 8.7
Kinship and family relationships

Introduction

Kinship is an important part of Aboriginal and Torres Strait Islander peoples' lives. It refers to a system of complex social and marriage laws that organise families and social lives. This ensured everyone knew what their responsibilities were within their community.

Traditionally, Aboriginal cultural practices relating to kinship worked differently in groups across Australia, but some ideas were important to everyone. For example, gift giving was an important part of kinship, as a way of strengthening social bonds between families and alliances between groups.

The idea of family was also central to the kinship system. Unlike European families, traditionally Aboriginal and Torres Strait Islander peoples did not just care for the people directly related to them. Children could have a close relationship with relatives other than their mother and father; to this day it is common for entire communities to raise children. For example, a child's aunts and uncles would also be called their mother and father. Cousins could also be called brother and sister. Older people who were not related to them at all could be called aunty or uncle. While the terms and rules around family relationships could be different across groups, caring for their community as a family was always very important. This is still the case for many Aboriginal and Torres Strait Islander groups across Australia.

Source 1 The image on the $2 coin represents an Aboriginal Elder. The designer of the image used some of Gwoya Tjungurrayi's physical features as inspiration. Gwoya Tjungurrayi was a Walpiri-Anmatyerre man of the Northern Territory and an Elder in his community.

Elders

Elders were a very important part of each Aboriginal cultural group. This is still the case today. Elders play a key role in running the community from day to day and they lead by example. It is their role to show young people the importance of the natural world. Aboriginal Elders would teach younger people about bush tucker and bush medicines and share knowledge about the Dreaming through songs and stories. If there was a problem or dispute in the community, the Elders would decide together about how to settle things. Elders would also lead initiation ceremonies for young people. Many of

Source 2 Elder Eileen Harrison a Gunaikurnai Elder and artist. Elders play an important role in passing down knowledge and keeping order in Aboriginal communities.

these practices continue to this day. A person does not just automatically become an Elder when they get old. Respect and authority have to be earned by showing understanding and dedication to the community.

Marriage

For many Aboriginal peoples, there were strict rules about marriage as part of the kinship system. Kinship structures provided order and ensured that marriages between moieties followed ancient traditions. This helped to strengthen connections across families, clans and other language groups. For example, relationships in the Kulin Nation had a lot to do with a person's totems. A marriage had to be between a man and a woman of different moieties (totems or symbols). Among the Kulin people, those whose moiety totem was the eagle often married people whose moiety was the crow. A person could not marry someone with the same moiety. This ensured people did not have to marry their relatives but could move between groups instead.

The traditions and ceremonies surrounding marriages were also different across groups. In some areas there was no marriage ceremony. The young woman would simply move to live with her husband's people. In other groups, a marriage ceremony was held. This could involve special face and body painting, music and dancing, and the smoking of leaves to ward off bad spirits and give good fortune to the newly married couple.

Analyse this! Kinship and family relationships

kinship an important part of Aboriginal and Torres Strait Islander cultures and values; kinship relates to relationships between people, and between people and the land

Elder a key person who is the keeper of cultural and spiritual knowledge within Aboriginal communities

History

Check your learning 8.7

Check your learning 8.7

Review and understand

1 In your own words, **define** "kinship" as it refers to Aboriginal and Torres Strait Islander peoples' lives.
2 **Identify** the important people in Aboriginal and Torres Strait Islander families or groups. How did they become so important?
3 How did people become Elders?

Apply and analyse

4 **Explain** why it was important to have strict rules about marriage. What do you think these rules were meant to prevent or achieve?
5 **Summarise** what it means to be an elder, such as grandparents, in a non-Indigenous community. How is this

role different from the role of Elders in Aboriginal cultural groups?

Evaluate and create

6 Think about the relationships in your family. **To what extent** are they different or similar to the relationships discussed in this lesson? A lot (strongly), a little bit (somewhat) or not at all?
7 Using the information in this lesson, **create** a mind map identifying the different elements of the kinship system.

Lesson 8.8
Food in early Australia

Introduction

The climate of Australia has undergone many changes in the time before and since human habitation. Because Australia is so big, its climate zones vary, meaning the plants, animals and landforms within the zones are different. Climate differences played a big role in the types of food people could access.

Source 1 shows how the climate and environment in different regions influenced the lives of various Aboriginal and Torres Strait Islander groups around Australia.

The **Meriam people** of Murray Island, Queensland ate mainly seafood, including prawns and fish, and caught turtles and dugongs. They also farmed yams, taro and cassava.

The **Kulin Nation (including Wurundjeri people)** of Central and southern Victoria slept in sheltered caves and kept warm in winter with rugs made from possum skins. In summer, some Wurundjeri lived along the coast and built dome-shaped shelters. They ate kangaroos, wallabies and possums, and set river traps to catch eels and fish.

The **Pitjantjatjara people** of Central Australia, Northern Territory found water in trees and plants. They hunted kangaroos, wallabies, goannas and smaller mammals, and found berries and seeds.

The **Yawuru people** in the Broome region of Western Australia slept in the open or in simple shelters. They ate food from the sea, including turtles, oysters, eels and shellfish.

▶ **Key content video:** Food in early Australia

Regions in the north

Northern regions are tropical, which means they are very warm and wet all year round and receive more than 2,000 mm of rainfall each year. The vegetation is often dense and leafy, and there is plenty of fresh water in streams and rivers. These areas include parts of: Queensland, the Northern Territory and the Torres Strait.

Aboriginal peoples living in the north of Queensland experienced both wet and dry seasons. Rivers often flooded in the wet, and cyclones and large storms were annual events. Due to the abundance of fresh water and annual rainfall, people in the tropics ate a rich and balanced diet based on fish, **game**, fruits and nuts. This included:

game meat-based food that has been hunted, such as kangaroo or emu

- eels
- fresh and saltwater fish
- crocodile
- cassowary
- scrub fowl
- lilly pilly berries
- quandong
- yams
- figs.

Grubs and larvae provided additional nutrients.

Australia climate zones

Yawuru people
Broome region, Western Australia

Meriam people
Murray Island, Queensland

Pitjantjatjara people
Central Australia, Northern Territory

**Kulin Nation
(including Wurundjeri people)**
Central and southern Victoria

ARAFURA SEA

Torres Strait

PACIFIC OCEAN

TIMOR SEA

Darwin

INDIAN OCEAN

Northern Territory

Cairns

Charters Towers

Queensland

Tropic of Capricorn

Western Australia

South Australia

Coober Pedy

Kati Thanda (Lake Eyre)

Lismore

Darling River

New South Wales

Perth

Mildura

Murray River

Sydney

ACT

N

0   250   500   750 km

Victoria

Melbourne

Tasmania

Legend

Tropical

- **Tropical wet:** hot and wet all year
- **Tropical wet or dry:** hot with wet and dry seasons
- **Sub-tropical wet:** hot or warm, wet summers; mild winters
- **Sub-tropical dry winter:** hot or warm, wet summers; dry winters

Temperate

- **Maritime hot summer:** hot summers, cool winters; wet all year
- **Maritime warm summer:** warm summers, cool winters; wet all year
- **Mediterranean:** hot and warm, dry summers; mild, wet winters

Dry

- **Semi-desert:** hot all year; 250–500 mm rain
- **Desert:** hot all year; less than 250 mm rain

Source 1

History

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8.8

Regions in the south

Southern regions of Australia are temperate, which means they are cool and wet. These areas are covered with forests and grasslands, and there is water available most of the year. Temperate regions include parts of Victoria, Western Australia and Tasmania.

Consistent rainfall meant creeks and rivers provided meat-based diets, such as:

- eel
- fish
- yabbies
- game (smaller mammals, birds and possums).

Fruit and nuts were also part of the diet of people living in these areas.

Coastal dwellers in temperate areas often used the oceans and the waterways to provide a very seafood-rich diet, including:

- turtle
- **dugong**
- fish
- eels
- clams
- oysters.

On Yarun (Bribie Island) in south-east Queensland, the evidence of dugong hunting rounds and large middens reflects this diet. Aboriginal and Torres Strait Islander peoples are still permitted to hunt dugongs and turtles today, although these are protected species in other regards.

dugong also known as a sea cow, the dugong is native to Queensland and was a rich source of protein for early peoples in Australia

Regions in the centre

Regions in the centre of the country are arid, which means they are hot and dry, and receive less than 250 mm of rainfall annually. Vegetation is sparse, and there is verry little fresh water available. The desert regions include parts of the Northern Territory, South Australia and Western Australia.

The lack of a consistent and reliable water supply in many areas meant that people in these areas tended to live a lifestyle based on **seasonal movement**. Foods included:

- kangaroo and emu
- bush berries and fruits
- roots and **yams**
- insects such as honey ants.

seasonal movement movement based on needs and the availability of seasonal resources; in ancient Australia, this was determined by the seasons, climatic conditions and the availability of food, water and shelter

yam a vegetable similar to a sweet potato

Quiz me! Food in early Australia

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8.8

Check your learning 8.8

Check your learning 8.8

Review and understand

1 Name three foods eaten by Aboriginal or Torres Strait Islander peoples in each region: the north, south and centre.

2 **Describe** some of the challenges Aboriginal peoples may have faced in securing food and water.

Apply and analyse

3 **Explain** how the climate and environment influenced what people ate in different areas of Australia.

Evaluate and create

4 "Bush tucker" refers to foods that are native to Australia, especially roots, fruits, nuts and seeds. **Research** the "bush tucker" of your local area and create a menu using only foods that were available before European colonisation.

Lesson 8.9
Land and water management

Introduction

Aboriginal peoples have a deep connection with their Country; this has informed how they use and care for the land and seas. Aboriginal peoples developed techniques to manage the land based on a thorough understanding of nature after thousands of years of observation. Aboriginal groups often rotated through the areas where they lived, to avoid using up the resources in that area. They knew how much food to take and how much to leave.

This knowledge meant animal and plant populations were not overhunted or destroyed. Instead, animals and plants had time to recover or regenerate, so that there was always enough for people to hunt and harvest in the future.

Careful use of the land was not the only way Aboriginal peoples looked after the environment. Land management techniques, such as landscape burning to turn an area into grasslands, was also used by Aboriginal peoples. This encouraged animals to come to the area, and these animals could then be hunted for food (see Source 1). Landscape burning also encouraged regeneration of native plants. The use of fire was one of the most important elements of land management for many Aboriginal peoples around Australia.

Learning intentions and success criteria

Source 1 This *c.* 1817 watercolour painting by Joseph Lycett, *Aborigines Using Fire to Hunt Kangaroos*, shows Aboriginal peoples using fire to herd and hunt kangaroos.

▶ **Key content video:** Land and water management

8.9

Fire-stick farming

The term "fire-stick farming" comes from the method Aboriginal peoples use to light fires. A base stick is made from a piece of soft wood. A wedge is cut into the wood and filled with fuel – this could be dried animal droppings or dry grass. An upright stick is then inserted into the wedge and rotated swiftly (see Source 2). Eventually the fuel smoulders and catches fire.

Aboriginal peoples would set fire to land in sections at a time, creating a patchwork of burnt land. This type of controlled burning has many purposes, including:

- thinning out vegetation that might stop other plants from getting sunlight
- allowing new grass to grow, which would attract kangaroos looking for food
- causing seeds to germinate or begin to grow
- reducing the amount of fuel that could be burnt by a serious bushfire
- making travel or access easier by getting rid of thick undergrowth and encouraging open grassland between the trees.

Women could then work on these burnt patches of land with their digging sticks, looking for edible roots and tubers, such as yam daisies. In the process, clumps of soil would be thinned out and roots replaced.

In Australia today, these strategies are recognised as being highly effective, and they are being reintroduced to help manage the Australian bushfire seasons.

Source 2 Controlled burning is an important part of modern bushfire control. This is a technique Aboriginal peoples have understood and used for thousands of years.

Source 3 In New South Wales, Bundjalung man Oliver Costello and Gumea-Dharrawal/Yuin man Jacob Morris demonstrate cultural burning in a forest.

Farming in ancient Australia

There is growing evidence that large-scale systems of production were used in ancient Australia. According to an article in the *Sydney Morning Herald* in 2011, historian Bill Gammage found that Aboriginal peoples grew crops of tubers such as yams, grain such as native millet, macadamia nuts, fruits and berries. They also raised dingoes, possums, emus and cassowaries, moved caterpillars to new breeding areas and carried fish stock across Country. This work by Bill Gammage, included in his book *The Biggest Estate on Earth*, along with the work of Yuin, Bununrong and Tasmanian man Bruce Pascoe in *Dark Emu*, has challenged the stereotype that Aboriginal peoples in Australia were all hunter-gatherers.

Source 4 This illustration, by John Helder Wedge in 1835, shows Wathaurong women harvesting yam daisy tubers with digging sticks and turning the soil to help remaining tubers grow again the next year.

Grain and flour production

The records of grain production were so widespread that in 1974 anthropologist Norman Tindale compiled a map of the grain growing areas of Aboriginal peoples (see Source 6). Grindstones dating back 30,000 years have been found at Cuddie Springs in western New South Wales. Grindstones (see Source 5) were used to crush seeds or grains and grind them to make flour. This suggests Aboriginal peoples are among the oldest bakers in the world, predating ancient Egyptians by 15,000 years.
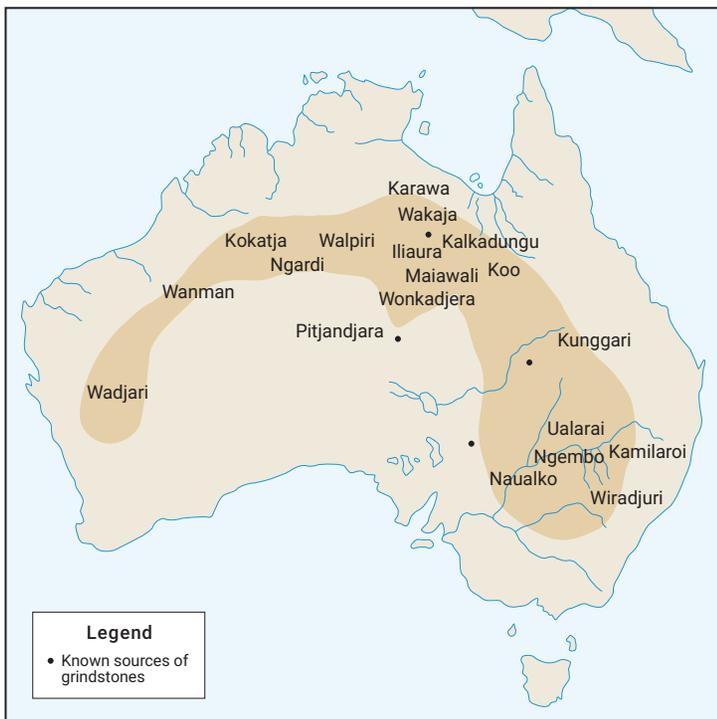
Source 5 A grindstone from New South Wales

Source 6 A recreation of Norman Tindale's 1974 map, which shows the grain and seed growing regions of the continent. The dot symbols are places where millstones (also known as grindstones) have been found.

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8.9

Aquaculture and water management

Water has played, and continues to play, a significant role in Aboriginal cultures, not only because it is essential to survival, but also from a cultural and ceremonial perspective.

Waterways often provided the natural boundaries between clans and language groups, and water is linked to stories of Creation.

Aboriginal peoples mapped water sources, and passed this information down through oral tradition, as well as physical markers, such as **scar trees**.

Aquaculture was a significant aspect of Aboriginal food production before the European colonisation of Australia. Aboriginal communities channelled and stored water to ensure a consistent and abundant supply of fish and shellfish by using dams, weirs and fish traps. Many such systems, such as those at Budj Bim in Victoria and Brewarrina in New South Wales also supported permanent settlements.

The Budj Bim site is evidence that Aboriginal peoples used volcanic rock to build stone fish traps, channels, weirs and ponds. These structures joined a series of natural pools and swamps. This allowed the local people to control the flow of water throughout the year, helping to provide a reliable supply of water in hot months and to control the movement of fish and eels for food. There is also evidence of permanent stone houses on the site. It is considered one of the largest and oldest aquaculture sites in the world. There is more information about Budj Bim in Lesson 7.5 Daily life for the Kulin people (page 266).

scar trees a tree where bark has been removed to create items such as canoes, shelters, weapons or containers

aquaculture the farming of seafood

🔲 **Analyse this!** Land and water management

Source 7 The remains of a stone shelter at Tae Rak (Lake Condah), Budj Bim.

Check your learning 8.9

🔲 **Check your learning 8.9**

Review and understand

1 **Identify** the benefits of fire-stick farming.
2 **Describe** the benefits of using fire as a land management tool.
3 **Outline** the system of aquaculture used by Aboriginal peoples at Budj Bim.

Apply and analyse

4 **Explain** why Budj Bim is important in helping historians understand ancient land management practices.
5 Reflect on the views regarding land use by Aboriginal peoples before and in the early days of colonisation. How does evidence challenge the European view that Aboriginal peoples were hunter-gatherers?

Evaluate and create

6 **Research** your local area and research the traditional land and water management systems that were in use there prior to European colonisation.
7 **Propose** (put forward) an argument to your local government about the use of fire to better manage the landscape.

Lesson 8.10
Contact and conflict with others

Introduction

For thousands of years, Aboriginal peoples in Australia largely lived in harmony with each other. Most of the time, Aboriginal groups travelled and hunted within their own traditional lands and maintained separate cultures, but Aboriginal peoples also had contact with other groups in their region. Sometimes this was for social reasons and sometimes it was for trade. There is also some evidence of conflict between groups.

Learning intentions and success criteria

Social contacts

Social contacts were common and an important part of daily life. Aboriginal peoples met on special occasions such as initiation rituals and marriage ceremonies. The most widely practised ceremonial gathering for the Kulin peoples was the **corroboree**. Several groups would gather for a corroboree, so they could involve hundreds of people and go on for several days.

Ceremonial dancing, storytelling and music were important parts of corroborees, with different groups often competing to outperform each other. Preparing for a corroboree involved body painting and special ceremonial clothing. People traded goods and shared food at corroborees. They were also a good opportunity for the Elders from different groups to get together and settle disputes or decide on punishments for people who had broken laws.

corroboree a ceremonial gathering practised by Aboriginal peoples

Source 1 *Aboriginal dancing scene* by William Barak of the Wurundjeri people in Victoria shows Aboriginal men performing a dance. The bottom half of the drawing shows a group of people in elaborately decorated possum-skin cloaks sitting and clapping.

Trading contacts

Long before Europeans arrived in Australia, Aboriginal peoples had developed a complex network of overland pathways (trading routes). These pathways criss-crossed the country and extended to the islands of the Torres Strait.

To travel between different territories, travellers and traders needed to receive permission from the traditional custodians. Visitors seeking permissions usually brought gifts for the people whose land they were passing though. In return, a special ceremony was held to welcome the visitors – known as "Welcome to Country".

For Aboriginal peoples, trade was not just limited to physical objects, such as tools and clothing; it also included stories, songs, dances, art, rituals and ceremonies. Aboriginal peoples would trade or barter (exchange) goods. For example, one highly crafted possum-skin cloak might be exchanged for three axes.

History

People could swap items they had access to for items they did not have in their own lands. For example, green stone used by the cultural groups of the Kulin Nation to make axe heads in Will-im-ee Mooring (Mount William) have been found as far away as Adelaide and parts of central New South Wales, meaning the people of the Kulin Nation had well established trading networks and were able to trade items far and wide across Australia.

Key concepts & skills Historical significance

Tanderrum – the Kulin "Welcome to Country"

Among peoples of the Kulin nation, the "Welcome to Country" ceremony was known as a *tanderrum*. When visitors wanted to enter Kulin lands, the Kulin people would form a large circle, with men on one side and women on the other. Visiting Elders were invited into the circle. Leaves from the manna gum were burnt and the visitors would pass through the smoke to cleanse themselves and show their respect for the culture and laws of the Kulin nation. The smoking ceremony was often accompanied by song and dance. Visitors were asked to look after and protect the land. They were handed gum leaves to protect them while they were visiting Country and to give them permission to share the local resources.

The tanderrum ceremony is still performed today, and many school functions, sporting events and public festivals around Victoria begin with this traditional welcome.

For more information on historical significance, see Lesson 6.7 Historical significance (page 235).

Source 2 A tanderrum held at Federation Square in Melbourne for the 2015 Melbourne Festival on land that is a historic Kulin Nation site. This ceremony brought together Elders and members from the Wurundjeri, Boonwurrung, Taungurung, Dja Dja Wurrung and the Wathaurong groups.

Source 3 Dancers from different Aboriginal nations and cultural groups dancing in a Welcome to Country ceremony in Melbourne (Naarm).

Songlines

To assist people travelling through unfamiliar territory for trade, songs were developed to help visitors and traders remember important landmarks and help them find their way. These pathways were called songlines. Using songlines, a knowledgeable person could navigate their way across large distances by repeating the words of the song.

Conflict between different Aboriginal groups

Contact between different Aboriginal groups for social events and trade was usually friendly, but occasionally conflict broke out. Arguments over access to water or hunting rights could cause conflicts, especially during times of drought. Competition between men over women could also be a cause of conflict. Rock paintings from pre-colonial times show warriors armed with weapons.

The land was so closely tied to the identities of particular people that the idea of taking another group's traditional land was unthinkable.

Weapons and warfare

The types of weapons used by Aboriginal groups varied throughout Australia, but in the Kulin Nation the most common weapons used for fighting included:

- spears (and spear throwers) – spears were generally about 3 metres long and made from the strong wood of the tea tree. The Kulin peoples used a spear thrower called a *murri wan* to hurl (throw) spears with great accuracy over long distances.
- shields – these were used to block attacks from enemy spears and clubs. They were carved from the bark of strong hardwood trees such as manna gum and acacia (wattle) and decorated with patterns and symbols.
- boomerangs – there were many different types of boomerangs, and some were designed for fighting. Fighting boomerangs were a different shape to hunting boomerangs. They were longer and flatter and not designed to return when they were thrown. Skilled Wurundjeri men carved deadly fighting boomerangs from acacia wood.
- clubs – a variety of different-sized clubs were used during warfare. These were also carved from different types of hardwood.

Source 4 This photograph taken at the Coranderrk Aboriginal Station near Melbourne around 1877 shows a range of different weapons and tools used by the peoples of the Kulin Nation.

Settling conflicts

Aboriginal peoples, including those from the Kulin Nation, had well-developed laws and systems to settle conflicts and maintain peace and order. All different Aboriginal language and cultural groups have their own lore (knowledge and traditions). Aboriginal lore provides guidance to Aboriginal peoples about how to live, with Elders acting as custodians (keepers) of lore. While Aboriginal lore is about knowledge or beliefs, Aboriginal customary law governs behaviour that is acceptable or unacceptable.

Much of the customary law (Aboriginal law) was based on the Dreaming stories. In the Kulin Nation, customary law was administered by a council of Elders from different groups across the Kulin Nation who often met at ceremonial gatherings and could also set punishments for wrongdoers within their communities.

Traditional Aboriginal punishments could take a wide variety of forms depending on the crime. Many other factors were also considered, such as the age, gender, social standing and previous history of the wrongdoer.

Source 5 This illustration shows a wrongdoer being punished for a crime by having spears thrown at him. Punishments like this rarely resulted in serious injury or death, but were designed to be a deterrent. Non-violent methods of punishment were also very common.

Punishments could include:
- shaming or public ridicule – individuals could be placed in a circle of people or Elders with everyone talking at them
- exclusion from the community – individuals were sent away for a specific period or could be banished forever
- duels – individuals could be punished by relatives or friends of the people they had hurt by having spears, boomerangs or fighting sticks used on them
- physical punishment – this could involve spearing, or burning the hair from the wrongdoer's body
- death – an individual could be punished by death.

Contact and conflict with outsiders

Some groups of Aboriginal peoples had contact with outsiders – from Asia and Europe – before British colonisation began in 1788.

Evidence suggests fishermen from a region in modern-day Indonesia called Makassar sailed to Australia as far back as 800 years ago to collect sea cucumbers to trade with the Chinese. During their time in Australia, they traded and worked with the local Aboriginal peoples. People from Papua New Guinea are also believed to have visited northern Australia on a regular basis to trade with local Aboriginal and Torres Strait Islander peoples.

Possibly the earliest European contact with Australia was made by the Portuguese in 1520 when a Portuguese expedition is believed to have sailed down the east coast of Australia, although there is no definite proof of this. The Dutch are also believed to have encountered Aboriginal peoples in the seventeenth century; some evidence suggests shipwrecked sailors lived with Aboriginal peoples in Western Australia.

Source 6 Many examples of Aboriginal rock art around Australia record the arrival of ships from Europe, as shown in this artwork from Arnhem Land in the Northern Territory.
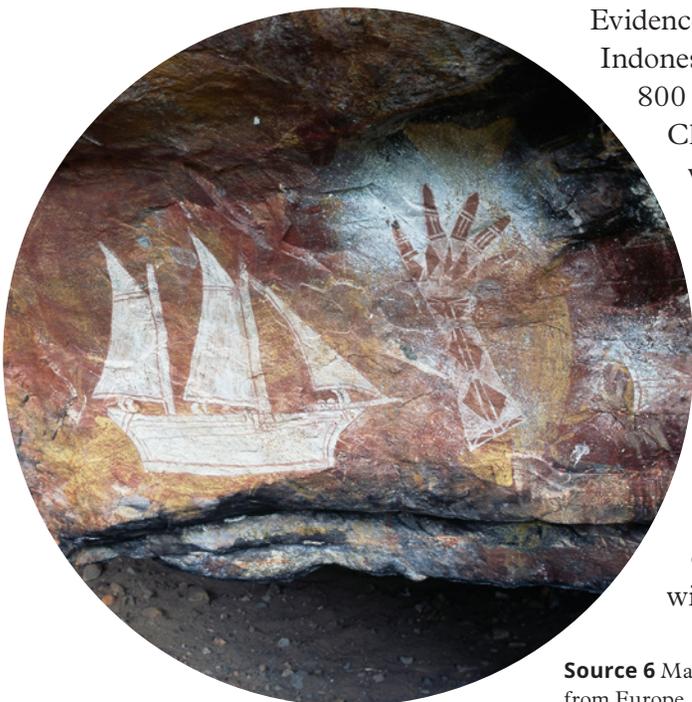
Contact between the Kulin Nation and Europeans

The first significant exposure of the Kulin people to European colonists occurred along the southern coast of Victoria around 1800. British colonists hunting seals and whales were common in Bass Strait around this time.

The establishment of a European colony in Melbourne (Naarm) in 1836 had devastating effects for the Wurundjeri people. In June 1835, John Batman – as leader of the Port Phillip Association – "purchased" 600,000 acres of land around Melbourne. He did this by presenting the local Wurundjeri Elders with a document – a land use agreement known today as "Batman's treaty". This treaty was used to claim that the people of the Kulin Nation consented to Batman taking their land, in exchange for rations and goods. Batman's treaty was based on the European idea of land ownership and legal contracts. This idea did not exist for the Aboriginal peoples. It is likely that the Wurundjeri people present at the signing of the treaty thought they were consenting to give John Batman safe passage through, and temporary use of their land. The Wurundjeri people had often made similar transactions for safe passage within their land with other members of the Kulin Nation. Two months later, this treaty and the "purchase" was declared invalid under European law. However, the land was still taken from the Aboriginal custodians and leased or sold to colonists. To do this, brutal violence was largely used and inflicted upon the Wurundjeri peoples.

By 1839 most of the Wurundjeri people had been displaced from their land. Estimates suggest that in 1850, about 3,000 Wurundjeri people had survived the disease and violence brought to them by colonisation. Today, recognition of the place of the Wurundjeri people in Melbourne's history and culture is growing and is increasingly a part of public events and celebrations.

Quiz me! Contact and conflict with others

History

Check your learning 8.10

Check your learning 8.10

Review and understand

1 What is a tanderrum? **Describe** what it involves.
2 What are songlines? **Outline** how they helped people to find their way across large distances.
3 **Identify** the different groups of people believed to have visited Australia before British colonisation.

Apply and analyse

4 **Explain** what archaeological evidence there is to suggest that items such as axes and tools were traded over large distances.

5 In your own words, **summarise** what is meant by the term "customary law". Who administered customary law and what were some possible punishments?

Evaluate and create

6 William Barack was an influential Ngurungaeta (Elder) of the Wurundjeri-willam peoples. Research William Barack and **create** a biography of his life. Include details of his important accomplishments as an Elder and activist.

8B Concepts & skills in context
Caring for Country

Introduction

For many Aboriginal people, land management is known as "caring for Country". Caring for Country was and remains an important part of Aboriginal peoples' connection to the land that gave them life.

A common concept in Aboriginal cultures is that you should only take from the land what you can give back. This is shown in the way Aboriginal peoples looked after and preserved the environment that provided for them. Historians use a range of primary sources and secondary sources to learn about how Aboriginal peoples took care of the land they lived on. These sources include artefacts, paintings, oral accounts and other historical records.

Source 1 This scarred tree in the Fitzroy Gardens, Melbourne, shows where Aboriginal people removed a large section of bark to make a canoe. The tree kept living for many years after, but died in the 1980s. The trunk of the tree has been preserved as a reminder that the Wurundjeri people lived here long before Europeans settled.

Source 2 This illustration, by John Helder Wedge in 1835, shows Wathaurong women harvesting yam daisy tubers with digging sticks and turning the soil to help remaining tubers grow again the next year.

Source 3 A digging stick, or wulunj, from the Kulin Nation; all Wurundjeri women carried a long, fire-hardened stick like this to harvest roots and tubers.

Source 4

"The natives seem to have burned the grass systematically along every watercourse, and round every waterhole, in order to have them surrounded with young grass as soon as the rain sets in. … Long strips of lately burnt grass were frequently observed extending for many miles along the creeks. The banks of small isolated waterholes in the forests were equally attended to …"

Explorer Ludwig Leichhardt, Journal of an Overland Expedition in Australia, T. & W. Boone, London, 1847.

Key concepts & skills Using historical sources

The primary and secondary sources that historians use to understand the past all tell different stories. It is the job of historians to examine these sources and come to a conclusion about their usefulness and reliability. Follow these steps when analysing primary and secondary sources.

- **Step 1** Identify who wrote, produced or made the source. Is their personal perspective obvious in the source?
- **Step 2** Identify what type of source it is. Was the source created at the time?
- **Step 3** Find out when the source was created. How old is it? Is it an eyewitness account or did someone create it?
- **Step 4** Decide why it was written or produced. Was it meant to entertain or to argue something? Does its creator have anything to gain personally from producing the source? What may have influenced its creator?

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Practise the skill

1 Can modern historians develop a complete understanding of the ways in which Wurundjeri people lived before Europeans arrived? **Explain** why you think this.

2 **Examine** Source 1, Source 2, Source 3 and Source 4 and complete a copy of the table below.

3 Once you have completed the table, use the information you have collected to write a short paragraph about life in the Kulin nation before Europeans arrived.

Extend your understanding

Historical sources are more useful to historians and archaeologists if their origin can be traced, and if other sources can be located to verify the information provided by them. Historians refer to this as **provenance**. Read Source 5 and complete the following questions to get a better idea of how this process works.

1 **Outline** what you can learn about the Wurundjeri people's way of life from this source.

2 **Summarise** how you would go about finding out how accurate or reliable this source is.

3 **Propose** (put forward) suggestions for two additional sources that you could investigate to get a better understanding about the way of life of the Wurundjeri people before colonisation.

> **provenance** a history of ownership or custody of an object that can be traced or verified by other sources

Source	Is it a primary or secondary source?	What kind of source is it? (e.g. painting, photograph, artefact)	Who created the source?	What does the source show or describe?	How does the source show or describe the way Kulin people cared for Country?
Source 1					
Source 2					
Source 3					
Source 4					

Source 5

In the forests and hills, possum was also a staple source of food and clothing. The flesh of the possum was cooked and eaten, while the skin was saved to be sewn into valuable waterproof cloaks. These cloaks were fastened at the shoulder and extended to the knees.

'Wurundjeri-willam: Aboriginal Heritage of Merri Creek', by the Merri Creek Management Committee, accessed 15 July 2016, https://www.mcmc.org.au/about-merri-creek/wurundjeri.

Lesson 8.11
Protecting the heritage of Aboriginal and Torres Strait Islander peoples

Learning intentions and success criteria

Lasting impacts of colonisation

When British colonisation began in 1788, Aboriginal and Torres Strait Islander peoples were treated very badly. Australia had been declared *terra nullius*, a Latin term that means "land belonging to no one". Over the years following the British colonisation, Aboriginal and Torres Strait Islander peoples were removed from their Country – often forcibly and violently. Many Aboriginal and Torres Strait Islander peoples died in violent conflicts caused by the Europeans. Many also died from European diseases the British brought with them, as Aboriginal and Torres Strait Islander peoples had no immunity to imported diseases. The trauma caused by British colonisation has had lasting impacts on Aboriginal and Torres Strait Islander peoples for generations and still continues to this day.

Source 1 Quinkan art on Ang-Gnarra Country on Cape York Peninsula is some of the oldest rock art in Australia. As well as being very important to Aboriginal and Torres Strait Islander peoples, rock art is a valuable source of evidence for historians investigating ancient Australia.

The traditional cultures and ways of life of Aboriginal and Torres Strait Islander peoples were changed forever after colonisation. Many sacred sites, human remains, and ancient practices were destroyed or stolen due to government policies both before and after Federation in 1901. From the late 1970s, changes in the Australian law granted some Aboriginal peoples control over some Aboriginal lands and gave Aboriginal and Torres Strait Islander peoples more rights. This return of land continues today.

It is important to know that not all destruction of Aboriginal and Torres Strait Islander sites occurred in the distant past. In 2020, the mining company Rio Tinto destroyed two Aboriginal rock shelters in the Juukan Gorge while it was extending an iron-ore mine. These shelters, in the Pilbara region in Western Australia, were of historical and spiritual significance, and contained evidence of human occupation dating back 46,000 years.

Repatriation

It was not only land that was taken during the colonial period. Items of significance to Aboriginal and Torres Strait Islander cultures, such as shields, weapons and headdresses, were sent to museums around the world. Physical remains of Aboriginal and Torres Strait Islander peoples were also treated in this way. In recent years, there has been a strong social push by Aboriginal and Torres Strait Islander peoples for the

return of artefacts stolen by the British colonisers from Australia and other parts of the British Empire. The return of these artefacts is called **repatriation**.

A recent case of repatriation was in 2022, when two artworks by Wurundjeri man William Barak (Source 2) were returned following a crowdfunding campaign by his descendants. The artworks had been in the hands of a Swiss family, but money was raised to buy them at auction so that they could be returned to Australia where they will be protected.

Also in 2022, the stolen remains of Mungo Man and Mungo Lady were reburied in the Willandra Lakes area, after being returned to their rightful burial ground (see 8C Concepts & skills in context The return of Mungo Lady and Mungo Man, page 315).

The Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) heads a program called the "Return of Cultural Heritage". It works with Aboriginal and Torres Strait Islander peoples seeking the return of their material such as objects, photos and artwork from governments of other countries, institutions and private collectors.

repatriation the return of someone or something – in this context, the remains and artefacts of Aboriginal and Torres Strait Islander peoples – to their place of origin
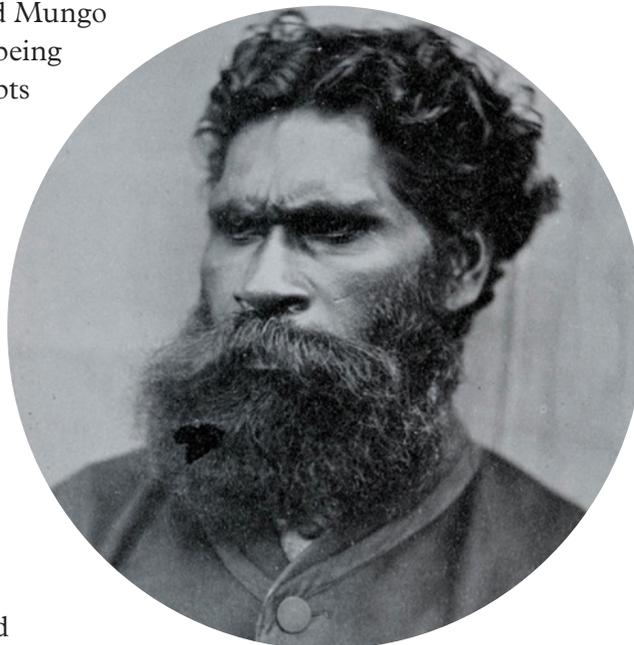
Source 2 William Barak

How can heritage be conserved?

Historical sources from Australia's ancient past can be fragile and rare, so it is important they are conserved and protected. Organisations, such as libraries, archives, art galleries and public museums, store artefacts where they can be cared for and preserved. The association Museums Australia provides museums and galleries around Australia with detailed information on consultation with relevant communities about artefacts, and on the care and preservation of sacred and important objects.

Museum displays are one of the main ways Aboriginal and Torres Strait Islander artefacts are protected, preserved and appreciated by the public. However, artefacts such as rock and cave paintings are more difficult to protect and preserve because they are exposed to the weather. The Jardwadjali people are the custodians of some very important and valuable rock art at Gariwerd (the Grampians), about 250 kilometres west of Melbourne. Rock art sites at Gariwerd are protected by mesh fences to ensure they are not damaged or vandalised.

Source 3 Traditional Aboriginal rock art, such as this example found at Gariwerd (the Grampians) in Victoria, is difficult to protect and preserve because it is exposed to the weather.

Conserving the ancient artefacts and sacred sites of Aboriginal and Torres Strait Islander peoples ensures that future generations will be able to access them and continue passing on their cultures and languages. This conservation can happen in several ways, largely through collaboration between Aboriginal and Torres Strait Islander groups and other stakeholders.

Although Aboriginal and Torres Strait Islander peoples lived in all parts of Australia, most people inhabited the coastal areas. This is where most Australians live today, so a great many sites important to Aboriginal and Torres Strait Islander peoples have already been destroyed by building and development that has taken place since British colonisation. Aboriginal and Torres Strait Islander peoples have sought to protect important sites, and many believe that conservation should be left with their custodians of Country, rather than with government organisations.

▶ **Key content video:** Protecting the heritage of Aboriginal and Torres Strait Islander peoples

World Heritage List a list compiled by UNESCO of natural or built sites, structures or features identified as being of international importance and worthy of special protection

The World Heritage List

In recent decades, there have also been determined efforts by non-Indigenous groups, local communities and governments to preserve and protect sacred sites.

One of the leading organisations in preserving and conserving significant sites is UNESCO (the United Nations Educational, Scientific and Cultural Organization). One of UNESCO's initiatives is the **World Heritage List**. This list compiles natural or built sites, and structures or features identified as being of international importance and worthy of special protection. This helps to safeguard them for future generations. Sites are nominated by countries that have signed an international agreement on the protection of the world's cultural and natural heritage and are chosen to be on the list if they are of outstanding universal value, meeting at least one of ten selection criteria.

In 2025 there were 20 Australian sites on the list, including the Willandra Lakes region, Kakadu National Park (see Source 4) and the Sydney Opera House.

Two more Australian sites, the Budj Bim Cultural Landscape (see Source 5) and Uluṟu-Kata Tjuṯa National Park (see Source 6), are also listed for their significance for Aboriginal peoples.

Source 4 Kakadu National Park meets several criteria for World Heritage listing, including for having important natural habitats.

Budj Bim Cultural Landscape

The Budj Bim Cultural Landscape on Gunditjmara Country is evidence of an extensive aquaculture system established more than 6,000 years ago to trap eels. Budj Bim is the only World Heritage listed site recognised purely for its relationship with Aboriginal and Torres Strait Islander peoples. It meets two criteria for World Heritage listing:

- (iii) "bears a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared"
- (v) "outstanding example of a traditional human settlement, land-use … representative of a culture".

Uluṟu-Kata Tjuṯa National Park

Uluṟu-Kata Tjuṯa National Park includes Uluṟu (one of the most recognisable symbols of Australia) and Kata Tjuṯa, the large rock domes about 40 kilometres west of Uluṟu. As well as being places of great natural beauty, they are sacred to the Aṉangu traditional owners, who have lived in the area for more than 20,000 years. This site is also a UNESCO world heritage site, meeting four criteria for World Heritage listing.

Source 5 The Budj Bim Cultural Landscape

Source 6 Uluṟu is an area of spiritual significance for the Aṉangu people.

Module 8 Australia: Deep time to the modern era

8.11

Cultural centres

In recent years there has been an increasing interest in and recognition of Aboriginal and Torres Strait Islander cultures, along with the recognition of Aboriginal and Torres Strait Islander peoples' continued custodianship of their Country. Cultural centres have been developed, usually in conjunction with tourist information centres in national parks, which recognise the ongoing connection to Country for the local people.

In western Victoria, the Tae Rak (Lake Condah) Aquaculture Centre opened at Budj Bim in 2022 to show how the Gunditjmara people worked with the natural resources and environment of the region. Visitors can take tours of the eel ponds and other sites, including the remains of stone shelters that Gunditjmara peoples built to live in. This enables visitors to better understand and appreciate their long-standing connection to Country. The physical remains of the site are preserved, as well as the culture and stories that accompany the eel ponds. In places of significance, such as the rock shelters of Gariwerd (the Grampians) in Victoria, or the artworks of Laura in northern Queensland, physical barriers are used to protect the sites, ensuring that they are not damaged or vandalised. Information is also provided to ensure that people understand the sites' significance. Some sites charge an entry fee to ensure its ongoing protection and management.

Analyse this! Protecting the heritage of Aboriginal and Torres Strait Islander peoples

Check your learning 8.11

Check your learning 8.11

Review and understand

1 **Identify** two examples of more respectful and inclusive attitudes towards Aboriginal and Torres Strait Islander cultures in today's society.
2 Why is it important to conserve traditional Aboriginal and Torres Strait Islander artefacts and sacred sites? **Outline** what might happen if these artefacts and sites are not conserved.
3 In your own words, define "World Heritage List".
4 **Identify** the two World Heritage listed sites that reflect their significance for Aboriginal and Torres Strait Islander peoples.

Apply and analyse

5 **Explain** why museums and galleries are increasingly wanting to display Aboriginal and Torres Strait Islander peoples' art and artefacts.

6 **Summarise** the ways in which Aboriginal and Torres Strait Islander peoples have worked with other groups to protect heritage.
7 **Compare** the UNESCO statements for Uluru and Budj Bim and suggest reasons for their World Heritage Listing. Remember, when you compare two things you must talk about how they are similar and how they are different.

Evaluate and create

8 Use the UNESCO World Heritage website to **research** either Budj Bim or Uluru. Create a poster, infographic or digital presentation outlining its World Heritage significance.

8C Concepts & skills in context
The return of Mungo Lady and Mungo Man

Introduction

Managing the remains of ancestors is important to Aboriginal peoples, because of cultural beliefs held about ancestral remains. In the past, Aboriginal remains were often treated in a disrespectful way by non-Indigenous scientists and governments.

Aboriginal peoples believe that removing a person's remains disturbs their spirit, and if a person's remains are not on their Country, the person's spirit cannot rest. To many, the presence of the archaeologists who came to unearth the remains of Mungo Man and Mungo Lady was an intrusion on a sacred site. The remains of Mungo Man and Mungo Lady were put in a suitcase and removed from their homelands without the traditional owners of the land being consulted.

Researchers took the remains to the Australian National University (ANU) in Canberra. These actions demonstrate that, since colonisation, the views of Aboriginal and Torres Strait Islander peoples were often disregarded in matters concerning them.

After the remains were removed, traditional owners of the land called for them to be returned to Lake Mungo. The remains of Mungo Lady were returned to Country in 1991. The remains of Mungo Man were repatriated to Country in 2017, and a ceremony was held by traditional owners to celebrate this return. In 2022, the remains of both Mungo Lady and Mungo Man were reburied in the Willandra Lakes area.

Source 1 The remains of Mungo Man being returned to Lake Mungo in 2017.

Source 2

For the Paakantji, Mutthi Mutthi and Ngyimpaa people, human remains and other evidence of their ancestors are an important part of their history. The spiritual and cultural connections to Country and the burial of Ancestors are important to their cultural traditions, making it crucial that these remains are returned to their country. The remains of Mungo Lady were returned to Lake Mungo in 1992, and Mungo Man's remains were returned in 2017.

Uncovering ancient Australia, National Museum of Australia,https://digital-classroom.nma.gov.au/defining-moments/mungo-lady-found?

Key concepts & skills Communicating

Creating and delivering an audiovisual presentation

Audiovisual presentations can communicate the findings of your research to an audience by using visual sources (such as photographs, maps and infographics) and audio sources (such as interviews and songs) to make your presentation informative and engaging. To create and deliver a good audiovisual presentation, follow these steps:

- **Step 1** Develop the research question (or questions). Work out exactly what topic your audiovisual presentation will explore. Make a list of points you will need to cover.
- **Step 2** Gather your research. Find and collect a range of reliable sources that will help you answer your research question. Ideally, you should have a combination of primary and secondary sources. Make sure these sources are accurate.
- **Step 3** Plan and create your presentation. Make sure your presentation addresses the question (or questions) that you set out to explore. Decide on the format that you will use; for example, PowerPoint, Prezi, a short video or a talk supported by a poster.
- **Step 4** Deliver your presentation.
  - Rehearse your presentation so that you can deliver it with confidence.
  - Engage your audience by speaking slowly and clearly and making eye contact.
  - Prepare for the worst by having a back-up plan in case technology lets you down.
  - Finish strongly. Your presentation should finish on a high note.
  - Encourage your audience to comment or ask questions at the end of the presentation.

Practise the skill

Create an audiovisual presentation supporting the return of Mungo Man and Mungo Lady to Country.

1 Develop a series of questions to guide your research, such as:
   - What are the arguments supporting the request to return the remains to their Country?
   - Who is involved?
   - How has it been received?
   - How will the return of the remains help keep First Nations cultures strong?
2 **Research** and collect a range of information (such as pictures, music, videos, interviews and short quotes) and prepare your audiovisual presentation.
3 Present your finished product to the class.

Extend your understanding

1 Listen to the episode "Shots fired" from the ABC podcast *Stuff the British Stole*, which explores the history of the Gweagal Shield, an artefact taken by Captain James Cook upon his arrival in Botany Bay.
   a **Discuss** why this shield is an especially significant artefact.
   b **Identify** the arguments put forward about the origin of the shield.
2 **Research** the Elgin Marbles, which are currently held by the British Museum. **To what extent** is the Greek parliament's claim to have the Marbles repatriated similar to the claims by Australia's Aboriginal peoples to have artefacts repatriated? To what extent do you agree with this? A lot (strongly), a little bit (somewhat) or not at all? Write a short paragraph explaining your position.
3 **Discuss** the advantages and disadvantages of artefacts being held and displayed by organisations such as museums.

Review: Deep time to the modern era

Review activity

Read the information and examine the map, then answer the following questions.

Songlines as trade routes

Songlines are travel routes across the Australian landscape. Certain songlines describe the routes that Creator beings took during the Dreaming. Other songlines describe ceremonial trade routes. Songlines link together important locations and often refer to landscape features, such as trees, waterholes and creatures.

For Aboriginal peoples travelling across Australia to trade or attend ceremonies, songlines were important as a memory aid in remembering which route to take or follow. Songlines were often sung during a journey. Because songlines are musical, they could be understood by many different Aboriginal language groups.

Before colonisation, the routes of songlines were maintained through regular use and clearing. Following the colonisation of Australia, some Europeans used songline routes – which were the easiest, cleared routes across the land – as paths for horses and carts of sheep. Over time, these paths were made into gravel roads. Many of the ceremonial trade routes described in songlines are present today as roads and highways across Australia.
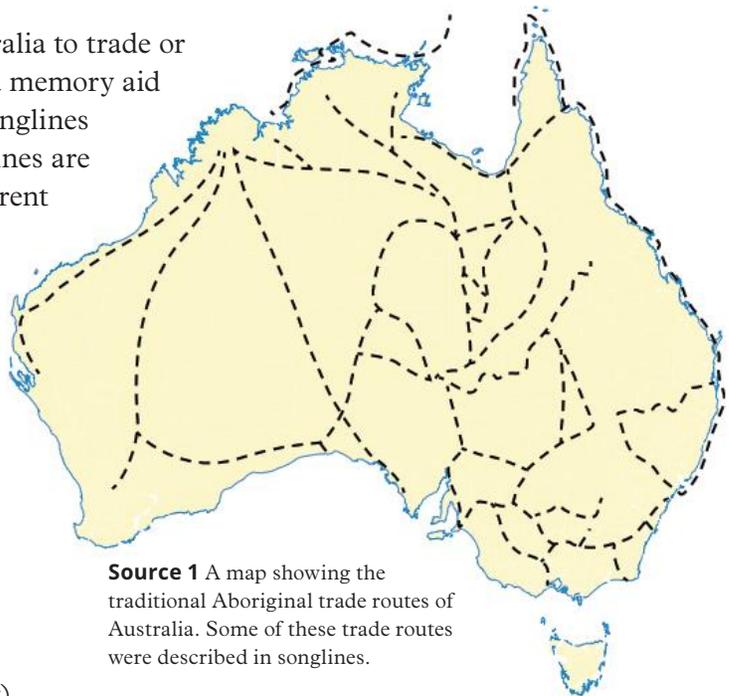
Source 1 A map showing the traditional Aboriginal trade routes of Australia. Some of these trade routes were described in songlines.

1 In your own words, **define** a songline. (1 mark)
2 **Explain** how songlines worked. How and why were they used? (3 marks)
3 **Summarise** the cultural significance of songlines to Aboriginal peoples. (2 marks)
4 **Identify** three landscape features that might be described in a songline. (3 marks)
5 Songlines were important for trading across Australia. **Explain** how songlines helped Aboriginal peoples across Australia meet for ceremonies and trade. (3 marks)
6 **Examine** Source 1 and describe the trade routes shown. (3 marks)
7 **Summarise** how early European colonisers used songlines. (2 marks)
8 In your own words, **summarise** how some songline routes are used today. (3 marks)
(Total: 20 marks)

Module checklist: Australia: Deep time to the modern era

Module review quiz: Australia: Deep time to the modern era

Module

9

Overview: Ancient societies (10 000 BCE–600 CE)

Sub-strand: Investigation: Ancient societies (10 000 BCE–600 CE)

Overview

In this module you will learn how physical features, social structure and government, cultural evidence, religion, and war and conflict influenced ancient societies in Egypt, Greece, Rome, China and India. This module will explore Asian and Mediterranean ancient societies to contextualise their impacts on our modern world.

Source 1 The Pyramids of Giza in Egypt are among the most important sites from the ancient Mediterranean world. They were built around 4,500 years ago to house the remains of dead pharaohs who had ruled over ancient Egypt.

Lessons in this module

9A Where and when did ancient societies develop?

Lesson 9.1 The where and when of the Mediterranean world

Lesson 9.2 The where and when of the Asian world

9B What were the key features of ancient societies?

Lesson 9.3 Key features of ancient societies in the Mediterranean world

Lesson 9.4 Key features of ancient societies in the Asian world

9C How did ancient societies influence our modern world?

Overview: Ancient societies (10 000 BCE–600 CE)

This sub-strand offers a choice of five topics:

- Ancient Egypt
- Ancient Greece (available on Oxford Digital)
- Ancient Rome
- Ancient China
- Ancient India (available on Oxford Digital)

You must choose *at least one* of these topics for study.

Lesson 9.1
The where and when of the Mediterranean world

societies
communities of people living in a particular area who have a shared culture, customs and laws

Introduction

Some of the most significant ancient **societies** developed on the continents we now know as Europe, Africa and Asia. They included ancient Egypt, ancient Greece, ancient Rome, ancient China and ancient India. In this sub-strand you will be learning about one of these ancient societies in detail. To get a better understanding of how and why your chosen society developed, it helps to look at some of the factors they had in common and how their development was linked.

This lesson focuses on ancient Egypt, Greece and Rome. These three societies had one thing in common – their connection to the Mediterranean Sea. The name Mediterranean comes from a Latin word meaning "inland" or "in the middle of land". By looking at Source 1, you can see how it earned this name.

Source 1 shows the location and size of these ancient societies and provides some key information about each of them. The timeline (Source 2) also shows the dates for each of the societies in the ancient Mediterranean world. Note the dates for each society as you are looking at the map – not all of them existed in the same time periods. Some flourished and then disappeared, only to later become part of another society. This was the case with ancient Egypt and ancient Greece, both of which eventually became part of the Roman Empire.

Ancient Mediterranean world: Key societies
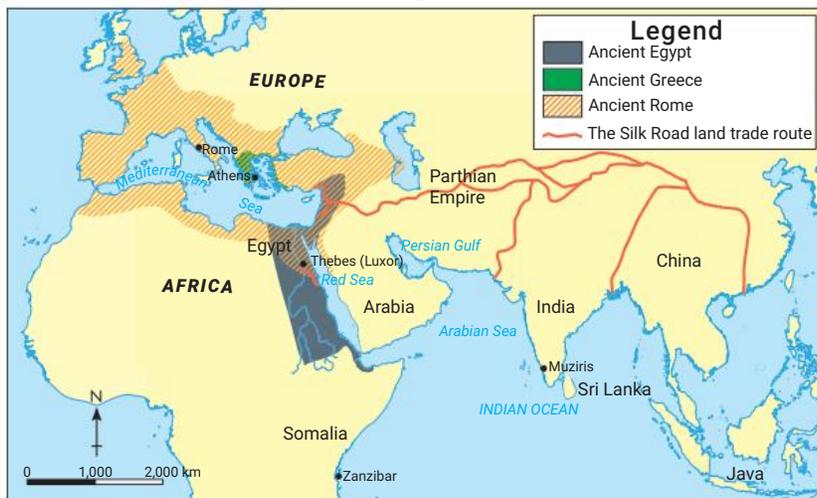
Source: Oxford University Press
Source 1
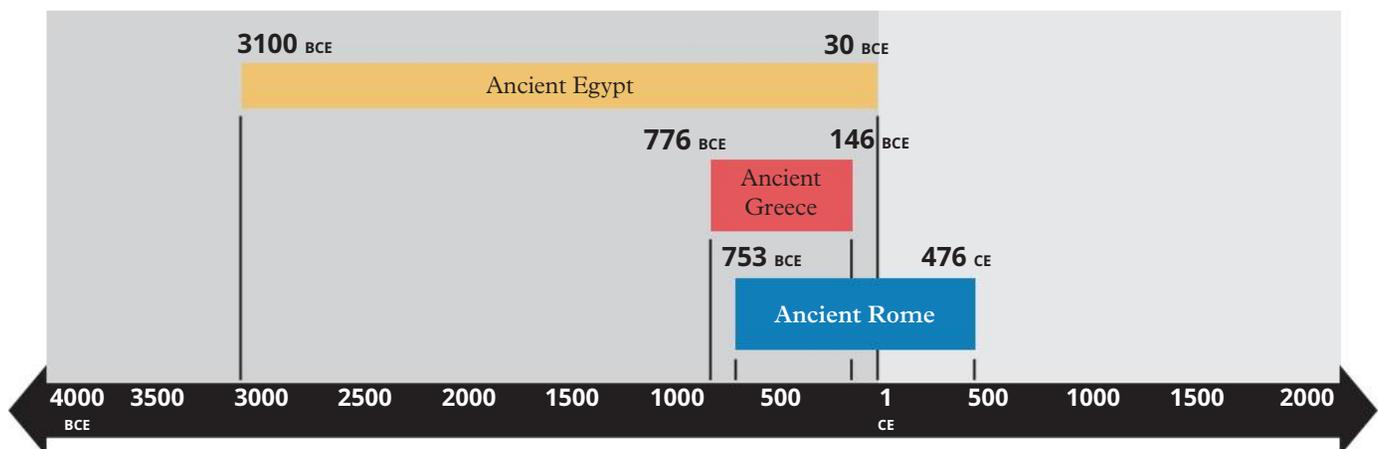
Source 2 A timeline showing the rise and fall of ancient societies in the Mediterranean world.

Ancient Egypt (*c.* 3100–30 BCE)

Ancient Egypt was a society based around the Nile River in northern Africa. It was one of the world's first societies. Ancient Egypt was ruled under one government from about 3100 BCE. Between then and 30 BCE, when the last pharaoh died, there were 31 **dynasties** and 70 **pharaohs**.

Source 3 The Great Sphinx, Egypt

dynasty a period of rule by members of the same family who come to power one after the other

pharaoh the leader of ancient Egypt who was believed to be a god; the pharaoh had absolute power and total control

Ancient Greece (*c.* 776–146 BCE)

Formed from three existing cultures in the region, ancient Greece covered all of modern-day Greece as well as parts of Turkey and other settlements around the Mediterranean and Black Seas. The society lasted only about 400 years, but its legacy (including democracy) influences the Western world to this day.

Source 4 The Acropolis, Athens

Ancient Rome (753 BCE–476 CE)

The society of ancient Rome lasted approximately 1,300 years. It was centred on the city of Rome, in modern-day Italy. The Romans conquered the ancient Egyptians and Greeks, as well as many other peoples. During its history, Rome was ruled as a **monarchy**, a **republic** and an **empire**. It was a powerful society with a strong military and an advanced culture.

Quiz me! The where and when of the Mediterranean world

Source 5 The Colosseum, Rome

monarchy a system of government in which a single monarch (such as a king or queen) has power

republic a system of government in which the people and their elected representatives (such as a president, politicians or senators) have power

empire a group of countries and/ or areas, often with different languages and cultures, that are ruled by a central power or leader (known as an emperor or empress)

History

9.1

Check your learning 9.1

Check your learning 9.1

Review and understand

1 In your own words, **define** the word "Mediterranean", and name the language it comes from.
2 **Identify** the geographical feature that ancient Egypt, ancient Greece and ancient Rome had in common.
3 Which ancient society lasted longer, ancient Egypt or ancient Rome?

Apply and analyse

4 **Summarise** one legacy of ancient Greece.

Evaluate and create

5 Examine Source 1 and look at the route of the Silk Road. Using the internet or library, **research** the Silk Road and write a short paragraph describing what it was and why it was important.

Lesson 9.2
The where and when of the Asian world

Learning intentions and success criteria

Introduction

Asia is the largest and most populated continent on Earth. It stretches from Europe and Africa in the west to Australia and Oceania in the south. Asia – including the subcontinent of India – is the birthplace of nearly all major religions in the world today, as well as a vast number of technological and philosophical achievements.

Source 1 shows the location and size of Asia's ancient societies and provides some key information about each of them. The timeline (Source 2) also shows the dates for each of the societies shown here. Note the dates for each society as you are looking at the map – not all of them existed in the same time periods. Some flourished and then disappeared, only to later become part of another society. This was the case with the Indus Valley society in India, which became part of the Mauryan Empire.

Ancient Asian World: Key societies
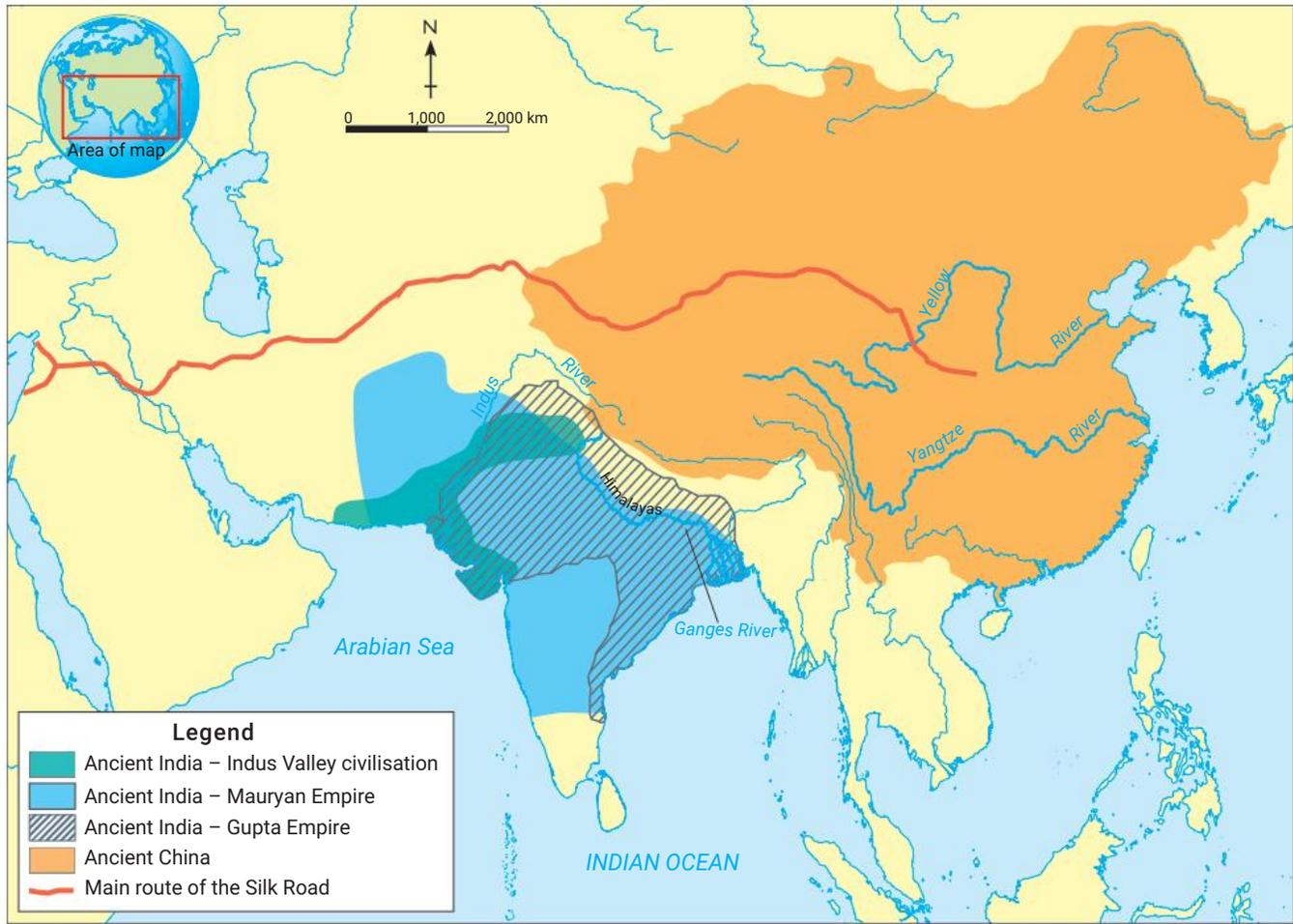
Legend
- Ancient India – Indus Valley civilisation
- Ancient India – Mauryan Empire
- Ancient India – Gupta Empire
- Ancient China
- Main route of the Silk Road

Source: Oxford University Press
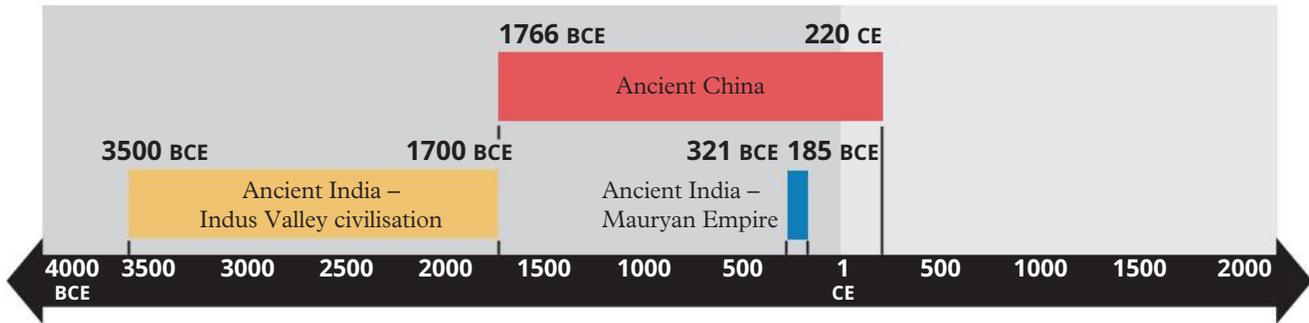
Source 1

Source 2 A timeline showing the rise and fall of ancient societies in Asia

Ancient India (3500–185 BCE)

Society in India began in the Indus Valley in 3500 BCE. For much of its history, ancient India was a collection of separate regions and kingdoms, some of which were at war with one another. At different times, some of these were ruled as part of **dynasties** or **empires**; this included the Mauryan Empire, a society that rose and fell in just 120 years.

Source 3 The Great Stupa, in central India

dynasty a period of rule by members of the same family who come to power one after the other

empire a group of countries and/or areas, often with different languages and cultures, that are ruled by a central power or leader (known as an emperor or empress)

9.2

Source 5 Terracotta warriors from ancient China

Ancient China (1766 BCE–220 CE)

Ancient China was ruled for 3,600 years by dynasties. The last dynasty – the Qing – ended in 1912. Chinese society was one of the earliest in the world to establish towns and cities. It also contributed important technological developments to the rest of the world, such as gunpowder and printing.

Source 4 The Great Wall of China

Quiz me! The where and when of the Asian world

Check your learning 9.2

🖥️ **Check your learning 9.2**

Review and understand

1   Use Source 1 and Source 2 to order the ancient societies in Asia by size and by length of time they existed.
2   **Identify** the first society in India and state where it began.
3   Ancient China was ruled by dynasties. In your own words, **define** the term dynasties.

Lesson 9.3
Key features of ancient societies in the Mediterranean world

Introduction

Even though ancient societies across the Mediterranean world were very different, they were all influenced by some common factors, including physical features, social structures (such as governments), religion and wars. This lesson will look briefly at some of these factors and see how they influenced different societies in the Mediterranean world.

Physical features

The physical features of the Mediterranean region were critical in influencing how early societies there developed.

In ancient Egypt, the Nile was the lifeblood of the society. Egypt would never have developed as a society without the Nile. It provided the water critical for irrigating crops that fed the early Egyptians. The deserts to the west could not support a society, but they did provide the Egyptian people with protection from enemy invaders because they were impossible to cross. The Red Sea to the east and the Mediterranean Sea to the north also provided barriers against invasion. Egyptian architecture and fashion were adapted to life in a hot, dry climate.

Ancient Greek society sprang up in an area known as the Peloponnese, on the shores of the Aegean Sea. The land is mostly mountainous (see Source 2) and the climate moderate, with wet winters

Learning intentions and success criteria

Source 1 A satellite image of Egypt showing the fertile Nile valley and delta in green.

Source 2 Steep mountains and flat farmland in the Peloponnese, Greece.

9.3
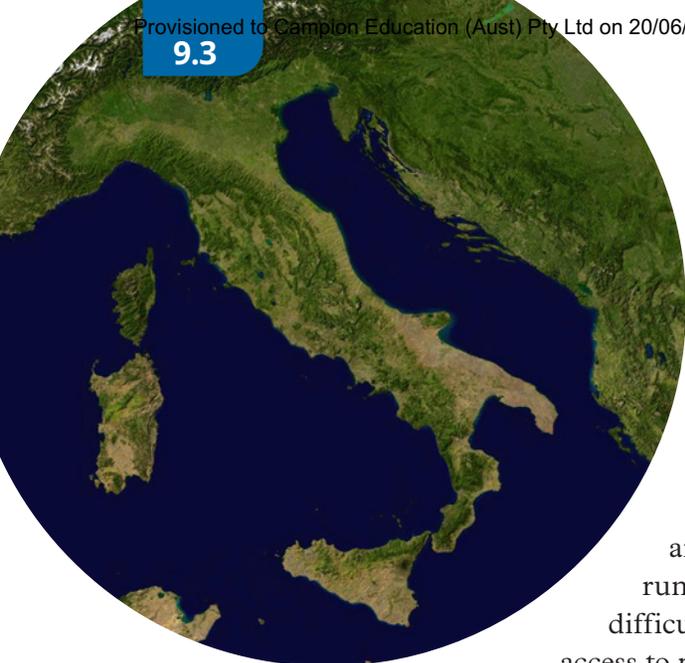
Source 3 A satellite image of the Italian peninsula.

and warm, dry summers – a very different geography and climate from Egypt. The fertile coastal plain was suitable for **agriculture**. The mountains isolated early settlements, as did the many islands that make up Greece, so these settlements developed independently of one another as separate city-states. Each city-state had its own ruler and customs – unlike Egypt and Rome, which each had one ruler.

Ancient Rome was settled on the Italian peninsula, which juts out into the Mediterranean Sea (see Source 3). The landscape of the peninsula is varied, with mountains and fertile plains. A rugged mountain range, the Appenines, runs down the peninsula's centre, which made expansion inland difficult. Being close to the sea, however, allowed the Romans easy access to many coastal settlements and other foreign territories around the Mediterranean region, which they gradually conquered with the help of their strong navy.

Social structure and government

A common element of ancient Mediterranean societies was that they were organised in a **hierarchy**. This means that they each had strict social classes. Despite this similarity, Egypt, Greece and Rome all had very different forms of government that developed and changed over time.

Ancient Egypt was ruled by a pharaoh who owned all the land and its resources. His power was passed on to his son. Other social groups were defined by their jobs, such as priests, merchants and scribes. Slaves, who were often captured as prisoners of war, did most of the hard work in Egyptian society. The role of women was generally to raise a family, but they had relatively strong rights for that era.

Unlike Egypt, ancient Greece was made up of a series of city-states and had no centralised government. In Greece's early history, the city-states were ruled by kings who had total power. Later, that power passed to a small group of **aristocrats**. In the sixth century BCE, the people of Athens developed a democratic system of government, which gave **citizens** some power in running the state. Most city-states eventually adopted **democracy**. Citizenship was restricted to adult men whose parents had been born in the city-state and were married. Women, slaves and foreigners were not "citizens" and could not vote. Women were expected to stay at home, regardless of their wealth and position. Slaves were usually prisoners of war or children sold by very poor families, and many lived short, brutal lives.

After 27 BCE, Rome was ruled by emperors. For a large part of its earlier history, however, the government of ancient Rome was similar to that of ancient Greece. Political decisions were made by a small group of people in the Senate and a Citizens' Assembly. All the politically important, powerful jobs were held by **patricians**, members of ancient Rome's wealthy aristocratic families. The ordinary people who made up the majority of Roman society were called **plebeians**. Similar rules of citizenship applied, so women, foreigners and slaves could not have full citizenship. Roman women had few rights and led restricted lives that centred on the home and

agriculture the science and practice of farming, including cultivating soil for growing crops, and raising animals to provide food, wool and other products

hierarchy a way of organising things (or people) from top down in order of importance or significance; ancient societies had strict hierarchies with a ruler at the top and peasants at the bottom

aristocrat a person who (through wealth or birth) belongs to the upper class of a social group

citizen a person who, through birth (or by meeting certain conditions) is recognised as a legal member of a community

democracy a political system in which people hold the power, either directly or through representative democracy

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9.3

their family. Like other ancient societies, Rome depended on slaves as a source of labour. Roman slaves were also usually prisoners of war or abandoned children. Some slaves were freed (freedmen), and a few became very wealthy and influential.

Cultural evidence

A lot of what we know about ancient societies comes from cultural evidence. This evidence includes artefacts such as paintings, sculptures and pottery. Cultural evidence is also present in iconography. This term refers to the content of art – how societies used pictures and symbols to represent their ideas and way of life.

Art, iconography and pottery

Ancient societies practised art for tens of thousands of years. The oldest rock paintings are believed to be 32,000 years old, and pottery has existed for more than 20,000 years.

In ancient Egypt, art was magical and was supposed to appeal to the gods. Art was found in temples, palaces and tombs. Artists used recognised symbols to seek protection from gods. When artists depicted people, they showed as much of the person as possible (both front and side) so that the gods would recognise them. Certain colours symbolised particular gods or parts of nature.

Most of the art remaining from ancient Greece can be found on pottery. Pots became highly detailed during Greece's Golden Age (*c.* 500–300 BCE), and depicted many aspects of religion and daily life. Greek pots usually showed red or orange images on black backgrounds or vice versa (see Source 5). The Greeks also produced many sculptures, usually of nude figures.

The ancient Romans produced vast quantities of pottery and glassware, but it was not as decorative as ancient Greek pottery. Much of Roman art was borrowed from the Greeks. The ancient Romans produced sculptures, paintings and mosaics (pictures made of tiles). Like the Greeks, they depicted gods, important people or scenes from everyday life (see Source 6 and Source 7).

patrician an educated and usually influential male member of one of ancient Rome's aristocratic families; usually wealthy landowners

plebeians a term used to describe the many poor and uneducated people in ancient Rome

History

Source 4 An ancient Egyptian plaque.

Source 5 A *krater* – a pot used to dilute wine in ancient Greece.

Source 6 An ancient Roman mosaic showing a slave serving wine.

Source 7 An ancient Roman mosaic depicting street musicians.

Writing

Mesopotamia
the fertile land lying between the Tigris and Euphrates Rivers (now covering a large part of Iraq); Mesopotamia is an ancient Greek word meaning "between rivers"

hieroglyphs
picture-like signs used in the original writing system of the ancient Egyptians

millennium a period of 1,000 years

Some ancient societies developed systems of writing to keep records of trading. The ancient Sumerians in **Mesopotamia** produced the first known script around 3500 BCE. Only the very privileged or highly educated would have been able to read or write.

The ancient Egyptians were using **hieroglyphs** by 3000 BCE. There were about 700 signs, each one representing a word or a sound.

By the early part of the first **millennium** BCE, a number of languages in the Middle East region had alphabets. These were lists of symbols that related to particular sounds. The first alphabets contained only consonants. The alphabet of the ancient Phoenicians (a people living in the region of modern-day Lebanon) had 22 characters. It would later influence the writing of the ancient Greeks and provide the basis for the alphabet of the ancient Romans.

Source 8 A clay tablet displaying a cuneiform script, developed by the ancient Sumerians.

Source 9 Hieroglyphs from an ancient Egyptian tomb

Religion

Religion played a central role in **culture** and society across the Mediterranean world. The Egyptians, Romans and Greeks all had complex religious beliefs. They all worshipped multiple gods whom they believed were responsible for things like the weather and natural disasters.

In Egypt, religion dominated society and the pharaoh was seen as a **deity**. Priests and priestesses were at the top of the social hierarchy. Many Egyptian gods were represented with animal parts, and gods were used to explain the natural world and forces of nature. Many of the most famous features of ancient Egypt, such as pyramids and mummies, were the result of religious practices related to death.

Ancient Greek religion, like Egyptian religion, involved many gods and goddesses. Myths and legends about the gods were used to explain the world and strengthen Greek history and culture. Religion was important but, unlike in Egypt, the head of the government was not a religious figure. Religious beliefs and practices influenced many aspects of Greek culture, including architecture and even the Olympic Games.

culture the customs and traditions that a community, society or civilisation develops over time that are passed down from generation to generation

deity a god or goddess

Source 10 A depiction of the Egyptian god Anubis.

Source 11 A marble carving showing the Greek god Apollo and the hero Heracles.

Source 12 A seventeenth-century painting of the Roman god Neptune.

Source 13 A painting showing the Egyptian pharaoh Tutankhamun on his war chariot.

History

Most ancient Roman deities were the equivalent of ancient Greek gods and goddesses. Romans also incorporated the deities of societies they had conquered into their belief system, such as the Egyptian goddess Isis. Roman deities were worshipped in temples and at home, and this often involved sacrificing animals. After Christianity was founded, it spread to Rome. Despite Christians facing around 300 years of brutal persecution in Rome, by 394 CE Christianity had become the official religion of ancient Rome.

War and conflict

Source 14 A seventeenth-century representation of a scene from the Peloponnesian War.

Source 15 An artist's impression of the Roman army at war.

In its early years, Egypt was a peaceful society, but by 1550 BCE it had a very powerful army, which included foot soldiers and charioteers. The pharaoh used the army to protect Egypt from attack, and various pharaohs also used the military to expand Egypt's territory and influence in the region.

Because the Greeks were not governed by one ruler like the Egyptians, different city-states often fought wars against one another. Different city-states used different military structures and strategies. Wars were an important part of myth and legend, and the gods were believed to be involved in determining their outcomes.

A long period of wars between Greek states ruined much of Greece's farmland and weakened the city-states. Eventually, the king of Macedon, Philip II, conquered Greece's city-states. His son Alexander the Great consolidated control and also conquered Egypt in 332 BCE.

Rome had a large and powerful army. Military service was an important part of life for most citizens and was crucial to expanding the empire and then defending it. The Roman army was highly structured and organised, very disciplined, and it employed a wide range of military tactics. Through wars with neighbouring societies, Rome was able to expand its empire around the entire Mediterranean Sea. It eventually conquered the Greeks and the Egyptians.

Quiz me! Key features of ancient societies in the Mediterranean world

Check your learning 9.3

Check your learning 9.3

Review and understand

1 What was the name given to the rulers of ancient Egypt?

2 Choose a social group (such as women or slaves) and **describe** its role in each of the three ancient societies.

Apply and analyse

3 Copy the following table.

Social structure in ancient Egypt	Social structure in ancient Rome

a In each column, write the main features of the social structure in ancient Egypt and ancient Rome.

b In a short paragraph, **compare** the social structure in ancient Egypt and ancient Rome. Remember, when you compare two things, you must talk about how they are similar and how they are different.

4 **Explain** some of the ways that religion and beliefs influenced ancient societies in the Mediterranean world.

History

Lesson 9.4
Key features of ancient societies in the Asian world

Physical features

For a long time, ancient societies in the West knew very little about societies in Asia, such as China and India. In China's case, a large part of this was due to its geography. The largest ocean on Earth (the Pacific) lies to its east, dense forests to the south, the world's tallest mountains (the Himalayas) to the west, and large deserts to the north-

west. All of these physical features made China difficult to reach. In the third century BCE, the Great Wall of China was constructed as a final barrier to would-be invaders at its northern border.

Chinese society was based on agriculture in the fertile plains of its two major rivers, the Yellow River and the Yangtze River. China's large area means it has very different climates in different regions.

Learning intentions and success criteria

Source 1 The Yangtze River in Yunnan Province, southern China.

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9.4

India's geography was also influential in shaping its history. To the north, deserts and the Himalayas provided a natural barrier. There was plenty of fertile land for people to settle, including coastal regions, plains and river valleys. Trade was made possible by the region's rivers. They provided transport routes to the coast, where goods could be traded with other countries.

These physical features were important for the development of two separate societies. First, there was the Indus Valley society (*c*. 3500–1700 BCE) in north-western India. This society relied on the Indus River as a major transport route for trade – a major occupation of its people. Much later, there was the Mauryan Empire (321–185 BCE), which began near the Ganges River in the north-east of India. At the head of this empire was the Mauryan Dynasty, whose rulers were strong in both politics and warfare. They formed ancient India's first empire and rapidly conquered most of the Indian subcontinent.

Much of India is very hot throughout the year, and monsoonal rains mean it is wet for months at a time. These conditions influenced architecture, clothing and food.

Social structure and government

China was governed under ruling dynasties (ruling families) for much of its history. The emperors came from powerful, wealthy families, and passed the leadership down to their children. Dynasties sometimes changed after a power struggle between rival families, or if a ruler became very unpopular with the people because of floods or famine. The Han Dynasty ruled the longest – nearly four centuries.

hierarchy a way of organising things (or people) from top down in order of importance or significance; ancient societies had strict hierarchies with a ruler at the top and peasants at the bottom

China had a strict social **hierarchy**. Rulers, scholars and nobles made up the wealthy and powerful group at the top of the hierarchy. Farmers and then merchants were below them. Like women in other ancient societies, Chinese women had a lower status than men and had few freedoms. Their life was mostly restricted to the home.

Like China, India also had a strict social hierarchy. India's hierarchy was part of the Hindu religion. This hierarchy was known as a caste system, which divided people into social groups that determined their status, responsibilities and privileges. There were four main castes, with Brahmins at

Source 2 A Statue of Qin Shi Huang, the first emperor of China (221 BCE).

Source 3 A procession of modern-day Brahmins, the highest caste in Indian society.

the top. Outside the caste hierarchy were the Untouchables, who were the most deprived group in Indian society. People were born into a caste or group and could not move into a different one. This social hierarchy dominated people's lives – it determined their jobs, whom they could marry and whom they could socialise with.

As in many other ancient societies, slaves were an important source of labour in ancient India. Unlike in the Mediterranean, slaves in India were usually not prisoners of war. Many were brought to India by traders, or were made slaves as punishment for crimes they committed. Slaves had some rights in India and were theoretically protected by laws. People were rarely slaves for life.

Unlike in many other ancient societies, women in ancient India seem to have had a similar status to men. They were active in society, educated, and respected by men. With the arrival of Islam and Christianity, the status of women began to change, and they were increasingly socially repressed.

In ancient India, paintings and sculptures mostly related to Hindu symbolism (religious subjects). They often depicted gods and legends. As with Chinese art, Indian art changed over time as it was influenced by different rulers and foreign ideas.

Cultural evidence

A great part of what we know about ancient societies comes from cultural evidence. This evidence includes artefacts such as paintings, sculpture and pottery. Cultural evidence is also present in iconography. This term refers to the content of art – how societies used pictures and symbols to represent their ideas and way of life.

Written records provide probably the strongest cultural evidence of all. Not all ancient societies produced a system of writing, but scripts did develop in China and India. Very few people in ancient societies could read or write. Those who could do so usually belonged to the more privileged groups in the social hierarchy.

Source 4 A ceramic figure of a woman from the Indus Valley societies in India where women had a similar status to men

9.4
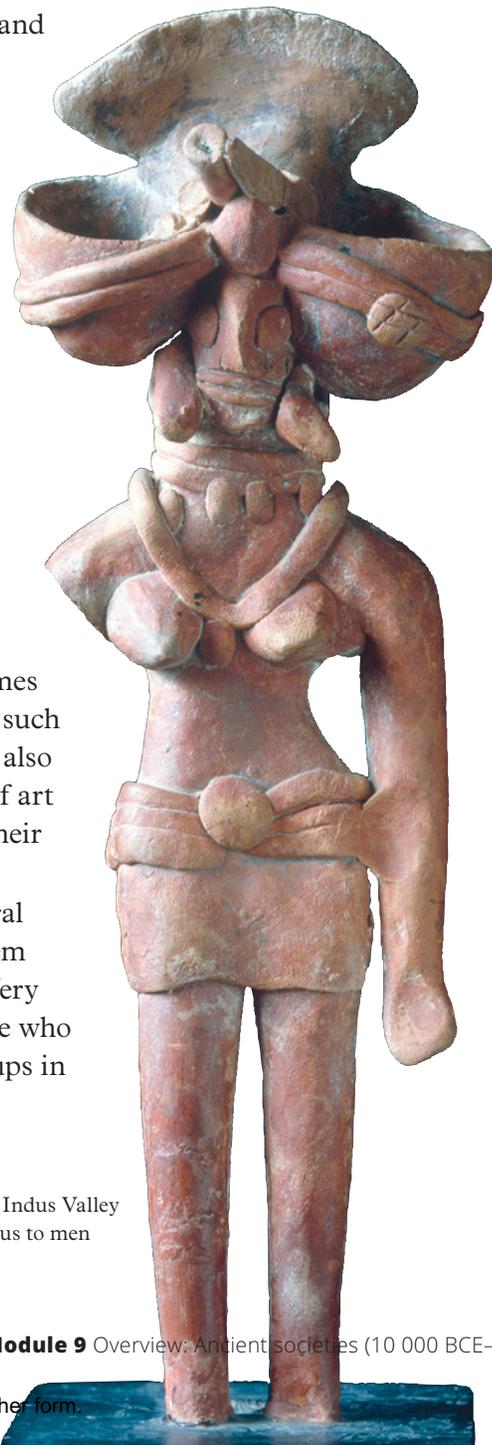
Source 5 A bronze figure of a maidservant holding an oil lamp, made in the Western Han Dynasty in 172 BCE.

Source 6 Calligraphy brushes, ink and the Chinese character for "double happiness"

Source 7 An example of Indus Valley script

deity a god or goddess

Art, iconography and pottery

Chinese art changed with different dynasties, and the materials used differed somewhat from those in the Western world. For example, decorative objects were first made from metal, ivory or jade (an ornamental green stone). Later, the Chinese created lacquered boxes and developed porcelain. Chinese paintings depicted nature, such as animals, trees and water, using distinctive brushstrokes. They were sometimes painted on silk cloth.

Writing

The Chinese script is the world's oldest writing system still in use today. It began, like many other scripts, with characters that looked like tiny pictures. Over time, these became more stylised. There are tens of thousands of characters, although Chinese people today only use an average of 5,000 characters. Most Chinese words consist of one or two characters, sometimes three. Each character represents a syllable. Chinese characters were traditionally drawn with a brush. The size of the brush tip, the type of ink and the brush pressure all influence the look of the script. Calligraphy – the art of handwriting – is still taught in Chinese schools today.

Various scripts developed in ancient India. The first was in the Indus Valley society, around 2600 BCE. The script has still not been deciphered by historians. Later, different scripts developed. These were used for royal and religious texts as well as for administrative purposes.

Religion

The people of ancient China worshipped their ancestors as well as gods and goddesses. Chinese **deities**, like those of ancient Mediterranean societies, were believed to control the forces of nature. China had a number of organised religions. Taoism focused on the spiritual struggle between the yin (female) and yang (male) forces of the world. Buddhism was brought to China from India in the first century CE and focused on a pathway to spiritual meaning and enlightenment. Confucianism was also a significant influence on Chinese beliefs, but was not a religion. It was more a system that governed how people behaved. It was developed by the famous Chinese philosopher Confucius (see Source 9).

Ancient Indian society was dominated by religion and superstition. Ancient Indians had deities, but also believed in other supernatural beings. From about 1500 BCE, the Aryan people began to move into the Indian subcontinent, bringing Hinduism with them. This became the major religion in India. Hinduism has multiple gods and, like Buddhists, Hindus believe in **reincarnation**. Buddhism was also a major religion in India. It was founded by a wealthy Indian prince in the fifth century BCE and was an established religion in India before it spread into China.

Source 9 An artist's impression of Confucius

reincarnation the process of being born again; to live life again in another body (human or animal)

War and conflict

China did not have a permanent professional army until relatively late in its history, during the Han Dynasty (206 BCE–220 CE). China was united in 221 BCE; before this, each region had its own fighting force, and these regions would fight with each other to gain power. Their armies were usually made up of ordinary men. During the Han Dynasty, however, all able-bodied men were forced to enlist.

The Chinese used a range of tactics and equipment to fight and these changed over time. Early on, chariots were important, but these were gradually replaced by cavalry (soldiers on horses). Some Chinese dynasties used large armies of foot soldiers. The permanent army established under the Han Dynasty allowed China to combat tribes of invading barbarians to the north, known as the Mongols.

Throughout its history India fought many invaders, and different kingdoms within India also went to war with one another. Kings therefore built strong armies. The Ksatriyas, people from the warrior caste, made up these armies. The army under the Mauryan Empire was strong enough to unite most of the country. At the time, the Mauryan army was one of the biggest in the world. Like the ancient Roman army, the Mauryan army had a highly organised structure and hierarchy. Indian armies used elaborate battle formations, and they were the first to use elephants in battle. They also had foot soldiers, cavalry and chariots.

One of India's invaders was Alexander the Great. Having conquered Greece and Egypt, he invaded India in 326 BCE and took over territories in the Indus Valley region. Soon afterwards, the Mauryan Empire was established.

Source 8 A statue of Buddha in India

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9.4
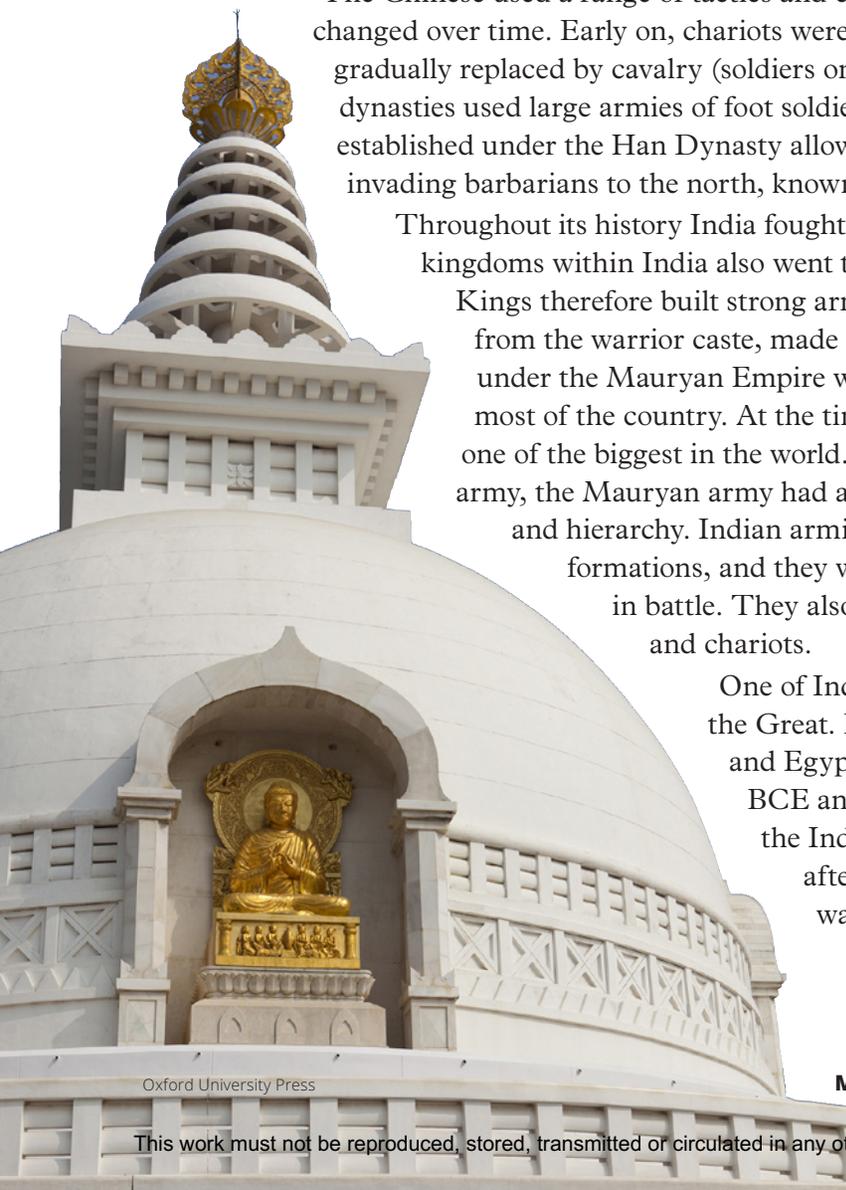
Source 10 Sculptures of members of the Han cavalry with their spears and chariots.

Source 11 The Great Wall was built to protect China from invaders.

Source 12 Two army formations used in ancient India.

Troops

Position of Deputy Commanders-in-Chief

Position of Commanders-in-Chief

Movements of troops if penetrated by the enemy

Padma Vyuha (lotus) formation

Elite soldiers

Good soldiers

Elephants

Chariots and cavalry

Troops

Garuda Vyuha (eagle) formation
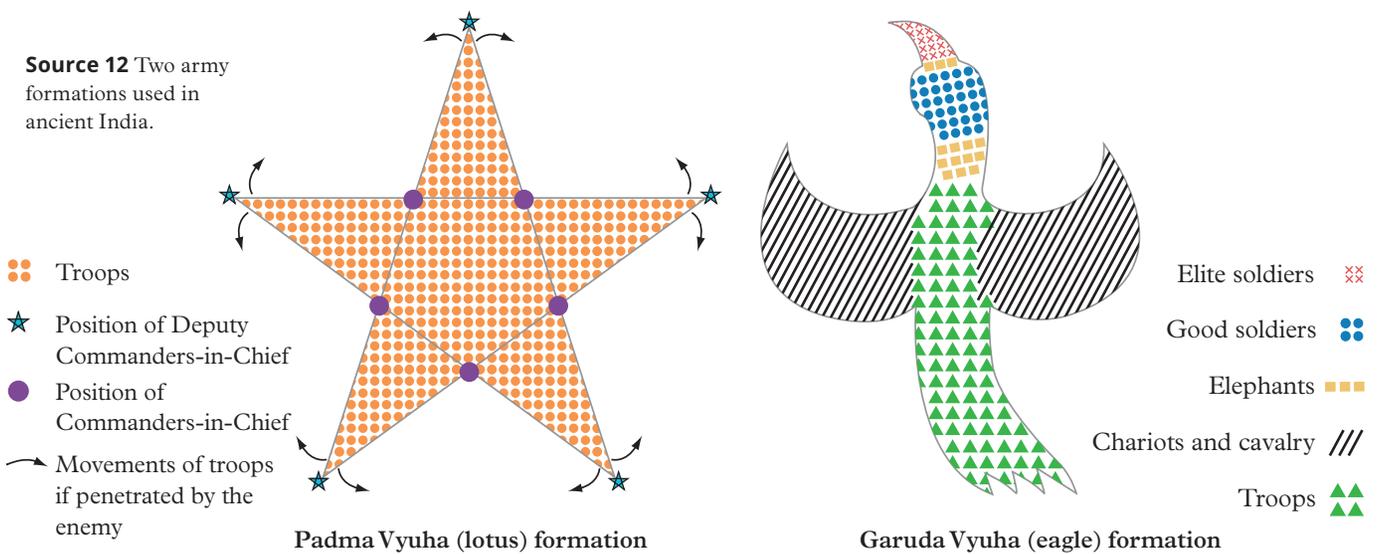
Quiz me! Key features of ancient societies in the Asian world

Check your learning 9.4

Check your learning 9.4

Review and understand

1 **Identify** the mountain range that influenced the development of both ancient China and ancient India.

2 Ancient India had two separate societies. What were they called?

3 **Describe** one similarity of the social structures in ancient China and ancient India.

Apply and analyse

4 **Explain** what was unusual about the status of women in ancient India.

Evaluate and create

5 **Propose** (put forward) ideas about how India and China may have developed differently if they had not been surrounded by natural barriers.

Source 13 An artist's impression of Alexander the Great defeating the Indian army, complete with battle elephants, at the battle at Hydaspes River in 326 BCE.

History

Module
10

Ancient Egypt

Sub-strand: Investigation:
Ancient societies (10 000 BCE–600 CE)

Overview

About 30,000 years ago, the Sahara Desert of north Africa was a grassy plain. It began to dry out around 8000 BCE. This change in climate forced people in the region to move on. Many drifted towards the area next to the Nile River, where the land was more fertile and there was a good water supply.

From this simple start developed one of the world's first societies – ancient Egypt. It lasted for nearly 3,000 years. As the population grew, the society became more structured. Powerful rulers, called pharaohs, expanded Egypt's territory. Huge monuments, temples and pyramids were built that would last for thousands of years.

Source 1 The Karnak temple is the largest religious building ever constructed. This city of temples was built over a period of 2,000 years, from around 2055 BCE to 100 CE. The temple at Karnak was built in tribute to the gods Amun, Mut and Khonsu, and was the location of an annual festival to honour these gods, which usually lasted around 27 days.

Lessons in this module

Lesson 10.1
Ancient Egypt: a timeline

The Great Sphinx of Giza

Learning intentions
and success criteria

c. 8000 BCE
People start forming
settlements in the
Nile valley.

Egyptian hieroglyphs such as
these have been essential in
unlocking the history of
ancient Egypt.

c. 2500
Building of Great Sphinx and Great
Pyramid at Giza; Egyptians start
experimenting with mummification.

c. 3200
Earliest known evidence of
hieroglyphic writing

8000 BCE	3000	2000
Predynastic period 8000–2700 BCE	Old Kingdom 2686–2180 BCE	Middle Kingdom 2055–1730 BCE

c. 3000
The first buildings
are made of mud
brick in walled towns
and villages.

c. 2650
First stone pyramid is
built in Saqqara for the
pharaoh Djoser.

c. 2100
Book of the Dead
starts being
used in funeral
ceremonies.

c. 3100
Upper and Lower Egypt
unite under Menes.

Source 1 A timeline of some key events and
developments in the history of ancient Egypt.

▶ **Key content video:** Ancient Egypt
– a timeline

Sequence this! Events in ancient Egypt

The Djoser pyramid is the oldest
building in the world made from
cut blocks.

Oxford University Press
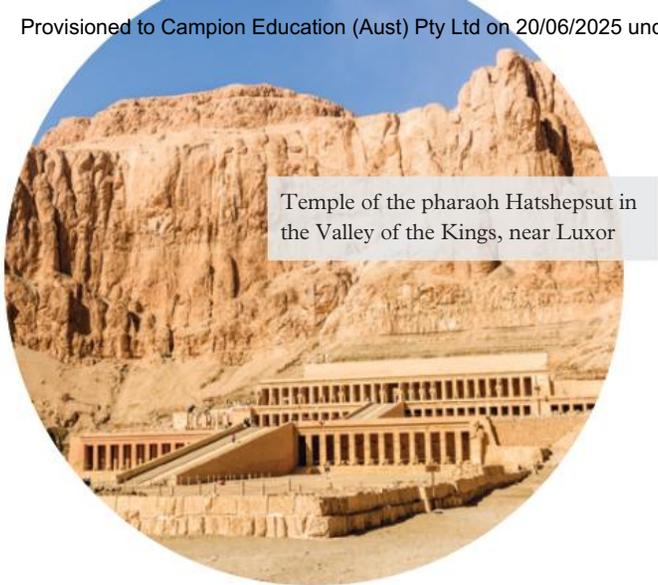
Temple of the pharaoh Hatshepsut in the Valley of the Kings, near Luxor

This bust of Cleopatra was created during the time of her rule as the last pharaoh of Egypt.

History

1479
Hatshepsut becomes first female pharaoh.

1274
Pharaoh Rameses II claims victory against his enemies, the Hittites, at the Battle of Kadesh.

332
Alexander the Great invades Egypt.

51
Cleopatra becomes pharaoh.

1000

1 CE

New Kingdom
1550–1069 BCE

c. **1550**
Construction of royal tombs in Valley of the Kings

1332
Tutankhamun ascends throne at age nine, dying ten years later.

30
Cleopatra suicides, and Egypt becomes part of the Roman empire.

Check your learning 10.1

Check your learning 10.1

Review and understand

1 Identify the years in which the following events happened:
  a people first began to settle in the Nile Valley
  b the Great Sphinx and the Great Pyramid at Giza were built
  c Hatshepsut becomes pharaoh.

2 Who was Cleopatra? What was the length of her rule?

Apply and analyse

3 Using the timeline, **analyse** when the period of the most change in ancient Egypt occurred. Remember, when you analyse something you must break it down into smaller parts and explain how they relate to each other.

Evaluate and create

4 The timeline shows that ancient Egyptian society began in approximately 8000 BCE and ended about 332 BCE. During this period, many historians identify four distinct eras, commonly known as the Predynastic period, the Old Kingdom, the Middle Kingdom and the New Kingdom. **Research** these periods and complete a chart with the following headings.

Period	Date	Key people	Interesting facts

Remember to include references to show where you found your information.

Lesson 10.2
Physical features of ancient Egypt

Key content video: Physical features of ancient Egypt

Introduction

Ancient Egypt was a long, narrow country in north-eastern Africa. The world's longest river, the Nile, ran the length of the country. Ancient Egyptian lands were also surrounded by a huge **desert**. These features played very important roles in the development of ancient Egyptian society.

The Nile begins in central Africa and flows north into the Mediterranean Sea. The desert made the Nile very important. The river's **delta** provided the food and other resources needed by the Egyptian people. The Nile was so crucial for the society's survival that the people worshipped it as a god. They called this god "Hapi".

The Nile has three main sources – the White Nile, the Blue Nile and the Atbara River. The Blue Nile and the Atbara River begin in the highlands of central Africa. Every summer, they are flooded by melting snow and heavy rains. These waters gush into the Nile, carrying a load of dark mountain silt – soil that is rich in nutrients. Every year, this increase in water caused the Nile to gradually rise and flood parts of Egypt.

Today, dams have been built along the Nile to prevent it from flooding, but in the days of ancient Egypt, these dams did not exist. Every year in June, the Nile would flood and leave a pile of dark, fertile soil all over the nearby land. This flooding season was known as the **inundation**. As soon as the floodwaters went back down, the farmers would plant crops such as barley and other grains. These crops would grow very quickly in this fertile soil.

The ancient Egyptians called the fertile land with rich dark soil around the river the "Black Land". This was where most people lived. On each side of the Nile, beyond the Black Land, were large areas of desert. The ancient Egyptians named these areas where few people lived the "Red Land".

The Nile was important for other reasons too. It provided fresh water for drinking and bathing. The ancient Egyptians used spears and nets to catch fish in the Nile. They also caught the birds, such as ducks and geese, that lived near it and used them for food. They picked wild reeds, called **papyrus**, which grew alongside the river. The ancient Egyptians used these reeds to make a type of paper and boats. The Nile also allowed the ancient Egyptians to travel quickly from place to place, so that they could trade with each other.

desert an area that receives less than 250 mm of rain every year; can be hot or cold

delta a fan-shaped deposit of soil formed where a river enters an ocean or lake

inundation a term used for a flood; there was a yearly inundation (flooding) of the Nile River in Egypt

papyrus a type of riverside plant; the ancient Egyptians made paper from the crushed pulp of the plant

Ancient Egypt and the Nile

Source 1 The boats and houses are modern, but this Nile scene is otherwise as it would have been in the times of ancient Egypt.

Source 2 An aerial photograph of the Nile showing the fertile valley (Black Land) and the bordering desert (Red Land).

Enlarged map: Ancient Egypt and the Nile

Source 3

History

Module 10 Ancient Egypt **343**

10.2

The importance of the Nile

Interactive: The importance of the Nile

The Nile was the lifeblood of ancient Egyptian society. It provided water for drinking and bathing; fertile soil for growing crops; fish and water birds for eating; and a means of transporting goods. The Nile also played a central role in the s`piritual and religious beliefs of the Egyptians..

a Crops included wheat, barley, lentils, beans, grapes, figs and dates. Trained baboons were sometimes used to pick fruit growing too high for people to reach.

b Flax plants were turned into cloth called linen to make clothing.

c Farmers provided labour (during the inundation) to build structures such as the pyramids.

d When the Nile flooded (known as the inundation) the river level rose around 8 metres. The silt it left behind on the floodplains fertilised the soil.

e Villages were built on raised mounds above the usual flood line.

f A network of canals (and later reservoirs) directed and stored river water for use in irrigation.
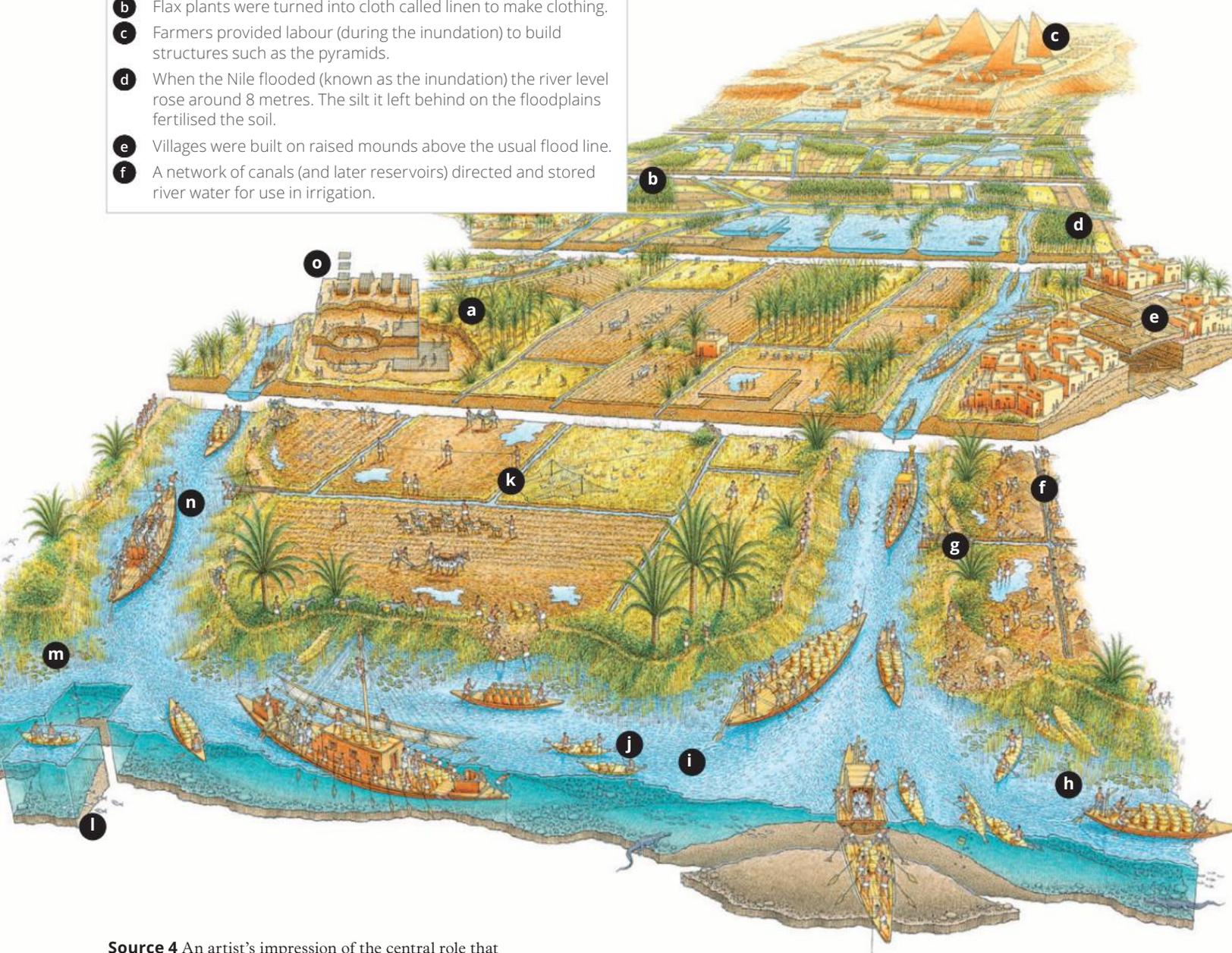
Source 4 An artist's impression of the central role that the Nile played in ancient Egyptian life.

g A shaduf was used to raise water from the river and direct it into irrigation canals.

h Merchant boats and barges moved trade goods to and from markets. Barges also transported the massive stone blocks used to construct the pyramids.

i The river provided fresh water for drinking, beer making, cooking, washing and irrigation.

j Small fishing boats were made from bundles of strapped papyrus reeds.

k Severe floods could wash away all traces of farm boundary lines (usually marked with stones). Officials known as "rope stretchers" re-measured and re-marked any lines that had disappeared.

l River wildlife included fish, birds, frogs, crocodiles, eels, hippopotamuses and snakes. Ducks and geese were hunted with wooden sticks or caught in nets.

m The riverside papyrus plant was used to make a type of paper (also called papyrus), as well as boats, baskets and furniture.

n Pleasure boats moved travellers up and down the river. Some boats were adapted as funeral boats to carry the bodies of pharaohs to their tombs.

o Bricks were made from riverbank mud. It was sometimes mixed with straw for strength. The mud bricks were packed into moulds and left to dry hard in the sun
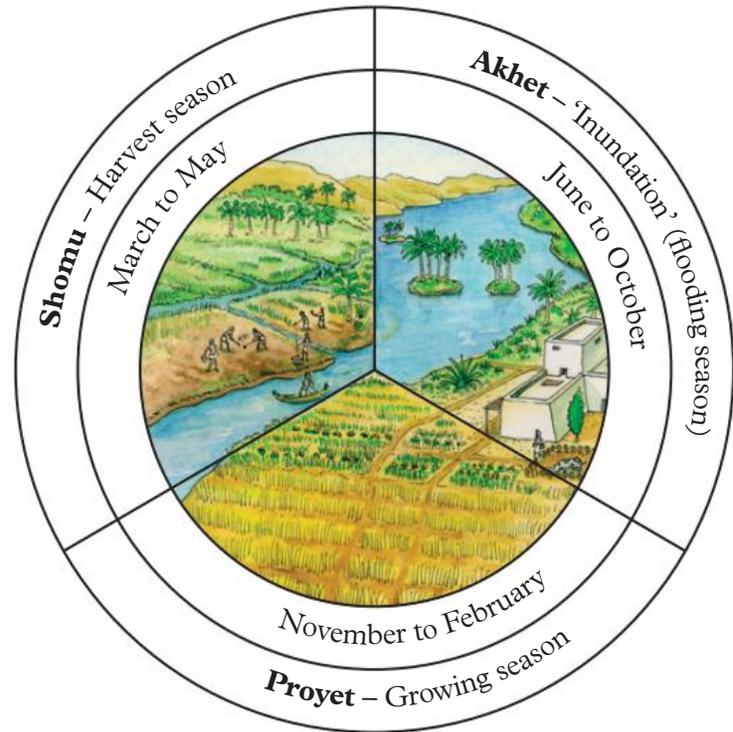
Source 5 The ancient Egyptian seasons

Explore it! A virtual field trip to the Nile

History

Check your learning 10.2

Check your learning 10.2

Review and understand

1 **Identify** three ways in which the Nile was important to the ancient Egyptians.

2 **Identify** the month that the Nile flooded each year.

3 **Outline** the main reasons that:
   a the Nile used to flood
   b the Nile no longer floods.

4 **Describe** why the ancient Egyptians called the land along the banks of the Nile the "Black Land".

Apply and analyse

5 **Examine** (look closely at) the illustration and labels in Source 4.
   a Identify the devices the ancient Egyptians used or made to help store and distribute water to fields.
   b What were the different purposes of boats used at the time?

6 **Explain** how the Nile influenced the ways in which buildings were made and villages designed.

7 Apply the information provided in Source 5 to **determine** (decide) which "season" it would be currently in ancient Egypt. Explain what would be happening in this season.

Evaluate and create

8 Using the internet, research how a *shaduf* worked. **Propose** (put forward) one modification or addition that would make it work better.

9 Imagine you are providing the voiceover for a feature documentary on the Nile. Write a segment explaining the importance of the Nile, why it flooded every year, and how this benefited the people of ancient Egypt. Make your report interesting – remember it is a speaking role!

Lesson 10.3
The climate of ancient Egypt

Learning intentions and success criteria

Key content video: The climate of ancient Egypt

Interactive: Cool house design

Introduction

Ancient Egypt was located within what is now the biggest desert in the world – the Sahara. This meant that the climate of Egypt was incredibly hot and dry.

Being surrounded by desert provided Egypt with some security. Any army that wanted to attack would have had a long, hot walk if invading from the east or west.

The desert was inhabited by many different animals that were hunted by the ancient Egyptians for food. These animals included gazelles, hares and foxes. The desert was also the source of minerals, rocks and metals, which the Egyptians used for building houses, pyramids, statues and tombs, and for making weapons and jewellery. The ancient Egyptians were able to trade many of these resources, as well as the products they made from them.
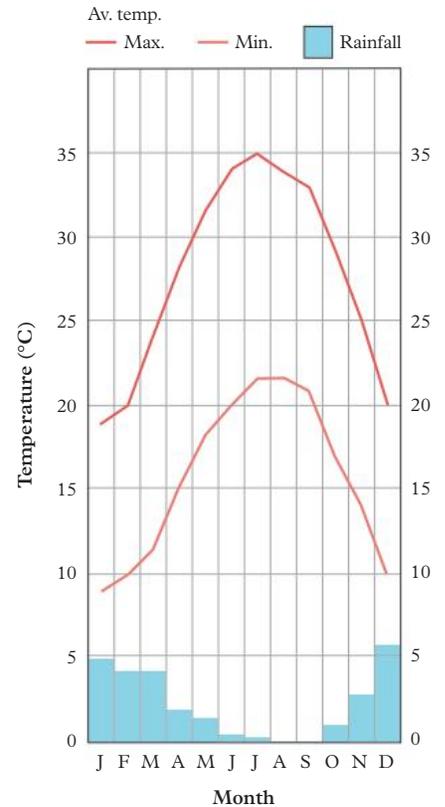
Source 1 Climate graph for the city of Cairo

How the climate influenced lifestyle

Living in a very hot and dry climate, the ancient Egyptians mostly lived an outdoor lifestyle. Most of them worked outside as farmers, fishers, builders and merchants. People cooked and often slept outside their homes (frequently on the roof) because of the heat.

Source 3 A headrest used by the wealthy while sleeping. It allowed air to circulate around the head and neck.

Houses

Rich or poor, most Egyptians lived in houses that were similar in design. They had flat roofs and were made from sun-dried mud bricks. Most houses were single-storey structures.

The one-room homes of poor farmers had dirt floors. In urban areas, houses were joined, rather like apartments and terrace houses are today.

Location of ancient Egypt on the African continent

Source 2

Enlarged map: Location of ancient Egypt on the African continent
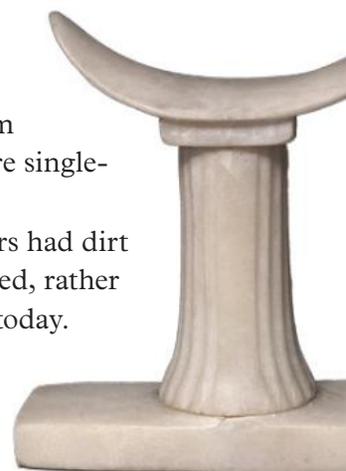
Fashion

The people of ancient Egypt dressed very lightly because of the heat. Men (including the **pharaoh**) often went bare-chested and wore short **linen** tunics. Women usually wore long linen dresses.

Most clothing was white, which is cooler than darker colours because it reflects the heat. Leather or papyrus sandals were sometimes worn by the rich, but most people went barefoot. Children and slaves were usually completely naked.

Source 4 Papyrus sandals from ancient Egypt. These would have been very cool to wear.

pharaoh the leader of ancient Egypt who was believed to be a god; the pharaoh had absolute power and total control

linen a natural fabric, made from the flax plant, that allows sweat to evaporate more easily

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Key concepts & skills Using historical sources

Living with dust and glare

Because of the desert surrounding ancient Egypt, dust, glare and wind-blown sand were a fact of life. Eye infections were common. Stone carvings have been found in tombs that show groups of blind people. Ancient papyrus texts show that bat blood was one treatment for eye problems. Another treatment was to rub a paste of mashed human brain and honey over the affected eye. Both men and women wore heavy eye make-up, called kohl, to help protect their eyes from dust and glare.

Men and women would also wear wigs, usually over a shaved scalp. Shaving kept heads cool (when at home, without wigs) and allowed scalps to be kept clean. Sometimes, a cone of solid perfumed fat was worn on top of a wig on special occasions (see Source 5). As it slowly melted in the heat, sweet-smelling liquid dripped over the face and upper body, cooling the skin.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Source 5 This detail from an Egyptian tomb shows a woman wearing heavy eye make-up and a cone of scented fat on top of her wig.

Quiz me! The climate of ancient Egypt

Check your learning 10.3

Check your learning 10.3

Review and understand

1 **Identify** three resources that the desert provided for the people of ancient Egypt.
2 **Identify** where the people of ancient Egypt often cooked and slept.

Apply and analyse

3 In your own words, **summarise** the advantages and disadvantages of shaving your head and wearing a wig when living in a location like ancient Egypt.
4 **Examine** (look closely at) Source 1.
   a During which months, on average, was there no rain in Cairo? Identify the average temperature for each of these months.
   b Melbourne's highest rainfall occurs from September to December, with monthly rainfall averaging between 58 and 66 millimetres in those months. Outline some of the differences between average rainfall in Cairo and average rainfall in Melbourne.

Evaluate and create

5 **Evaluate** the positives and negatives of Egypt's climate. Remember, when you evaluate something you should talk about its strengths and weaknesses. Be sure to give your overall opinion.
6 **Create** a diary entry in which you describe the climate and desert of ancient Egypt, as if you had lived there.

10A Concepts & skills in context
Irrigation in ancient Egypt

Introduction

The annual inundation (flooding) of the Nile was so important to the ancient Egyptians that they organised their lives around it.

Flooding happened in a season the Egyptians called *akhet*. As the flood receded, the fertile silt left on the ground near the river ensured perfect conditions for *proyet*, the growing season, which was when farmers would plant and grow their crops. The crops would continue to grow until they were picked in *shomu*, harvest season. During *proyet* the ancient Egyptians needed to irrigate (water) the crops they had planted. They experimented with many different kinds of irrigation over the course of their history.

Source 1 The Nile River

Key concepts & skills Using historical sourcest

Interpreting primary sources

Primary sources are things that were created during the time being studied. They can be documents, objects, paintings and other sources that provide us with a firsthand account of what life was like in the past.

> **primary source**
> a source that existed or was made in the time being studied

Because they are firsthand accounts, primary sources often convey the creator's point of view, attitudes and values. It is important that you can identify and describe these elements in their work. Use the following steps:

- **Step 1** Ask yourself what factual information is conveyed in this source. (Be careful: sometimes things that are presented as fact are not always accurate, so you might need to think about whether the information can be verified. Where else might you look to check and make sure those "facts" are accurate?)
- **Step 2** Think about how the world described or depicted in the source is different from the world you live in today. What do you already know about what the creator of the source and the people around them believed? How would you feel if you were in the creator's shoes?
- **Step 3** Ask yourself what opinions are expressed in the source. If the source is written, which specific words or phrases show how the writer feels?
- **Step 4** Ask yourself what is implied in the source. For instance, people do not always spell out what they are thinking when they write something. The reader needs to use clues in the text to "read between the lines" and infer meanings that are not spelled out.

The following primary sources provide evidence about the beliefs, values and attitudes of the ancient Egyptians towards the Nile and the annual inundation, as well as important types of irrigation technology that were developed.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Source 2 Canals were an important form of irrigation in ancient Egypt. A simple Egyptian canal system is depicted in this painting, found in the tomb of a commoner named Sennedjem.

Source 3 *Shadufs* were used in ancient Egyptian irrigation. This painting of a man drawing water from the Nile with a *shaduf* was found in the tomb of Ipuy, at Deir el-Medina, Egypt.

Practise the skill

1 Read Source 5 carefully.
   a **Identify** the factual information in this source.
   b **Explain** the writer's beliefs and attitudes about the annual cause of the inundation. Remember to identify the specific words or phrases in the source that support your conclusion.
   c What can you tell about the writer's values?
2 Use Source 2, Source 3 and Source 4 and information gathered on the internet, to **compare** the use of canals, *shadufs* and waterwheels in ancient Egypt.

Source 4 This traditional waterwheel near Luxor, Egypt, is similar in design to those used in ancient times. The water comes out of the well on a second wheel carrying clay water jugs (shown to the right). This water then supplies the irrigation network.

Source 5

Hail to you, Nile River! You show yourself over this land, and come to give life to Egypt! Your source is mysterious, but we celebrate the day when you come to us! Watering the orchards created by Ra, to cause all the cattle to live, you give the earth to drink, inexhaustible one!

…

Lord of the fish: during the inundation, no bird lands on the crops. You create the grain, you bring forth the barley, you make sure the temples will last for eternity. If you stop your toil and your work, then all that exists in our world will be in trouble.

Extract from 'Hymn to the Nile', written *c*. 2100 BCE in ancient Egypt.

Extend your understanding

1 Using the results of your **research**, write a short report on the history of irrigation technology in ancient Egypt. Make sure you:
   a include an introduction explaining why irrigation was so important in ancient Egypt
   b include a main body, broken up into sections (with subheadings) that describe each type of technology (for example, "canals", "*shadufs*" and "waterwheels")
   c explain within each section when this type of irrigation technology was invented and how it worked. Include diagrams if you wish.

Lesson 10.4
Key groups in Egyptian society

hierarchy a way of organising things (or people) from top down in order of importance or significance; ancient societies had strict hierarchies with a ruler at the top and peasants at the bottom

Introduction

The society of ancient Egypt was well organised. Ancient Egyptians had a central government and, from the fifteenth century BCE, they also had a professional army. People knew what their social responsibilities were. Some of these roles were shaped by the society's laws and traditions. Some were determined by religious beliefs. Other roles were determined by a person's wealth and abilities (such as whether they could read and write).

The society of ancient Egypt was a **hierarchy**. At the top was the royal family: the pharaoh and his family. At the bottom were the slaves and the poorest of the poor farmers.

Men usually did the jobs their fathers did. They learnt the skills a bit like apprentices learn trades today. Education was the key to improving a person's position in society. A merchant, or even a farmer, could do this by learning to read and write.

Source 1 The social hierarchy (structure) of ancient Egypt (from top to bottom).

Key content video: Key groups in Egyptian society

- **a** Pharaoh
- **b** Vizier
- **c** Director of the Seal
- **d** Nomarch
- **e** Priestess
- **f** Chief priest
- **g** Scribe
- **h** Soldier
- **i** Merchant
- **j** Linen workshop supervisor
- **k** Stonemason
- **l** Potter
- **m** Slave
- **n** Farmer and his wife
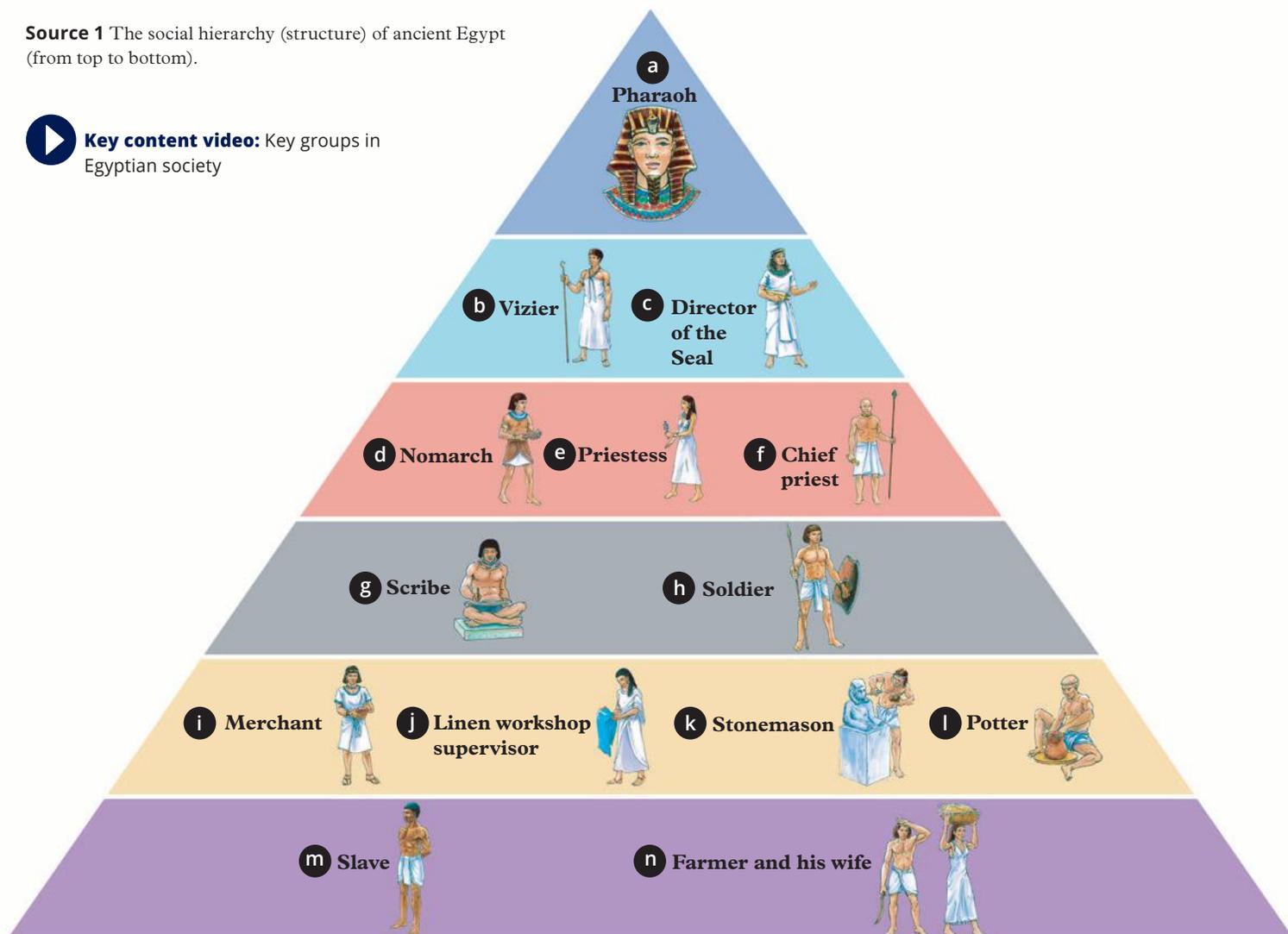
a **Pharaoh:** His main duty is to keep life in balance – on this Earth and beyond and govern with a large team of officials.

b **Vizier:** The pharaoh's second-in-command supervises the other officials and judge law-breakers and make sure people pay their taxes, in grain or goods and sometimes labour.

c **Director of the Seal:** The treasurer who manages all the goods (food and other products) that come into the pharaoh's storehouses. Most of these goods are tax payments, but some items are imports from other countries.

d **Nomarch:** Governs one of the country's 42 nomes (provinces). He keeps the Vizier happy by collecting lots of taxes. Like other important and wealthy people, he wears garments made from the finest linen and lots of gold jewellery.

e **Priestess:** Her main role is to help look after the temple goddess and to sing and play music if the pharaoh visits the temple. She reports to the chief priest. Her husband is a nomarch. Most priestesses are married to senior officials – the high priestess in her temple is a daughter of the pharaoh.

f **Chief priest:** Represents the country's top priest, the pharaoh, and looks after the gods. He enters the inner part of the temple where the statue of the god is kept. Each day, he washes it, wraps it in clean linen and brings it food. If he didn't do this, bad things would happen. On special days, he takes it out to show the people. He and his priests don't wear clothing made from animal products because that would be unclean. They wear only the finest white linen. They shave all their body hair and wash many times each day.

g **Scribe:** One of the very few people in Egypt who can read and write. He records the pharaoh's orders and decisions, and helps the Vizier and the Director of the Seal to keep tax records. He also keeps accounts for the army, writes letters for local people and prepares inscriptions for tomb walls and sculptures.

h **Soldier:** Very skilled at using a pike (spear), they march on foot but their army also has charioteers. Army divisions – all named after gods – usually consist of about 5000 men. They often fight alongside mercenaries – men from other countries who are paid to fight for them. Many come from Nubia. When not at war, they help out by supervising building projects.

i **Merchant:** A trader who sails up and down the Nile with goods from Egypt, such as linen, papyrus, pottery, grain and gold. He brings back goods from other places like ebony wood, ivory, incense, copper and baboons. Sometimes, he sails north, across the Mediterranean Sea.

j **Linen workshop supervisor:** Typically, they are homemakers raising their children. They make linen from flax where it could be traded for other things at the local market. Some are supervisors managing women in a linen workshop.

k **Stonemason:** Spends his days making stone statues (usually of the pharaoh), carving the blocks used to build temples and pyramids, and engraving the walls of tombs.

l **Potter:** Members of the middle class - not too poor, but not too rich either! They give some of the pots they make to the pharaoh as a tax payment, while others are exported to other countries. Most learnt our trades from their fathers. Some make jewellery; others make papyrus, boats or furniture.

m **Slave:** Typically, they were born in Libya but captured as a prisoner of war. Other slaves come from Syria and Nubia. Their masters use them as field hands. Some of the lucky slaves work in the palace of the pharaoh – much better than working in the quarries or mines out in the hot desert.

n **Farmer and his wife:** Except for slaves, they are at the bottom of the social ladder (along with tomb builders, pig herders and beggars). They grow wheat and barley, and flax used to make linen. Farmers work very hard, digging canals for irrigation and preparing the soil. Their wives help them in the field when they can. During the inundation, farmers help out with the pharaoh's building work. They pay over half of the grain they produce as tax.
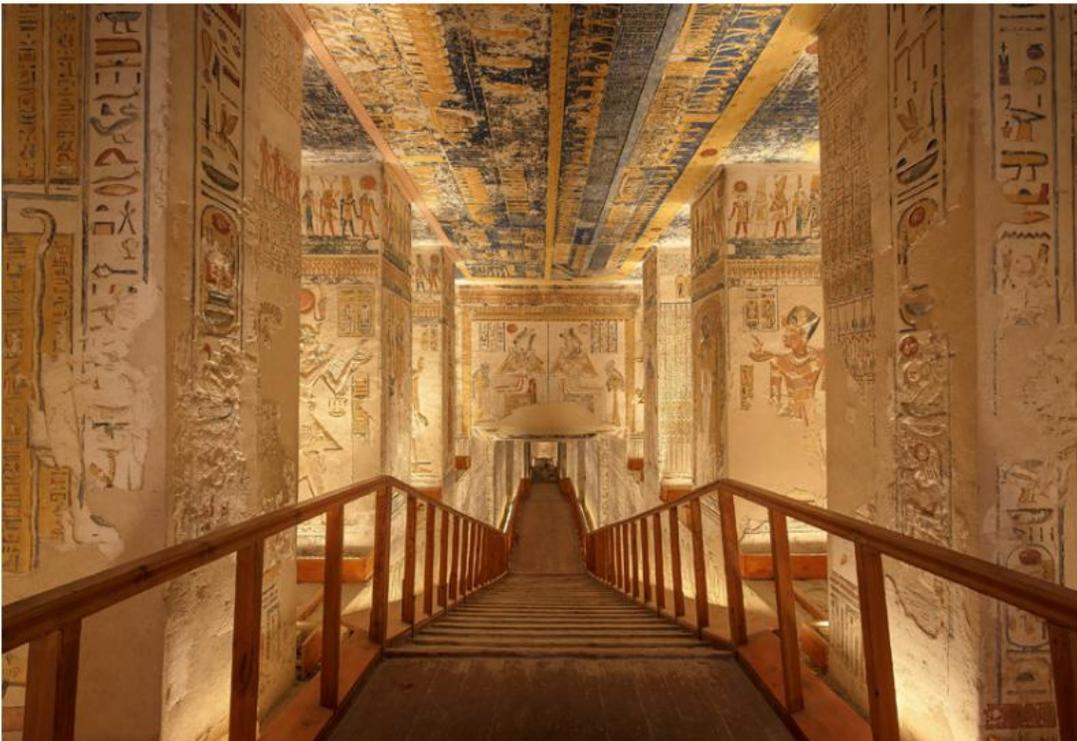
Source 2 Inside the tomb of Rameses VI. In keeping with the pharaoh's position at the top of the social hierarchy, their tombs were grand and highly decorated.

Interactive: Key social groups in ancient Egypt

The role of women

The role of most women in ancient Egypt was to raise a family. Pregnancy was always a celebrated event. It was common for a woman to have lots of pregnancies, and many women died in childbirth. Girls were often married as young as 12, and were expected to have children quickly. Life expectancy was low. A poor woman might only live until she was 30.

Rich and poor women

Poorer women usually devoted their entire lives to raising their children, keeping house and helping their husbands with planting and harvesting crops.

Upper-class women, such as the wives of pharaohs and nobles, had more pampered lives. They had servants to wait on them, and fine clothing and jewellery to wear (see Source 3). If they were the eldest child, they inherited their father's wealth.
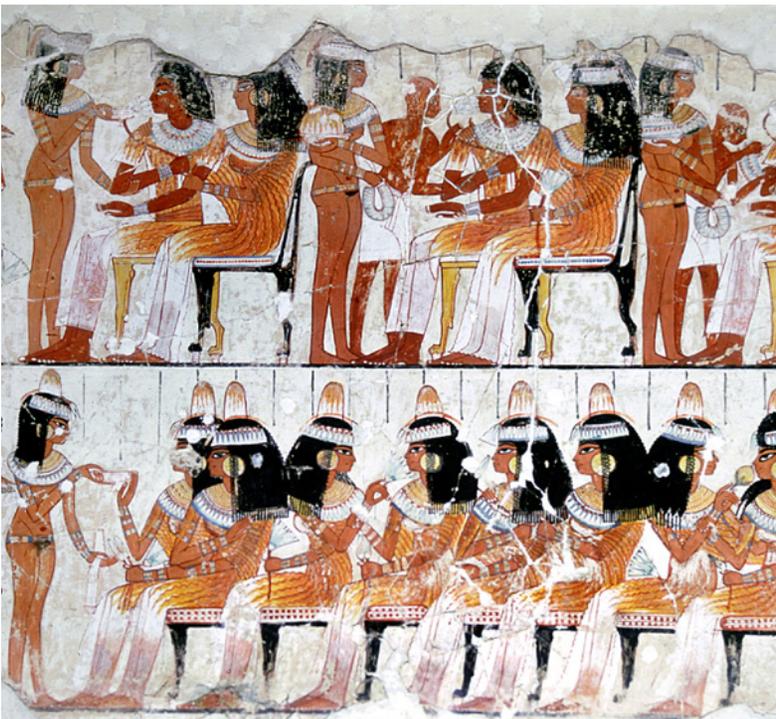
Source 3 Tomb art, painted about 4,500 years ago in Thebes, showing Egyptian women celebrating at a feast, attended by servants.

Rights and freedoms of women

The man was the head of the household in ancient Egypt, but women had more freedom than in many other ancient societies, such as ancient Greece. This may partly be because of Egyptian religious beliefs. The ancient Egyptians saw their world as being controlled equally by male and female **deities**.

Women could own land and businesses, keep the children if there was a divorce, and openly breastfeed their children. They could make wills, testify in court and bring legal actions against men. Women could also hold jobs. For poorer women, a job meant manual labour. These women would work on farms, look after animals or even become weavers. Some might have worked as singers or dancers. Wealthier women might work as priestesses.

The role of slaves

Many people think that slaves were used to build the pyramids. Actually, there is little evidence to support this. Records suggest that there were not many slaves during the Old Kingdom, when the pyramids were built. Rather, it is thought they were built by peasants and farmers who could not work on the land during the rainy season.

The number of slaves in ancient Egypt did increase during the Middle and New Kingdoms. Most were prisoners of war. Others were bought and sold at markets, or were unlucky travellers captured by slave traders.

The role of the slave was often to be a faithful servant in the households of

pharaohs, nobles and priests. They could own land and hire servants. They could marry those who were not slaves. Some talented or beautiful slaves were able to get promoted to senior or privileged positions.

Less fortunate slaves were sent to work in the gold and copper mines of north Africa's deserts. They often died of thirst or heat exhaustion.

Source 4 An engraving showing roped slaves on the stone wall leading into the Great Temple of Rameses II at Abu Simbel.

Key concepts & skills Using historical sources

Considering perspectives

As with today, a person's experience and perspective of the world was influenced by their standing in society. For example, in ancient Egypt, the pharaoh was likely to have experienced life in a way that was very different to that of a farmer. It is therefore important to ask questions about where a primary source comes from, why it was created, and what it tells us about the world it portrays.

Look closely at Source 3. This painting depicts Egyptian women celebrating at a feast. These women are being attended by servants, which suggests that they were rich women with a high standing in society. Think about how the perspectives of the women in this painting would be different to that of the slaves. Do you think they would have the same perspective, or would it be different?

Complete the key skill worksheet on Oxford Digital.

Key skill worksheet: Using historical sources – Considering perspectives

Quiz me! Key groups in Egyptian society

Check your learning 10.4

Check your learning 10.4

Review and understand

1 List these social roles in order (from most to least important) according to the values of ancient Egyptian society: potter, merchant, pharaoh, farmer, priestess, vizier, scribe.
2 **Outline** how a farmer's social role and standing might change if he learnt to read and write.
3 **Identify** the types of duties most slaves were expected to carry out. What types of duties were less fortunate slaves expected to carry out?

Apply and analyse

4 **Compare** the roles of a chief priest and the vizier in ancient Egypt. Remember, when you compare two things you must talk about how they are similar and how they are different.

5 In your own words, **summarise** how religious beliefs in ancient Egypt shaped the role of women.
6 **Compare** the perspectives of rich women and poor women in ancient Egypt. How might these two groups of women have perceived life in ancient Egypt? Do you think it would be similar or different?

Evaluate and create

7 The powerful roles in ancient Egyptian society were those of people who were wealthy, had political power or had religious authority. As a class, **discuss** the extent to which this represents the situation in Australia today.

Lesson 10.5
Pharaohs

Introduction

The pharaoh was the head of Egyptian society and was almost always a man. Pharaohs were regarded as god-kings, and were seen as descendants of Ra, the sun god. People knelt and kissed the ground when they met the pharaoh.

Pharaohs were very wealthy, owning all the land and its resources. They placed taxes on the people, which were usually paid to them in the form of grain and other crops. In addition to power, pharaohs had a number of responsibilities, some of which were shaped by law, others by religion (see Source 1).

Source 1 Responsibilities of the pharaoh as god-king

Earthly responsibilities (shaped by the law)	Divine responsibilities (shaped by religion)
The pharaoh was responsible for: • directing the government • commanding the army and leading it into battle • protecting the people and keeping peace and order • making all laws, and sometimes making decisions in the courts • managing building, mining, trade and irrigation.	The pharaoh was responsible for: • acting as chief priest • keeping the gods happy so the Nile flooded every year and harvests were plentiful • choosing priests • overseeing religious ceremonies and festivals • building temples to honour the gods • performing religious duties.

Source 2 An artist's impression of a pharaoh and their symbols of power.

a A crown symbolised the pharaoh's position as chief ruler. The crown shown here was the official crown; its design is a combination of the white crown of Upper Egypt and the red crown of Lower Egypt that merged to form a united Egypt. Pharaohs also wore a range of other headgear depending on their duties.

b The *uraeus* (gold headpiece shaped like an upright cobra) symbolised magical powers and a readiness to strike.

c A false beard made from goat's hair symbolised the pharaoh's status as a god.

d The heavy jewelled collar symbolised great wealth.

e The flail (whip) symbolised total authority.

f The crook symbolised the pharaoh's role as a shepherd of the people.

g An animal tail (usually from a bull) symbolised strength and fertility.
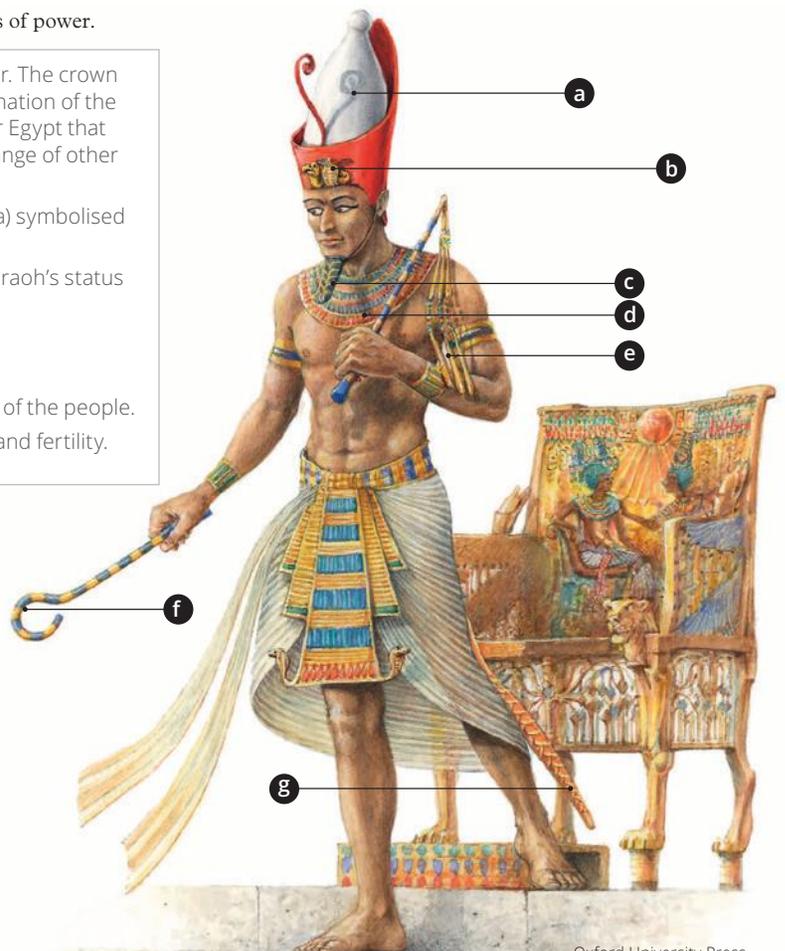
Key content video: Pharaohs

Oxford University Press

The rulers of ancient Egypt

By about 3300 BCE, the Nile settlements were grouped into two kingdoms: Upper Egypt and Lower Egypt. These united in about 3100 BCE. For the next 2800 years, the unified kingdom of Egypt was ruled by pharaohs, thus creating the world's first national government.

Dynasties

The laws and traditions of ancient Egypt meant that a pharaoh passed on his power as ruler to the son (usually the eldest) of his main wife – in the ancient world, it was common for men to have more than one wife. If the main wife did not have a son, the son of a less important wife would become the new ruler, or **heir**. The period where members of the same family ruled was known as a **dynasty**. Sometimes, someone from outside the family seized power and became pharaoh. This meant the start of a new dynasty.

In 332 BCE, Egypt was conquered by the king of Macedon (modern-day Macedonia), known as Alexander the Great. He started what was to be the last dynasty in ancient Egypt, known as the Ptolemaic Dynasty. This dynasty lasted until 30 BCE when its last ruler, Cleopatra, committed suicide. After that, Egypt became part of the Roman Empire.

Hatshepsut – 18th-dynasty ruler

Hatshepsut was one of few female pharaohs. She ruled between about 1473 and 1458 BCE. When she became pharaoh, she wore a false beard, men's clothing and a bull's tail, and changed her name to its male form. She ordered the construction of many buildings, paid for many trading expeditions, and rebuilt trade routes that had been damaged by former invaders.

heir a person who has the legal right to receive somebody's property, money or title when that person dies

dynasty a period of rule by members of the same family who come to power one after the other

Analyse this!
The power of the pharaohs

Source 3 An ancient stone carving of the female pharaoh Hatshepsut.

History

Check your learning 10.5

Check your learning 10.5

Review and understand

1 **Outline** the main difference between the pharaoh's divine role and earthly role.

2 In your own words, **define** the term "dynasty" and give reasons why a dynasty usually changed.

Apply and analyse

3 **Examine** Source 2. Copy the table below and add at least three items to each column.

4 Suggest why the ancient Egyptians knelt and kissed the ground when they met the pharaoh.

5 Consider some of the items the following people wear or carry to reflect their social position or role. For each item, **determine** what it symbolises:

a the King

b a high-ranking soldier

c an Australian High Court judge

d the principal of your school.

Evaluate and create

6 Hatsheput made changes to her appearance.

a How did she adjust her appearance to suit her role as pharaoh? **Discuss** why she would have made these changes.

b Do you think people today feel pressured to change their appearance and behaviour when they move into a public leadership role? **Discuss** with a partner. Give examples if possible.

Item worn or carried by the pharaoh	What it symbolised

Lesson 10.6
Significant individual: Tutankhamun

mummy a body of a human or an animal that has been mummified

canopic jar a jar used in ancient Egypt to store body parts removed during the mummification process

mummification the process of preserving a dead body by preventing its natural decay; in ancient Egypt a body was mummified by removing internal organs (except the heart) and drying out the remaining body tissue, and the mummy was then buried

Introduction

Tutankhamun (*c.* 1342–1323 BCE) is the world's best-known pharaoh and one of the most studied figures in history. He was a boy when he became pharaoh in 1332 BCE and only ruled for 10 years, yet his story still captivates people all over the world.

Scientific analyses of his remains reveal that he was about 170 centimetres tall, with a slight bend in his spine. He had an overbite, a cleft palate and an elongated skull. He was only 19 when he died. He did not live long enough to do much that was remarkable. He did, however, change the command of his predecessor, Akhenaten, that the people only worship one god – Aten, a Sun god. Tutankhamun declared that Egypt's old gods could again be worshipped. He restored their temples, priests and festivals. He also reversed Akhenaten's decision to move ancient Egypt's capital. He moved the capital to Memphis.

Despite his short life, Tutankhamun is significant because his tomb is the only ancient tomb in Egypt so far found not to have been broken into by robbers. It contained over 5,300 sources of evidence of his life and burial practices at the time. These sources include his decorated gold throne and his nest of coffins.

The discovery of Tutankhamun's tomb

The English archaeologist Howard Carter found the tomb in 1922. It was at the end of a long tunnel in the Valley of the Kings. This was a deep, rocky valley close to the Nile where many pharaohs were buried. Carter reported: "At first I could see nothing … but as my eyes grew accustomed to the light, details of the room within emerged slowly from the mist, strange animals, statues and gold – everywhere the glint of gold!"

Source 1 The gold mask found fused to Tutankhamun's head and upper body

Source 2 The reconstructed head of Tutankhamun

Tutankhamun's **mummy** lay within a solid-gold body-shaped coffin (110 kilograms in weight) in the burial chamber. This coffin was enclosed by two more coffins. In the treasure chamber next door were four **canopic jars** holding the pharaoh's mummified liver, lungs, stomach and intestines.

His body was covered in **amulets** and jewels, and he was wearing an 11-kilogram solid-gold burial mask inlaid with precious stones. Carter and his team used hot knives to remove the mask. They also cut up the body to retrieve the jewels and amulets that were wrapped up in his bandages.

Since then, conservators (people responsible for preserving important historical sources) became more worried about the damage that was still being done to Tutankhamun's mummy. When visitors entered the tomb, their breath and body heat caused damage to the mummy and other parts of the tomb. Tutankhamun's remains stayed within his coffin until November 2007, when they were moved into a special, climate-controlled case within the tomb.

amulet a charm thought to keep away evil

I used to think, now I think

Reflect on your learning about Tutankhamun and complete the following sentences.
· I used to think ...
· Now I think ...
What has changed in your understanding?

History

Key concepts & skills Using historical sources

How Tutankhamun died

To this day, historians cannot agree on how Tutankhamun died. Some historians used to think he was murdered, because there was a hole at the back of his skull and a floating piece of bone behind his eyes. This view has been contested in more recent years.

In 2005, an extensive number of CT scans (special X-rays) were taken of Tutankhamun's remains. These scans led the Egyptian archaeologist Zahi Hawass to conclude that he died of a complication from a broken leg – specifically, gangrene (which is the rotting away of living tissue). He thinks the break in the leg became infected. The hole in the skull, he thinks, might have been a **mummification** accident. Other historians have found evidence to suggest that Tutankhamun might have had malaria, which could have contributed to his death.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Quiz me! Tutankhamun

Check your learning 10.6

Check your learning 10.6

Review and understand

1 Who was Tutankhamun?
2 **Identify** two changes that Tutankhamun made during his reign.

Apply and analyse

3 Tutankhamun did not live long enough to do much that was considered remarkable. **Explain** why historians still regard him as significant.
4 **Analyse** the treatment of Tutankhamun's remains by archaeologists. How has the discovery of his remains put them at risk? Has enough been done to help conserve them?

5 **Explain** why the cause of Tutankhamun's death has been contested by historians.

Evaluate and create

6 **Create** a diary entry that Howard Carter might have written after discovering Tutankhamun's tomb. Use the internet to research more about the discovery and the tomb's contents.

Source 3 The mummified head of Tutankhamun

10B Concepts & skills in context
Farming in ancient Egypt

Introduction

Farmers in ancient Egypt prospered because of the fertile land along the banks of the Nile. Farming was so central to the success of ancient Egypt that many aspects of society were shaped by it, such as the calendar, the design of houses, even the class system. Most of the pharaoh's wealth came from the taxes paid in grain by farmers. This grain was stored in plentiful years for use when food was in short supply.

Key concepts & skills Historical significance

Using primary sources as evidence

Historians focus their research on sources that are relevant. After locating a range of sources that they think might be useful, historians need to analyse them to discover if they contain evidence that will be relevant to the particular question they are investigating. The evidence is the information contained in or gathered from the source. A source becomes evidence if it can be used to answer a particular question about the past.

The first thing you must do before attempting to locate, compare, select and use a range of sources as evidence is to be very clear about the historical questions you are investigating. In this key skill, your research questions are:

- What were farming practices like in ancient Egypt?
- What role did farmers [play in the social] hierarchy?

You need to keep these questions in mind as you work through the following steps:

- **Step 1** Look at the source carefully and note the obvious things that it is telling you.
- **Step 2** Look beyond the obvious and see what you can infer; that is, what can you work out from what you see in the source, even though it may not be immediately obvious?

For a more information on historical significance, see Lesson 6.7 Historical significance (page 235).

Source 2, a wall painting from the tomb of an important official called Menna, provides a lot of information about ancient Egyptian farming, including crops, tools and farming methods. It is a very useful primary source.

Source 1 Egyptian agriculture involved sourcing wheat to create food.
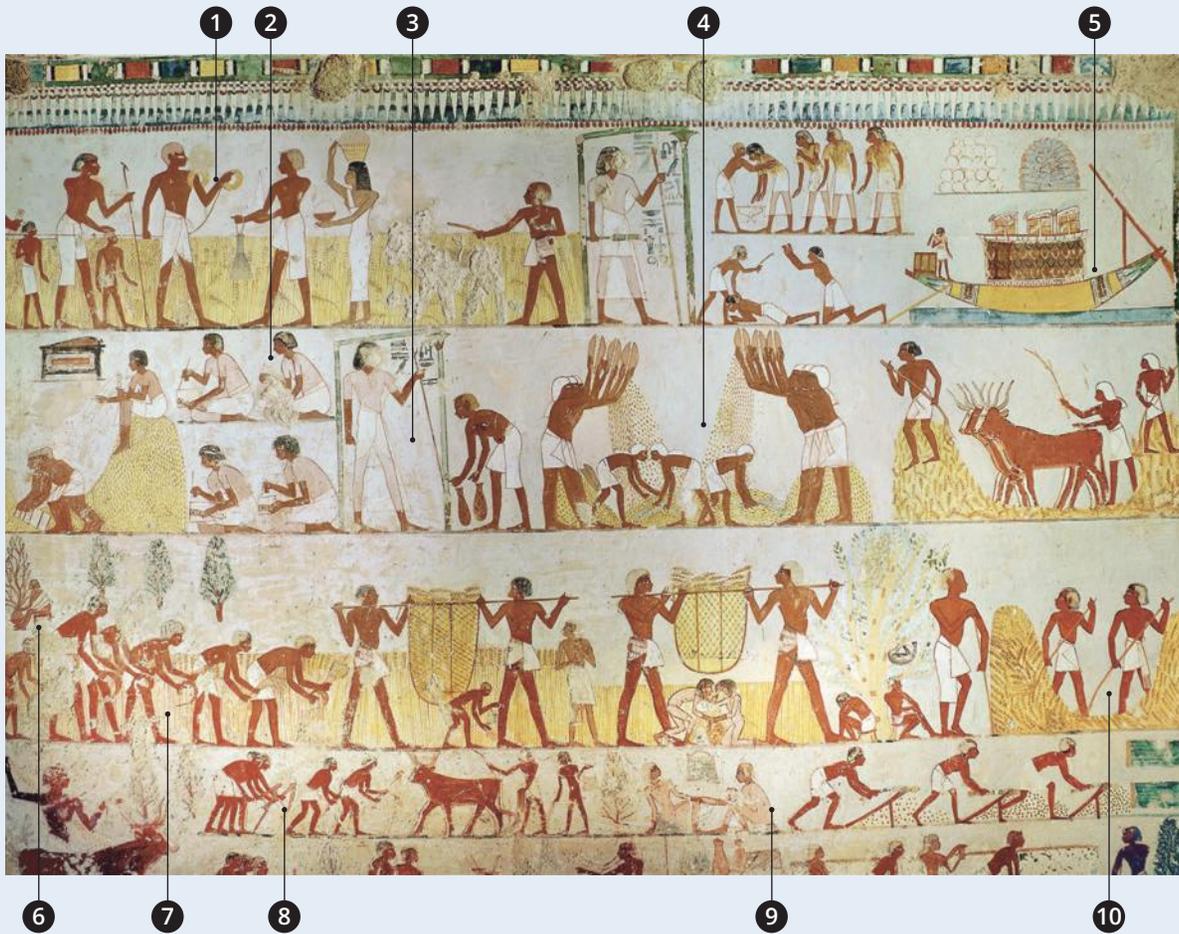
Source 2 This is a detail from a wall painting in the tomb of Menna, an important official from ancient Egypt. The painting (*c.* 1400–1390 BCE) contains detailed information about farming practices in ancient Egypt.

Practise the skill

1 Each farming activity listed below has a letter beside it. **Examine** the painting and numbers in Source 2. Find the section of the painting that shows each activity and connect the matching letters and numbers.

   a Cutting grain with scythes (metal cutting tools)

   b Threshing (beating) the grain

   c The arrival of a noble to check grain stores

   d Picking fruit

   e Preparing for planting

   f Stopping for a rest

   g Measuring the size of the field

   h Recording details of the harvest

   i Separating the husks from the grains

   j Transporting the crop

2 Who is involved in the activities? **Identify** as many different classes, genders and ages as you can.

3 What tools and animals can you **identify** in the painting? Can you suggest what the tools are made from?

Extend your understanding

1 **To what extent** does this painting help you to understand why farmers were at the bottom of the social hierarchy? Think about how many workers there are and the tasks they are performing.

2 Using the internet, conduct **research** to find three other types of primary sources that provide useful evidence in your research into what farming practices were like in ancient Egypt, and the role of farmers in the social hierarchy. Remember to include references to show where you found your information.

Lesson 10.7
Religious beliefs and practices

Introduction

Religious beliefs dominated the lives of the ancient Egyptians. Nearly everything in their world was seen as being controlled by hundreds of deities (gods and goddesses). People's beliefs greatly influenced how they lived, what they built and how they waged war. These beliefs also shaped their views about death and how they prepared for it.

Beliefs and values in ancient Egypt

The ancient Egyptians believed that one group of gods created the world and its living things, while another group controlled the forces of nature. There were also gods of fertility, wisdom, love, music and dance, death, health and childbirth. The Sun god Ra (or Re) was the most important god. The Egyptians believed he rode across the sky each day in a boat. Ra is often shown with the Sun symbol on his head (see Source 1). He is said to travel alongside Nut, the universal mother, during the day and night. Every night, she swallows the Sun and gives birth to it again next morning.

Source 1 A hieroglyph depicting the Sun god Ra (left). Ra is often shown with the body of a human, the head of a hawk and a golden disc with a serpent on top of his head.

Traditions and ceremonies

The ancient Egyptians built many temples where priests and priestesses served the gods and goddesses they believed lived there. The priests burned incense, made offerings and held festivals.

Ordinary people made shrines in their homes where they said prayers and left offerings for the deities. People played instruments such as **sistra** (metal rattles; see Source 2 in Lesson 10.8 Everyday life, page 362) to keep away evil spirits. They also wore amulets to attract the protection or goodwill of the gods and goddesses.

sistra metal musical instruments in ancient Egypt that rattled when shaken; the singular form is sistrum

Animal gods

Many deities throughout ancient Egypt were shown with the heads or bodies of animals. For example, the goddess of war, Sekhmet, was shown as a lion, and the god of water, Sobek, was represented as a crocodile. As a result, many priests and priestesses kept crocodiles as pets and spoilt them with offerings of food.

The Egyptian goddess Bastet, the protector of homes, was shown as a cat. The ancient Egyptians valued cats highly, not only out of respect for Bastet, but also because they protected their grain stores by killing vermin such as mice and rats. Households treated cats very well; harming or killing a cat was often punished by death. The Greek historian Herodotus wrote that when a cat in ancient Egypt died, the occupants of the house would mourn and often shave their eyebrows to show their loss.

Video: Cats in ancient Egypt

History

Source 2 An ancient painting on papyrus showing some of the most important gods of Egypt.

Quiz me! Religious beliefs and practices

Check your learning 10.7

Check your learning 10.7

Review and understand

1 Who was the most significant Egyptian god? **Outline** why this god was so important.

2 How were gods worshipped in ancient Egypt?

3 **Identify** the ways that ordinary people tried to keep evil spirits away and how they tried to attract protection from the gods.

Apply and analyse

4 **Explain** why cats were valued highly in ancient Egypt.

5 Look closely at Source 2. **Determine** (decide) whether it is a primary or a secondary source, and give reasons for your answer.

Evaluate and create

6 Egyptian deities were depicted in different ways.

a Using the internet, **research** three Egyptian deities other than Ra. Find out how they were depicted. Look particularly at their heads.

b **Create** three new gods: a god of peace, a god of greed and a god of courage. Draw sketches of them, remembering to pay attention to the head.

Source 3 Many animals in ancient Egypt were mummified after death as a sign of respect, or as offerings. Shown here is a mummified cat.

Lesson 10.8
Everyday life

Key content video:
Everyday life in ancient Egypt

Introduction
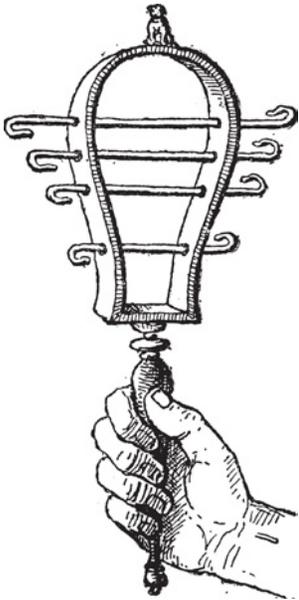
Ancient Egypt was a highly organised civilisation that was deeply influenced by its people's beliefs, values and practices. This influence was evident in various aspects of the ancient Egyptians' daily lives.

Marriage, love and birth

Egyptians married as teenagers. Marriage was usually a business matter, arranged by the parents when the partners were young. This is why a man might, for example, marry his sister – to keep the money in the family. It seems not much fuss was made about weddings – the woman simply left home to live with her new husband. Yet marriage was seen (by law and religious belief) as a serious commitment; some marriages would also have involved mutual love and respect apart from economic arrangement.

Childbirth was a risky business. There was a high loss of life for both babies and mothers. Some women gave birth in special "birthing houses" in temples. People often called on deities for help. For example, they might ask for support from Hathor, the goddess of women (represented as a cow). Or they would ask Ra, the main Egyptian deity, to send a wind to cool the mother.

Source 1 This sculpture comes from the tomb of a couple buried together at Saqqara, near Cairo. The level of affection shown here (the woman's arm behind the man) is uncommon in Egyptian paintings and carvings.

Music and dance

The ancient Egyptians had a range of musical instruments, including harps, drums and *sistra* (see Source 2). Music and dance were always part of funerals. They were also seen as ways to communicate with deities such as Sekhmet. People who had done the wrong thing were very scared of this goddess, because they believed she would destroy the wicked. Dancing was a way to appeal to her mercy. The ancient Egyptians also believed that *sistra* both honoured the god Hathor and frightened off the desert god Set (the god of chaos).

Source 2 These musical instruments, known as *sistra*, made a loud clanging sound when shaken as the moving metal parts banged into each other.

Communication

Only around 1 per cent of people in ancient Egypt learnt to read and write. These people, almost always men, were highly respected. They were called scribes (see Lesson 10.4 Key groups in Egyptian society, page 350).

During the period of the Old Kingdom, the ancient Egyptians used **hieroglyphs**, which were a form of writing or script. This script contained over 750 symbols. As

hieroglyphs
picture-like signs used in the original writing system of the ancient Egyptians

time passed, the ancient Egyptians developed simpler scripts – the **demotic and hieratic** scripts. These could be written more quickly, and were used for everyday writing.

Health and hygiene

The ancient Egyptians valued cleanliness. The wealthy bathed often. Priests used to shave their entire bodies regularly, and wash up to four times a day, so that they were completely clean when performing their religious duties. Slaves, on the other hand, washed rarely and so could be smelly and sticky. Records describe how one pharaoh, Pepy II, used to surround himself with naked slaves who were smeared with honey, so that flies would annoy them instead of him.

Source 3 Ancient Egyptian hieroglyphs in the Temple of the Dead of Rameses III, Luxor

Health problems

Despite Egyptians' love of cleanliness, ancient Egypt was not a healthy place to live. Malnutrition was common, especially among the poor, and there were other problems. These included:

- mosquitoes that bred in the Nile, spreading diseases such as malaria, which causes flu-like symptoms including fever
- rubbish and human waste that were often dumped in the Nile and other canals, leading to diseases such as dysentery, which causes severe diarrhoea
- breathing in sand blown in from the deserts, which often led to a lung disease called silicosis
- fragments of rock left in flour from the stones used to grind the grain, which caused tooth damage and decay.

demotic and hieratic both simplified systems of writing based on hieroglyphs; demotic was faster and easier to write

Medicine and healing

The ancient Egyptians discovered a lot about the human body through their practice of mummification. For example, they knew how to use hot knives during surgery to seal blood vessels in order to stop uncontrolled bleeding. However, healing and medicine also relied heavily on magic and the influence of the gods. Priests were often involved in medical treatments, reciting spells and performing magic rituals.

Quiz me! Everyday life in ancient Egypt

History

Check your learning 10.8

Check your learning 10.8

Review and understand

1 **Identify** the ways in which ancient Egyptians showed that they valued cleanliness and their physical appearance.
2 Why were scribes so highly valued?
3 **Identify** the practice that advanced the knowledge of anatomy for the ancient Egyptians.
4 **Outline** the role of music and dance in the society of ancient Egypt.

Apply and analyse

5 **Explain** why ancient Egyptians often suffered from each of the following: bacterial infections, bad teeth and silicosis.
6 **Explain** why women called on gods when giving birth in ancient Egypt.

Evaluate and create

7 Over time, written forms of communication developed and changed in ancient Egypt. **Propose** why these changes happened.

Lesson 10.9
Warfare

Introduction

Ancient Egypt had a fairly peaceful early history, mainly because the physical features that surrounded ancient Egypt, such as mountains and deserts, acted as natural barriers against invasion. During the Old Kingdom, Egypt had only a small army. During the Middle and New Kingdoms, however, the army grew into a large, well-organised group because the pharaoh's rule was often threatened.

The army and the pharaoh's military role

Ancient Egypt's army was similar to a loosely organised police force. It had three main roles:

1 to keep law and order
2 to protect the pharaoh and his palace
3 to guard borders.

One of the pharaoh's main responsibilities was to protect the Egyptian people from attack. The pharaoh was considered to be a god, so he had to make his people believe that he was strong enough to protect them. This was one of the reasons why many pharaohs built huge statues of themselves.

The army included both foot soldiers (those who walked and fought on the ground) and charioteers (soldiers who drove and fought from horse-drawn chariots like the one shown in Source 1). Usually, there were two charioteers in each chariot. One man steered the horses and the other used the weapons (usually a bow and arrow, and a spear). It cost a lot of money to buy a chariot and horses, so only wealthy men could become charioteers. Successful charioteers were considered heroes.

Source 1 The remains of a wall painting showing Pharaoh Rameses II charging into battle. The horse-drawn chariot was an important weapon in ancient Egypt.

Life of a soldier

Evidence from ancient Egyptian sources shows that army life was tough. Soldiers had to participate in a very challenging program of weapons training and physical exercise. Soldiers who did anything wrong might be whipped. Often, soldiers had to go on long marches through the desert.

Treatment of enemies

Ancient Egyptians could be very harsh in their treatment of enemies they fought and conquered. There are accounts of corpses being destroyed, with body parts such as arms and heads chopped off to present to

the pharaoh or the gods. However, there were also many occasions of mercy. For example, conquered leaders were sometimes allowed to continue to rule their local region as long as they acknowledged the pharaoh as supreme ruler.

Weapons and armour

Soldiers did not wear much clothing, mainly because of the heat. They would usually wear a belt and loincloth, or a short tunic. They did not wear headgear. Some charioteers wore a type of armour on their upper body, made from leather straps. It seems that only the pharaohs wore metal armour, but not all the time. This armour was made from overlapping bronze pieces. Pharaohs would also wear a special headpiece during battle, known as the **khepresh** or blue crown. It was usually made of cloth or leather stained blue and covered with small gold or bronze discs.

Many weapons also served as farming tools. For example, axes might chop down palm trees as well as enemy bodies. Spears might kill creatures such as lions as well as men. Throwing sticks were useful for hunting birds. Many weapons, such as the mace, had religious importance. Archaeologists have often found weapons in graves alongside the remains of ancient Egyptian bodies.

khepresh a blue crown often worn by the Egyptian pharaoh when in battle; it was often studded with semi-precious stones to create a hard surface

History

Source 2 A model of Egyptian foot soldiers from the tomb of Mesehiti, an important official in Egypt during the 11th Dynasty (*c.* 2134–1991 BCE).

Source 3 Some weapons used by soldiers in ancient Egypt

Weapons used in ancient Egypt
Flint and bronze knives
Swords and daggers (made of bronze, and later iron)
Bows and arrows
Spears
Maces (heavy clubs with stone or copper "heads")
Battleaxes
Shields
Battering rams and scaling ladders (for attacking buildings with high walls)

Analyse this! Warfare in ancient Egypt

Check your learning 10.9

Check your learning 10.9

Review and understand

1 The army of ancient Egypt had two main types of soldiers. **Identify** them and describe how they fought.

2 Write a short paragraph to **describe** what life was like for a soldier.

Apply and analyse

3 **Explain** why the Old Kingdom of ancient Egypt only needed a small army.

Evaluate and create

4 After some battles, ancient Egyptian soldiers cut off parts of people they had killed in battle and presented them to the pharaoh or as offerings to the gods. **Propose** (put forward) two reasons why you think they might have done this.

5 With a partner, **create** a role play between two soldiers who are discussing what life is like in the army – both in training and in battle.

Lesson 10.10
Death and funeral customs

Introduction

Religion played a major part in the life and death of ancient Egyptians. For those who were considered worthy, death was not seen as the end. Instead, it was regarded as the start of a different sort of existence. To be worthy, each person had to live a good life.

In addition to living a good and honest life, there were a number of rituals that needed to be performed to ensure a smooth journey into the afterlife. These included:

- preserving the body after death through a process known as mummification
- reciting certain magic spells to ensure the person's safe passage into the afterlife
- making sure that the dead person had access to what he or she would need in the afterlife. These items needed to be placed in the person's tomb.

Journey to the afterlife

Once a person's body was ready for burial, a procession including family, priests and professional mourners would take the body to its tomb. At the entrance of the tomb, the priests performed various rituals, including the "opening of the mouth" ceremony. A priest touched all the head openings of the mummified body with an axe-like tool. This was believed to awaken the dead person's senses. The coffin was then sealed up and placed in the stone **sarcophagus**. The dead person was now ready to start the journey into the afterlife.

sarcophagus the outer case (usually stone) of the nest of coffins containing the dead body of a person of importance
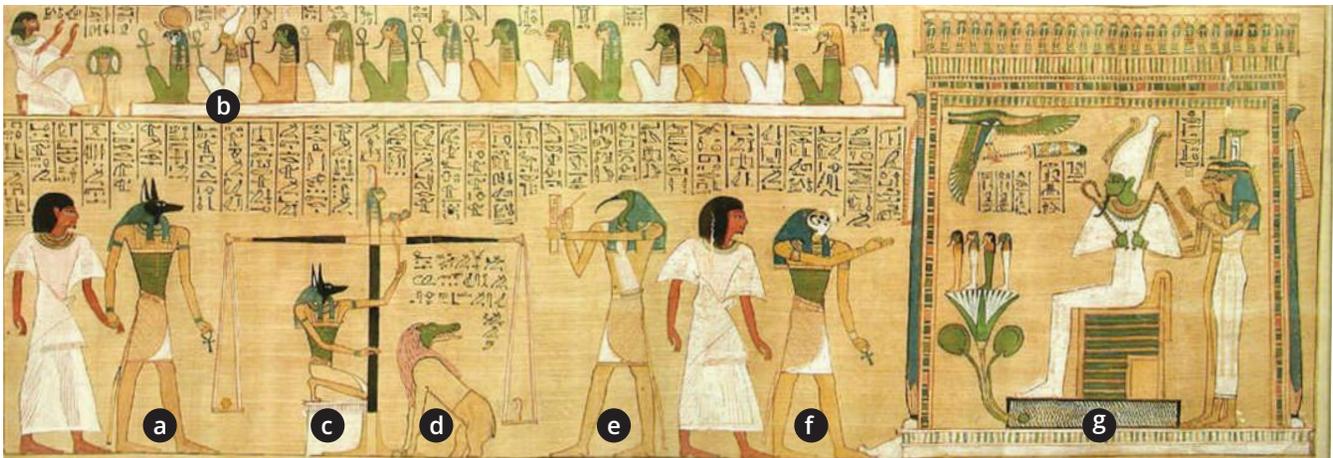
Source 1 An ancient Egyptian painting showing the "weighing of the heart" ritual.

a Anubis, god of embalming and the dead, leads the dead person to judgment.

b A row of judges sit watching.

c Anubis weighs the dead person's heart against a feather from the headdress of Ma'at, the goddess of truth and justice. If the heart is lighter than the feather, it means the person has led a good life and will be admitted to the afterlife.

d Ammit, a female demon with the head of a crocodile, will eat the dead person's heart if it is heavier than the feather.

e Thoth, god of writing and knowledge, records the result of the weigh-in.

f Horus, god of the sky and ruler of the world of the living, leads the dead person (who has passed the test) to Osiris.

g Osiris, god of the dead and the underworld, allows the person into the afterlife.

The *Book of the Dead*

In order to reach the afterlife, the ancient Egyptians believed that the dead person would need magic spells and special prayers to support them through any dangers and further rituals on their journey. These spells and prayers were recorded in a special text known as the *Book of the Dead*. A copy of the *Book of the Dead* was often buried with the dead person.

One of the important rituals the dead person must undergo before being allowed into the afterlife was the "weighing of the heart". In ancient Egypt, it was believed that the heart contained the soul, so the weighing of the heart was a kind of final judgment. The ritual is explained in Source 1.

Tombs

The earliest tombs were often graves in the desert. The hot, dry sand soon sucked all moisture from the corpse, preserving it. The poor continued to be buried this way even after burial practices had changed.

The first above-ground tombs were called *mastabas*. These were large, box-like structures. Many *mastabas* had detailed designs, with stones in patterns decorating the walls. Perhaps the best-known above-ground tombs were the pyramids. Today, more than 160 pyramids have been found.

When grave robbers started becoming a problem, tombs for important people such as pharaohs were dug underground in places such as the Valley of the Kings. This began to happen from about 1500 BCE.

Source 2 This person was buried in a pit in the Egyptian desert 5,400 years ago, along with some possessions. The well-preserved body had a number of broken bones.

Burial goods

Egyptians buried their dead with goods they believed would be needed in the afterlife – clothing, jewellery, pots, furniture, wigs, tools, chariots, boats, food and even servants! Later, small models of servants were used instead of the real servants.

Watch it! The tomb in the Great Pyramid

Check your learning 10.10

Check your learning 10.10

Review and understand

1 In your own words, **define** the following terms:
   a *mastabas*
   b pyramids.
2 **Outline** what the *Book of the Dead* was, including the role it played in Egyptian funeral customs.
3 Why was it so important to ancient Egyptians to preserve the body when someone died?
4 What role did climate and physical features have in ancient Egyptian burial practices?

Apply and analyse

5 **Analyse** the connection between burial rituals and grave robbing in ancient Egypt.
6 Look at Source 1. **Explain** why "having a heavy heart" might indicate that a person has not led a good life.

Evaluate and create

7 **Discuss** how religion influenced the burial and funerary customs of the ancient Egyptians. Look closely at the sources in this topic to help you.

History

Lesson 10.11
How mummies were made

Introduction

To the ancient Egyptians, reaching the afterlife was a complicated business. It was not enough for a person simply to be worthy, they also had to be prepared for the journey according to a number of rituals and be supplied with the necessary provisions and protections. Their bodies were preserved through the process of mummification (or embalming), which involved removing vital organs and placing charms and spells in specific areas (see Source 1).

Learning intentions and success criteria

scarab a type of beetle considered sacred by the ancient Egyptians; the word "scarab" also refers to items of stone or metal jewellery in the form of the scarab beetle

resin a sticky substance (similar to the sap from a tree) used in ancient Egypt to glue bandages together

Source 1 The steps followed during the mummification process.

(a) The dead body is brought for mummification followed by mourners.

(b) The body is thoroughly washed. A priest reads prayers from the *Book of the Dead*.

(c) The liver, lungs, stomach and intestines are removed through a cut on the left side of the abdomen. A hook, pushed up through the nostrils, removes the brain (thought to be a useless organ that produces only mucus). The heart is left in the body.

(d) The internal organs are dried in natron (a natural powder, a bit like salt), rubbed with fragrant oils and put into four canopic jars. Each jar lid is shaped like the head of a different god, who acts as the guardian of the organ inside: the liver has a lid like a man's head; the lungs, a baboon's head; the stomach, a jackal's head; and the intestines, a falcon's head.

(e) The body is then covered with salt for 70 days. This, and the dry air, sucks out any moisture. The body is washed again in water and smeared with fragrant oil.

(f) Once the body has been embalmed, it is wrapped with rolls of fine linen (similar to bandages), starting with the head and neck. Toes and fingers are wrapped separately, and sometimes covered with gold caps. Sacred amulets such as the **scarab** are wound into the bandaging. During the wrapping, prayers from the *Book of the Dead* are said over the body.

(g) The fully bandaged mummy is painted with sticky **resin**, and then more cloth is wrapped around it.

(h) The mummy is put into a body-shaped coffin. Often more than one coffin is used, each one sitting inside the next. For important people like pharaohs, the nest of coffins is placed inside a stone box, called a sarcophagus

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10.11

Key content video: How mummies were made

Interactive: The mummification process

Sequence this! Making mummies

Check your learning 10.11

Check your learning 10.11

Review and understand

1 **Identify** why the brain was thought to be a useless organ.
2 **Describe** what was done with a dead person's internal organs during the mummification process.
3 Why were bodies covered with salt for 70 days?
4 **Outline** the religious ritual that was conducted as the bodies were wrapped in cloth.

Apply and analyse

5 **Examine** the various elements illustrated in Source 1. What evidence does this source provide about ancient Egyptian beliefs and values?

I used to think, now I think

Reflect on your learning about the mummification process and complete the following sentences.
· I used to think ...
· Now I think ...
What has changed in your understanding?

10C Concepts & skills in context
The Great Pyramid at Giza

Introduction

Interactive: The pyramids

The Great Pyramid at Giza is the only remaining wonder of the ancient world. It was built in *c.* 2580 BCE as the tomb of the Pharaoh Khufu. The question of how the Great Pyramid was constructed with such accuracy has mystified many historians.

Historians have come up with many different hypotheses about how it was built. Source 2 highlights the main steps that may have been used in the pyramid's construction. It is important to note that there is some debate about how the Great Pyramid was constructed. There are no surviving texts or manuals to tell us exactly how it was built.

Source 2 Historians believe the building of the Great Pyramid at Giza took about 20 years and used more than 100,000 workers.

a. The first step in the building of the pyramid was probably the selection of a workforce. It is believed that, during the inundation of the Nile, most of the workforce was made up of farmers who could not work on their farms because of the floodwaters.

b. Posts were buried deep in the slopes so blocks could be hauled from below.

c. Once the first later of blocks was laid, further blocks would then need to be dragged up to be placed on the next layer of the structure. There are many theories about how the blocks were moved, but a discovery of a modified ramp in an ancient quarry suggests this technology could have been used at the time the Great Pyramid was built. The three-metre-wide ramp had steps either side of it. Set alongside the steps on each side were built-in holes which would have been filled with thick wooden posts. Teams of builders would then have wrapped ropes around the posts to create pulleys that allowed blocks to be pulled upwards from below and above. The slope of the ramp grew as the size of the pyramid did.

d. Scholars think that the blocks were probably dragged across wet sand on sleds to the base of the pyramid or, once construction started, to the bottom of the ramp. The sand in front of the sled was likely dampened with water to reduce friction, making it easier to move the sled.

e. Most of the 2.3 million blocks used to build the Great Pyramid were limestone blocks, mined in local quarries. Others were heavy granite, found about 800 kilometres south of Aswan. They then had to be transported downriver on barges or ships.

f. The base of the Great Pyramid is almost flat. This has left historians to believe that the area in which the Great Pyramid was to be build was first marked out and levelled. Marking out the ground involved complex mathematics. Precise calculations were required to set out where the corner blocks would be placed, the angle of the sloping sides, the height and the dead centre of the structure.

g. Once completed, each later of the pyramid was coated with panels of white limestone.

h. The final step in the construction of the pyramid of Giza was to place a pyramidion (a smaller pyramid cut from one piece of stone) on the very top. It was about 8 metres high and coated with a mix of gold and silver
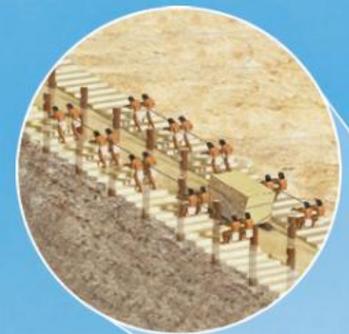
Source 1 The Great Pyramid at Giza
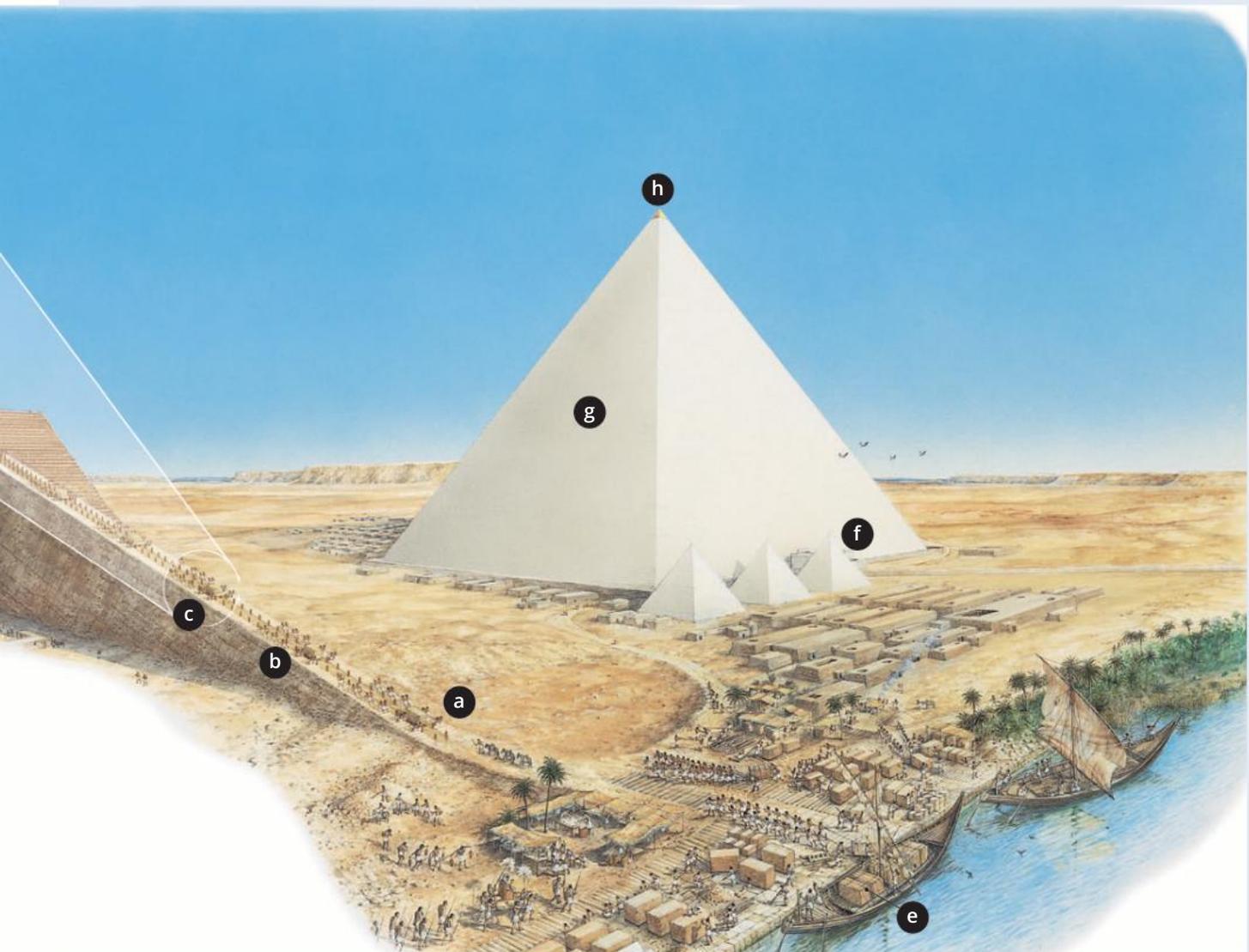
Creating a flow chart

After conducting their research, historians need to be able to express and communicate their findings in a range of ways and using different forms. Sometimes, historians communicate their findings orally or in writing. At other times, historians use particular graphic organisers, such as flow charts, to communicate information.

Flow charts are a very useful tool for communicating steps in a process. To create a flow chart, you need to think carefully about the steps involved in a process, as well as the order in which these steps would have been performed. A good flow chart should include:

- written descriptions of each step
- a small drawing or visual representation of each step
- arrows between each step to show the order in which they were performed.

For more information on communicating, see Lesson 6.8 Communicating (page 236).

Practise the skill

1 Look carefully at Source 2. **Identify** what the key steps would have been in the building of the Great Pyramid, and the order they would have been carried out. Create a flow chart that outlines these steps, using the guidelines above.

Extend your understanding

1 Source 2 shows one theory of how the Great Pyramid was built, but some historians still contest this theory.

  a **Research** theories about how the pyramids were built. For example:
    » a ramp that winds around the pyramid
    » ramping systems inside the pyramids
    » some of the blocks being made on the pyramid.

  b **Describe** each theory and draw a simple picture to illustrate how it may have worked.

  c Which theory do you think is most likely to be correct? **Justify** (give reasons for) your answer.

Lesson 10.12
Change through trade

Learning intentions and success criteria

Introduction

Ancient Egypt's location offered it many advantages in terms of trade. For example, the Nile allowed merchants easy access to the Mediterranean Sea and beyond. The trade contacts they made with new markets helped Egypt to develop and prosper. So did the lands Egypt acquired through their military conquests during a period known as the New Kingdom.

There is evidence to suggest that Egyptian traders were making contact with other countries almost from the start of their history. There were early expeditions up and down the Nile, down the Red Sea and across the deserts.

Egypt had plenty of grain and dates, papyrus, flax (a plant used to make linen), stone, fish, oxen and salt. The ancient Egyptians bartered plentiful goods such as these for other goods that they had little of. Bartering was a way to exchange or swap goods without using money. For example, they would trade with their southern neighbour Nubia (modern-day northern Sudan), swapping their own supplies of grain for exotic goods such as ivory (elephant tusk) and ebony (a rare timber). They would also buy goods such as silver, iron, horses, copper, cattle, leopard skins and spices.

One of the more famous trade expeditions in ancient Egypt was when Queen Hatshepsut sent an expedition down the Red Sea to obtain trees, elephant tusks, gold, ebony, spices and foreign animals such as panthers. Sailors on the trading ships were paid in grain.

When Egyptian traders travelled on land they used camel caravans to go through the deserts. When they travelled on water, they went by boat or barge.

Key content video:
Change through trade in ancient Egypt

History
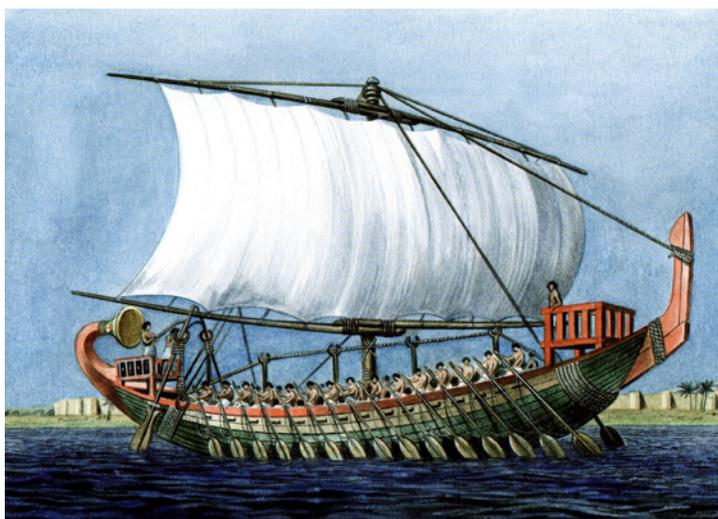
Source 1 An artist's impression of an ancient Egyptian river boat. Egyptian traders would have used boats like these to transport goods along the Nile.

See, think, wonder

Look at Source 2.
- What do you see?
- What do you think?
- What do you wonder?

Source 2 An Egyptian tomb painting showing Nubians carrying goods. Some exchanges were "gift giving" rather than trade. What was given reflected the power balance – a ruler who respected the power of Egypt might give "better" (or more) goods than they received.

Module 10 Ancient Egypt **373**

10.12

Key trade routes of ancient Egyptians

Legend

— Trading route
Commodities traded
a Olive oil
b Cattle
c Silver
d Copper
e Mineral powders (for eye make-up)
f Horses
g Camels
h Monkeys and baboons
i Ostrich eggs and feathers
j Exotic woods (e.g. frankincense)
k Stone
l Semiprecious stones
m Gold
n Cedarwood
o Iron
p Lapis lazuli (blue mineral used in jewellery)
q Turquoise
r Ivory
s Chickens
t Incense
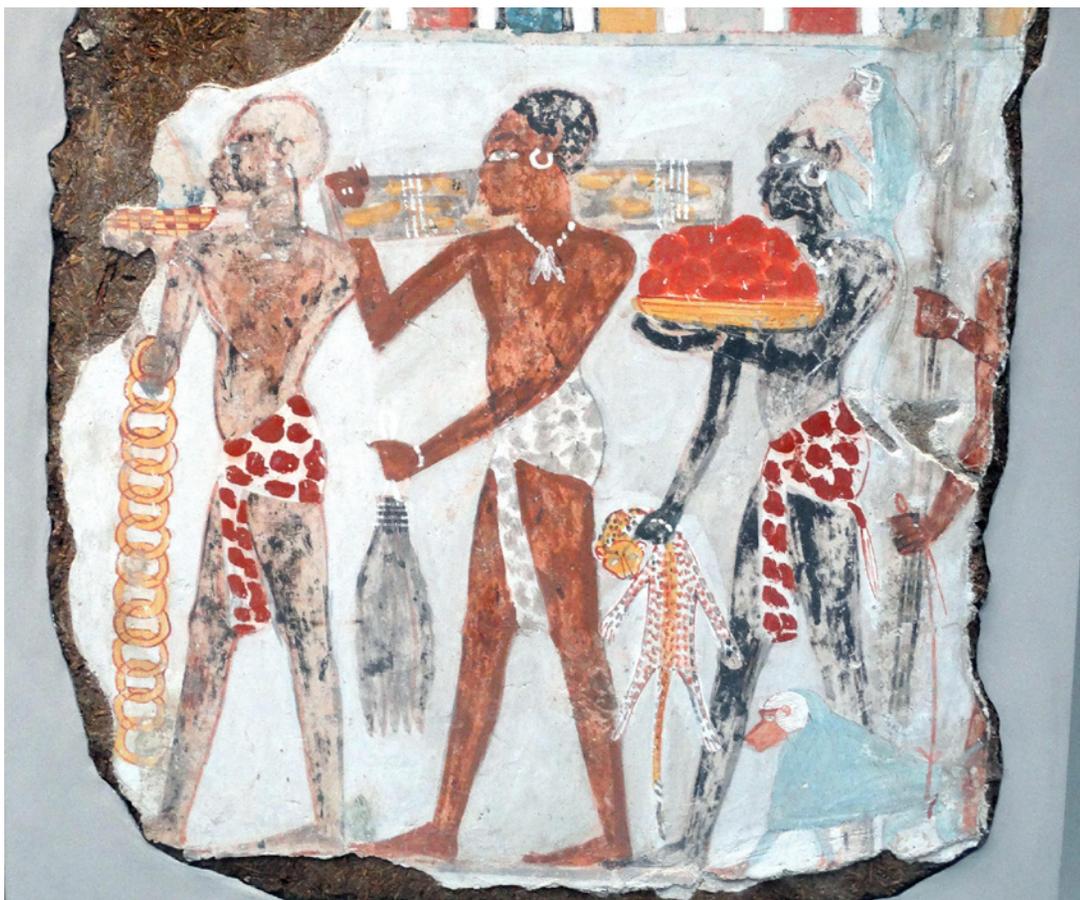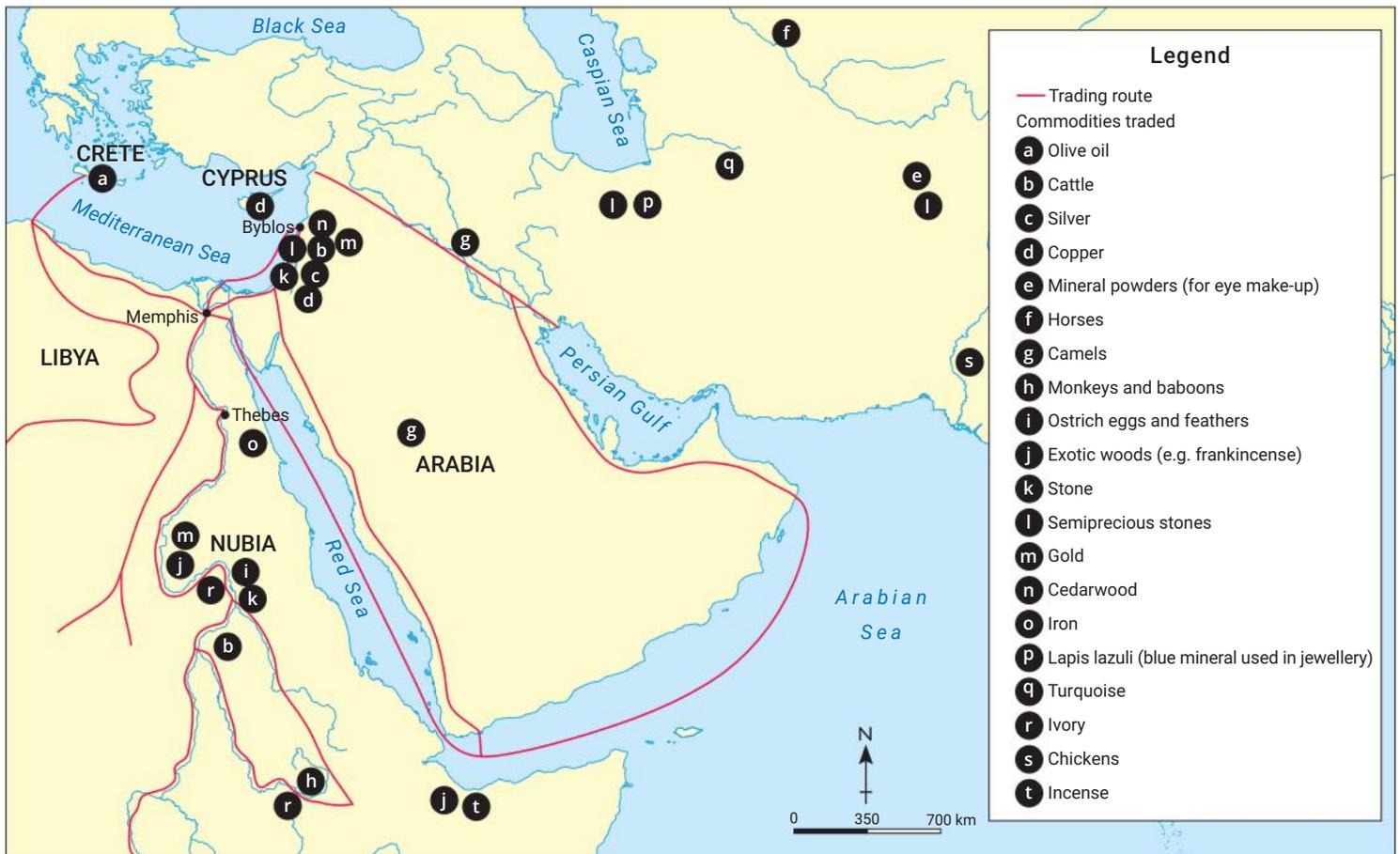
Source 3

Enlarged map: Key trade routes of ancient Egyptians

Quiz me! Change through trade in ancient Egypt

Check your learning 10.12

Check your learning 10.12

Review and understand

1 **Identify** the goods the ancient Egyptians had plenty of to trade.
2 In your own words, define the term "barter". **List** the goods the ancient Egyptians bartered with the Nubians.
3 Look at Source 2. **Identify** the goods in this image you are familiar with. With a partner, try to work out what the other items might be.

Apply and analyse

4 **Explain** how the exchange of goods was sometimes a way to reinforce how rulers perceived the power of other countries.
5 **Examine** Source 3. Using a world map, such

as the one at the back of the Student Book, list the modern names of at least three countries that the ancient Egyptians traded with to obtain various goods.

Evaluate and create

6 **Create** a concept map to show how imported goods listed in Source 3 might have helped to change the society of ancient Egypt.
7 Imagine that Australia is cut off from all contact with the rest of the world. As a class, **discuss** how you think this would influence our society in both the short term and the long term. What does your discussion reveal about the impact of trade on societies?

Lesson 10.13
Change through conflict

Introduction

▶ **Key content video:** Change through conflict in ancient Egypt

Learning intentions and success criteria

At the start of the New Kingdom in 1550 BCE, Egypt's army was more professional than it had ever been. Its soldiers had better military equipment and were better trained. This put Egypt in a strong position to conquer territories beyond its borders.

The pharaoh Thutmose III and his army were particularly successful at this. Their efforts meant that a large part of southern Syria was brought under Egypt's control.

A growing threat to Egypt around this time were the Hittites. The Hittites were a group of people keen to build their empire. From about the fourteenth century BCE, the Hittites started to push south from the area that is today known as Turkey, down through the coastal regions of the western Mediterranean Sea. Egypt had maintained a trade interest in this region for a long time.

Campaigns of Seti I and Rameses II

The 19th Dynasty pharaoh Seti I used Egypt's growing military strength to further expand Egypt's influence. He fought conflicts in Canaan, Syria, Libya and Nubia in an attempt to increase Egypt's power and prestige.

Kadesh was a city in Syria that had been taken from the Egyptians by the Hittites. Seti I led a very bloody battle against the Hittites and was able to reclaim Kadesh for a short time.

Rameses II became the pharaoh after his father, Seti I. He was in power for a long time, from *c.* 1279 to 1213 BCE. Under his rule, Egypt's economy boomed. Rameses was also a remarkable soldier, and he was determined that Egypt would take over Kadesh permanently.

Enlarged map: Egypt's territorial expansion during the new kingdom

Egypt's territorial expansion during the New Kingdom

Legend

Extent of Hittite Empire at the time of Rameses II

Area ruled by Egypt under Rameses II

Nation of Amurru
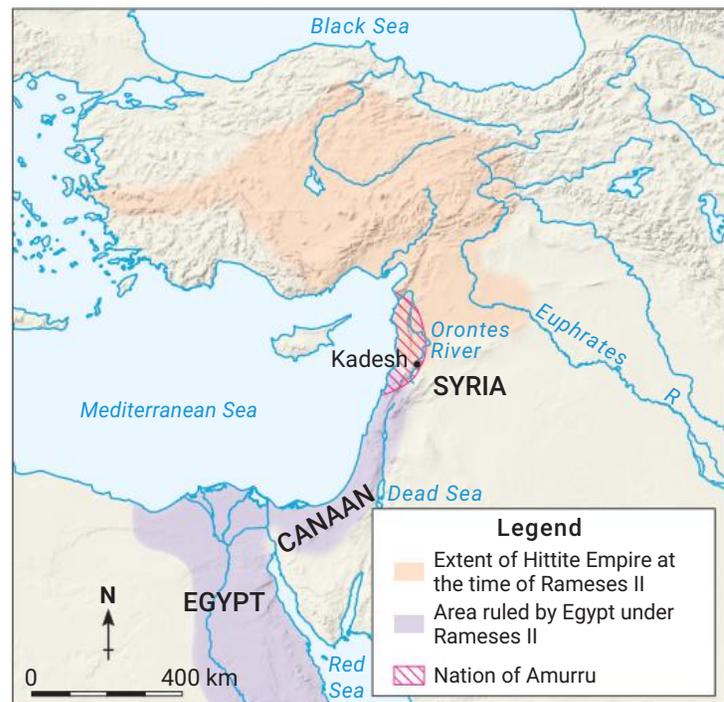
Source 1

The Battle of Kadesh (1274 BCE) is thought to be the biggest chariot battle in history. It is also the first battle in history where there are records from both sides, and it led to the world's first peace treaty. For all these reasons, the Battle of Kadesh is seen as historically significant.

Key skill worksheet: Determining historical significance: The Battle of Kadesh

Source 2 Rameses II celebrated what he claimed to be a great victory at Kadesh with many texts and stone artworks. This stone carving at the Abu Simbel temple shows him on the attack.

Key concepts & skills Causes & consequences

The Battle of Kadesh

The ancient city of Kadesh lay on the trade route that linked the Mediterranean Sea to the northern part of ancient Syria. Egypt lost its influence over Kadesh to the Hittites during the time that the pharaoh Akhenaten was in power (around the mid-fourteenth century BCE). The main reason for the battle was that Egypt wanted Kadesh back. Amurru, a nation near Kadesh, had also been taken over by the Hittites. The battle was started because Amurru asked for help from Rameses II to free itself from Hittite rule.

In the end, neither side actually won, although Rameses tried to say that he was the victor for some time. The longer-term effect of this battle was the historic treaty that Egypt signed with the Hittites in 1269 BCE. The treaty set out their agreement that Egypt would not invade Hittite territory and the Hittites would not invade Egyptian territory. The effect of this treaty was that there were 70 years of peace for the region.

For more information on causes and consequences, see Lesson 6.6 Causes and consequences (page 233).
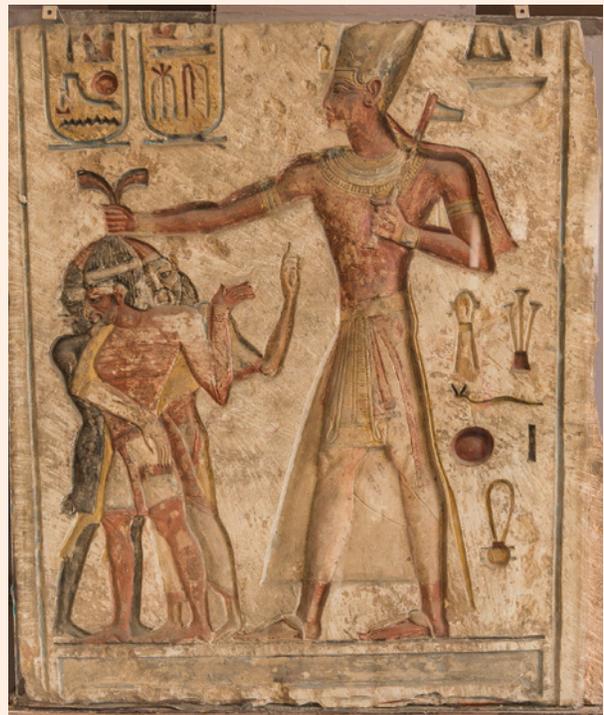
Source 3 This tomb painting shows Rameses II at the Battle of Kadesh. It is only one of a great many monuments and paintings he had made as propaganda for his achievements.

Quiz me! Change through conflict in ancient Egypt

Check your learning 10.13

Check your learning 10,13

Review and understand

1 **Outline** the importance of Kadesh. Why was it so important to Rameses II?
2 **Identify** what started the Battle of Kadesh.
3 **Describe** why the Battle of Kadesh was so historically significant.

Apply and analyse

4 Look at Source 3. Given what you know about Rameses II and the Battle of Kadesh, **explain** why this tomb painting is a good example of propaganda. How do you think the Hittites might have reacted to this?

Evaluate and create

5 **Propose** reasons why Rameses II tried to say that he was the victor in the Battle of Kadesh. To help answer this question, think about what you know of the role of the pharaoh in ancient Egypt.

10D Concepts & skills in context
The Battle of Kadesh

Introduction

In this battle, the Egyptian pharaoh Rameses II and his army fought the Hittites to regain control over the ancient city of Kadesh.

Rameses II's plan of attack was to divide his troops into four groups or "divisions": Amun, Re, Ptah and Seth. Each group would march from their starting point in the forest, north through the desert into Kadesh, one day apart, in the order mentioned. Rameses II led one of the groups – the Amun. They set up camp in a swampy area south of Kadesh. Two Hittite spies told Rameses II that the Hittites were far away, so Rameses II was very confident that he and his army would be able to take Kadesh.

Unknown to him, the Hittite army was hidden and waiting. While the Amun group camped near the swamp, the Hittites sneaked out and attacked the Re group, killing nearly all of them. Then, the Hittites turned north to finish off the Amun group. Luckily for Rameses II, the Ptah group arrived to help the Amun group at the scene of battle. It was a tough battle and Rameses II was forced to fight for his life.
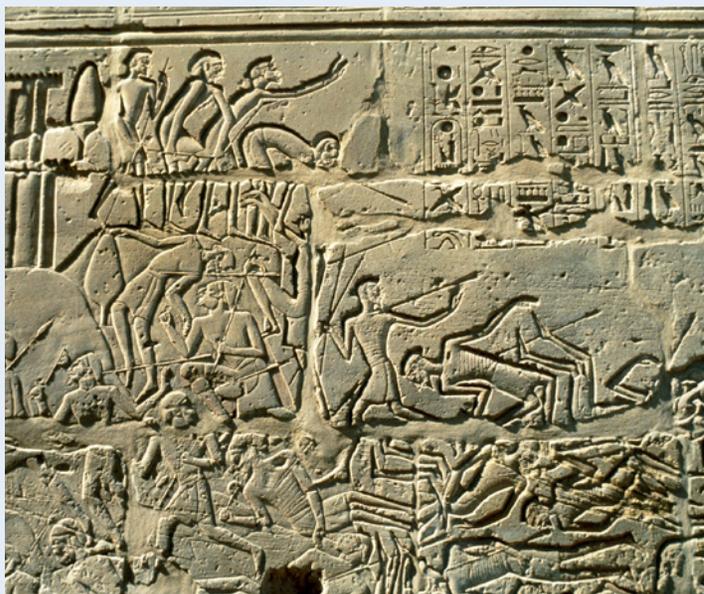
Source 1 A stone carving of the Battle of Kadesh showing the army of pharaoh Rameses II fighting Hittite soldiers

Key concepts & skills Chronology

Creating a visual representation of a historical event

Historians often use information in a written secondary source to create a visual representation of the key ideas or events. This representation might be a map or a labelled diagram. The process of creating such a representation can be very helpful for forming a better understanding or building a clearer picture of events. The resulting visual representation also makes it easier to explain events to others.

The following steps will help you to create a good visual representation of a historical event:

- **Step 1** Read the information in the source carefully.
- **Step 2** Identify the key players mentioned in the source.
- **Step 3** Re-read the information, this time making sure you visualise each stage of the events being described.
- **Step 4** Choose symbols and colours to represent key players, locations and events; for example, you might use arrows to show movement.
- **Step 5** Include a legend to explain the symbols and colours used in your representation.

For more information on chronology, see Lesson 6.3 Chronology (page 220).

Practise the skill

1   Copy the maps in Source 2 and use them to **create** a visual representation of how the Battle of Kadesh unfolded. The first one has been done for you. Do not forget to complete the legend.

Extend your understanding

1   **Explain** how Rameses II might have reduced his troop losses to help him win the battle.
2   **Discuss** how the propaganda about the godlike achievements of Rameses II would have been received in Egypt. How do you think it influenced the perceptions of ordinary Egyptians?
3   Write a poem about the battle from the point of view of Rameses II.
4   Design a stone relief or wall painting to commemorate the Battle of Kadesh. The design can be from a neutral perspective, or from the perspective of Rameses II or the Hittites.

Legend

Source 2
How the battle of Kadesh unfolded
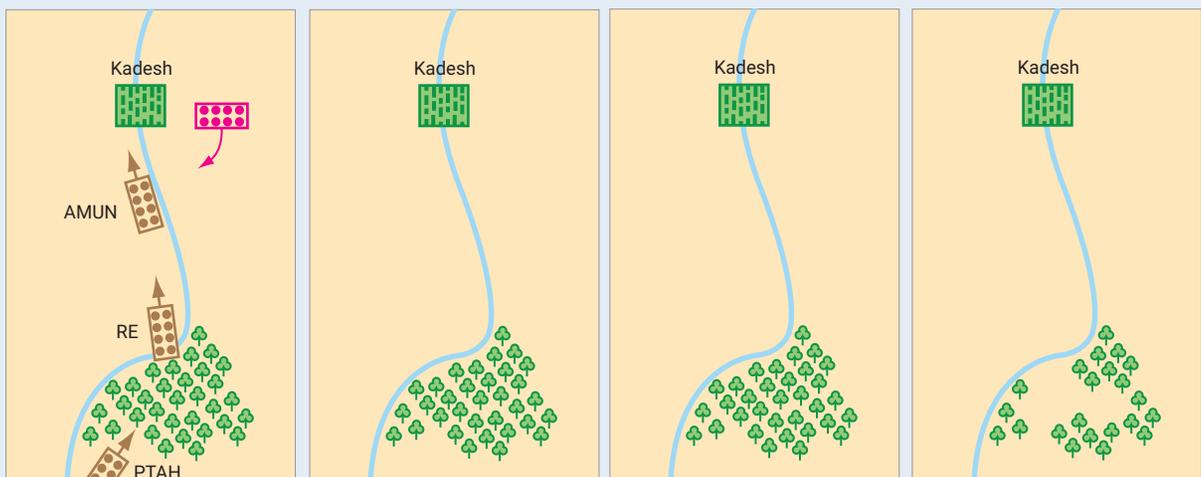
Review: Ancient Egypt

Review activity

Examine both sources carefully and answer the questions below.

Source 1 Wall painting from the tomb of Djehutihotep, who was a government official during the 12th Dynasty, *c.*1900 BCE.
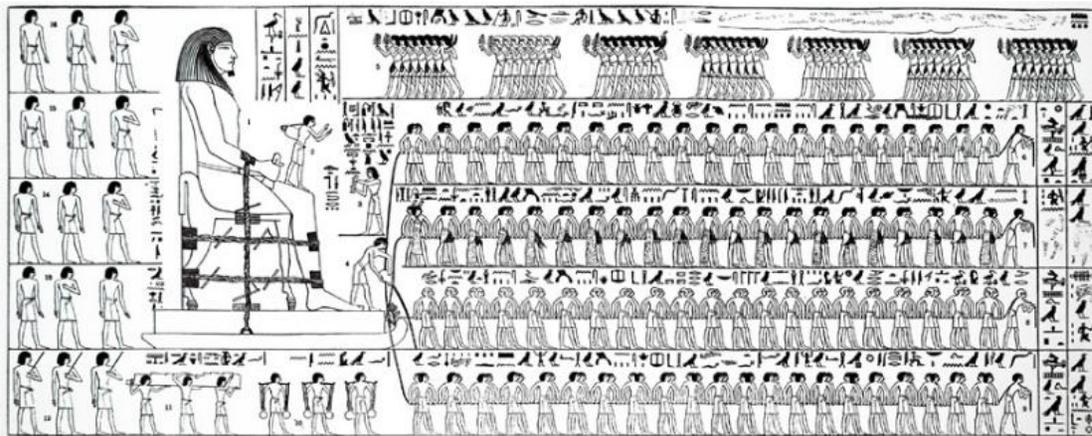
Source 2

The famous scene from Djehutihotep's tomb illustrates well the reasons why the ancient Egyptians were so successful in manoeuvring and building such impressive monuments, which were accomplished by the combination of knowledge, skill and necessary man-power, the latter provided by a willing workforce drafted in especially for the task rather than an army of slaves so often portrayed in books and films ...

The colossus has been placed on a wooden sledge for transportation ... The hauliers are gliding the sledge over a layer of carefully prepared sand, and there is some speculation about the significance of the man pouring water in front of the sledge: he was originally thought to be offering a *libation* (a drink poured out as an offering to a deity) as part of a ceremony, but it has been recently proposed that the ancient Egyptians understood that if a certain amount of water is added to sand, it significantly reduces the amount of friction generated by the dragging of such heavy loads.

An analysis of Source 1, provided by The Griffith Institute.

1 **Identify** the role of Djehutihotep in ancient Egyptian society. (1 mark)
2 **Determine** (decide) whether the sources provided are primary or secondary sources. Give reasons for your answer. (3 marks)
3 The significance of aspects of the painting have been speculated about over time.
   a **Explain** the significance of the man pouring water in front of the sledge.
   b What was it previously thought that the man was doing? (4 marks)
4 As you have learned, every source is created from a different perspective. Read Source 2 and **list** some of the words that the author has used that indicate their perspective on the ancient Egyptians' construction skills. (2 marks)
5 **Evaluate** the construction abilities of the ancient Egyptians, using both sources to help you. (10 marks)
(Total: 20 marks)

⚛ **Module checklist:** Ancient Egypt

🖥 **Module review quiz:** Ancient Egypt

Module

11

Ancient Greece

Sub-strand: Investigation:
Ancient societies (10 000 BCE–600 CE)

oxforddigital **This module is available on Oxford Digital.**

Overview

Ancient Greece covered the area known today as Greece and also the parts of modern Türkiye near the Aegean Sea. It also had many colonies or settlements around the Mediterranean Sea and the Black Sea.

Ancient Greece is sometimes called the "cradle of Western civilisation" because of the many features of modern life that have their origins in the time of the early Greeks. These features include democracy as a form of government, drama (theatre) and the modern Olympic Games. Some aspects of modern architecture and sculpture also draw on the classical traditions of ancient Greece. The work of ancient Greek mathematicians, thinkers and storytellers still inspires many people today.

Source 1 Ruins of the Acropolis of Lindos on the island of Rhodes in Greece. This is a popular tourist attraction today.

Lessons in this module

Module

12

Ancient Rome

Sub-strand: Investigation: Ancient societies (10 000 BCE–600 CE)

Overview

In 387 CE St Ambrose, bishop of Milan, wrote the now famous proverb, "When in Rome, do as the Romans do". To live in this society was to think big and live life to the *maximus* – a Latin term meaning "greatest". Ancient Rome is renowned for its grandeur, strength and domination. The Romans grew their empire from the heart of the Mediterranean, spanning five million square kilometres and lasting over 1,000 years. Romans were passionate about politics and warfare, while also being clever engineers, traders and planners. They sought a balanced lifestyle, enjoying indulgent baths, bloodthirsty entertainment and upholding virtue. Ancient Rome even experienced natural disasters which devastated the city of Pompeii. It is no surprise that ancient Rome is still considered one of the greatest societies of all time.

Source 1 The Arch of Constantine is the largest remaining triumphant arch from ancient Rome and the last grand monument of the Roman Empire, built in 315 CE near the iconic Colosseum.

Lessons in this module

12A How did the physical features of Rome influence its development?

Lesson 12.1 Ancient Rome: a timeline

Lesson 12.2 Physical features of ancient Rome

Lesson 12.3 Urban planning in Rome

12A Concepts & skills in context Pompeii

12B What shaped the roles of key groups in ancient Rome?

Lesson 12.4 Key groups in ancient Roman society

Lesson 12.5 Role of women in ancient Rome

Lesson 12.6 Significant individual: Julius Caesar

12B Concepts & skills in context Nero and the great fire of Rome

12C How did beliefs, values and practices influence ancient Rome?

Lesson 12.7 Religion in ancient Rome

Lesson 12.8 Everyday life for ancient Romans

Lesson 12.9 Roman baths

Lesson 12.10 Public entertainment

Lesson 12.11 Death and funerary customs in ancient Rome

Lesson 12.12 Warfare in ancient Rome

12C Concepts & skills in context Pax Romana

12D How did ancient Rome change and develop?

Lesson 12.13 Change through conflict

Lesson 12.14 Change through trade

12D Concepts & skills in context Tacitus: A Roman historian

Lesson 12.15 Review: Ancient Rome

Lesson 12.1
Ancient Rome: a timeline

The foundation myth of Rome tells the story of Romulus and Remus – sons of the war god, Mars. The brothers were saved by a she wolf before being raised by a shepherd and his wife. Romulus is said to have killed his brother Remus before founding the city of Rome and making himself king – hence the name Rome.

753 BCE
Legendary founding of Rome

509
Rome becomes a republic.

c. 450
First law code, *Law of the Twelve Tables*, is published.

149–146
Third Punic War
Rome destroys Carthage and conquers the last Greek city-state of Corinth.

218–202
Second Punic War
Rome defeats Hannibal, the Carthaginian general, at Zama.

264–241
First Punic War
Rome fights Carthage, a powerful city-state on the north coast of Africa, for control over the western Mediterranean.

44
Julius Caesar, Roman consul (the highest elected official in Rome), is assassinated (murdered).

27
Start of the rule of Augustus; Rome moves towards becoming an empire.

79
The volcanic eruption of Mount Vesuvius destroys the cities of Pompeii and Herculaneum, killing 16 000 people.

64
The Great Fire of Rome destroys much of the city.

80
The Colosseum opens in Rome, hosting a celebration that lasts 100 days.

800 BCE   **500**   **200**   **1 CE**   **100**

Source 2 A timeline of some key events and developments in the history of ancient Rome.

▶ **Key content video:** Ancient Rome – a timeline

Sequence this! Ancient Rome

An artist's impression of Emperor Augustus

Provisioned to Campion Education (Aust) Pty Ltd on 20/06/2025 under licence.

12.1

Source 1
The Roman Forum is now a protected archaeological park.

An artist's impression of the sacking of Rome by invading "barbarians" – a term used by Romans to describe people from outside the empire.

476 CE
"Barbarian" forces remove the last Western emperor from power, marking an end to the Western Roman Empire.

360
A group of people known as the Huns start invading Europe.

410
A group of people known as the Goths attack and plunder Rome.

300

400

500 CE

History

330
Work starts on St Peter's Basilica in Rome.

395
The Roman Empire is permanently divided into two parts, the Western Empire and the Eastern Empire.

451
Last strong military campaign of Roman army

Check your learning 12.1

Check your learning 12.1

Review and understand

1 What year does legend say Rome was founded, and who is said to have founded the city?
2 **Identify** when Rome became a republic.
3 **Identify** when the Roman Empire was permanently divided into the Eastern Empire and the Western Empire.
4 Who was the ruler when Rome began the move towards becoming an empire?

Apply and analyse

5 Using the timeline, **calculate** how many years in total the Punic Wars lasted.

Evaluate and create

6 Select four events on the timeline that you think might have been particularly significant in the history of ancient Rome. For each event, **create** one or two related questions to which you would like to find out the answer. For example, if you select the Great Fire of Rome in 64 CE, you might ask:
   a What caused the fire?
   b How many people were killed in the fire?
      Record these questions. Once you have finished working through the module, return to these questions and see if you are able to answer them. You may need to carry out some further research to find all the answers.

Lesson 12.2
Physical features of ancient Rome

Introduction

The physical features of ancient Rome were a key factor to its success. Hills, rivers, floodplains, mountain ranges and the Mediterranean Sea provided an ideal combination of physical features necessary for an empire to flourish.

The society of ancient Rome began in a small region in central western Italy called Latium. It had fertile farming land, and a climate that was hot and dry in summer and mild and wet in winter. The region is bordered by the Apennine Mountain range to the east and the Mediterranean Sea to the west.

The Tiber River flows from the north, and along its marshy floodplains is where the city of Rome was founded. With mountains providing protection from invasion, the nearby coast providing easy access to trade and a river providing water for farming, the city of Rome was settled in an ideal location.

The Mediterranean Sea

The Mediterranean Sea covers an area of 2.5 million square kilometres. Due to its landlocked nature, the Sea has little tidal movement or storms, which makes its conditions ideal for sailing and navigation. The Mediterranean Sea could be considered the "internet" of ancient times, as it provided a network for trade, ideas and technologies to be shared among many diverse cultures from different continents.

The Mediterranean Sea and surrounding areas

Source 1

With the Italian Peninsula located on its doorstep, Rome soon took control of the port of Ostia to commence trading activity. The Romans became expert seafarers, and they developed a strong navy, which helped them conquer new territories. At its peak, ancient Rome grew to control the entire Mediterranean coast (see Source 1). These included the Carthaginians in north Africa, the Celts on the Iberian Peninsula (modern-day Spain and Portugal), the Greeks and the Egyptians. The ancient Romans became so dominant in the region that they called the Mediterranean Sea *mare nostrum* – meaning "our sea".

Romulus and Remus and the Seven Hills of Rome

According to legend, Rhea Silvia, daughter of King Numitor, was married to the God of War, Mars. They had twin sons, Romulus and Remus. With threats against her sons' lives, Rhea Silvia placed them in a basket on the Tiber River, hoping they would be found safely downstream.

It is believed Romulus and Remus were discovered by a she-wolf, who fed them her own milk until a shepherd found them and raised them. The twins eventually learned of their origins and sought to establish a city of their own. They founded Rome on the banks of the Tiber where they had been rescued by the she-wolf.

When they found the surrounding land had seven hills, the brothers argued over the ideal defensive location for their city. Romulus began to build walls around his chosen hill – the Palatine Hill – which Remus mocked for their low height. Tensions built between the twins until one day Remus jumped over his brother's wall and was killed. Historians argue about exactly how Remus was killed; however, they agree that this act allowed Romulus to name the city after himself. Rome was founded in 753 BCE.

Source 2 An artist's impression of a she-wolf nursing Romulus and Remus as they are discovered by a shepherd on the banks of the River Tiber

As Rome expanded, the seven hills created a natural boundary for the city. In the early fourth century, the 10-metre high Servian Wall was built around Rome to protect the Seven Hills. Spanning 11 kilometres in length, it had 16 gates and acted as a **fortification**.

fortification
a tower or wall built to defend a place against attack

12.2

Key concepts & skills Using historical sources

Romulus and Remus

sarcophagus the outer case (usually stone) of the nest of coffins containing the dead body of a person of importance

Historians have debated the myth of Romulus and Remus for years. They argue that there are many inconsistencies and parts of the story are impossible to support. In 1988 archaeological excavations at the Palatine Hill discovered walls that dated back to the time of the legend of Romulus. Some historians argued this could have been the wall that Remus jumped over leading to his death, but others strongly disputed this.

In February 2020, an archaeological team recovered a 2,600-year-old **sarcophagus** within an ancient temple (see Source 3), which was hidden deep beneath a palace stairwell located on one of the seven hills. Based on ancient sources that recount Romulus' location, the temple has been linked to Romulus. This new evidence has reignited the historical debate around the supposed mythical origins of ancient Rome.

Alfonsina Russo, Director of Rome's Colosseum Archaeological Park, states that "All myths and legends have an element of truth, I am convinced that there was a founding hero." Experts remain divided over the new evidence and if the brothers even existed.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).
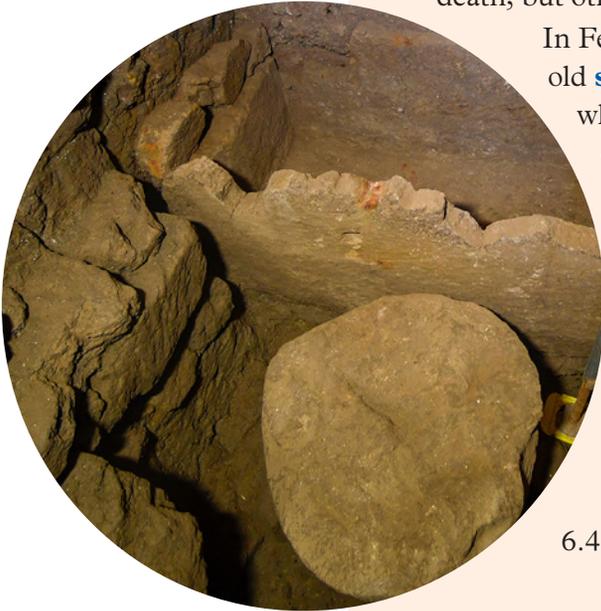
Source 3 The ancient tomb linked to Rome's legendary founder, Romulus

Explore it! A virtual field trip to Rome

Check your learning 12.2

Check your learning 12.2

Review and understand

1 **Identify** two of the physical features that surrounded ancient Rome.
2 **Describe** how hills and walls helped protect ancient Rome.
3 Why did the ancient Romans call the Mediterranean Sea *mare nostrum*?

Apply and analyse

4 Do you agree with the statement, "All myths and legends have an element of truth"? Use examples from this topic to **explain** your answer.

5 **Compare** the Mediterranean Sea to the internet today. Provide an example of how a new trend may spread globally or "go viral" online.

Evaluate and create

6 **Create** a visual diagram that shows how a network may have connected places on the Mediterranean coastline. Using your imagination, include the flow of various things from different places, such as technology, language, fashion, food produce and new ideas.
7 **Propose** (put forward) two other types of evidence that could help develop historians' understanding of Romulus and Remus.

Lesson 12.3
Urban planning in Rome

The Tiber River and flood control

The Tiber River was an essential resource to Rome. Measuring 400 kilometres in length, it was used as a trade and transport route. The Roman historian Livy describes the Tiber River as being an advantage for Rome, as it enabled the movement of goods and fresh produce inland without exposing the city to enemy fleets.

However, Rome was also prone to flooding after months of winter rainfall. Soil on the banks of the Tiber would become so heavily saturated that surface run-off would accumulate, and the river would overflow.

It is believed 33 floods may have occurred between 414 BCE and 400 CE. These floods created rich **alluvial** soil, which made the land ideal for farming. Unfortunately, flooding also damaged buildings and limited development in low lying areas, so the Romans embarked on a series of engineering projects to manage the river.

Canals and sewers

As early as the sixth century BCE, the Romans constructed open air canals to divert smaller streams known as tributaries into the Tiber River. These canals also enabled them to drain the marshlands surrounding the seven hills. By controlling the flow of water, the Romans were able to plan the development of their city, similar to how urban planners do today. They built more residential areas, as well as landmarks for the community. They constructed a port to facilitate trade, a meat market, known as the Forum Boarium, and a huge chariot-racing track called the Circus Maximus.

By 100 BCE, the canals were covered and formed an underground sewer system known as the Cloaca Maxima. This major sewer system was connected to the bathhouses, street drains and **latrines** across the city, with wastewater entering the Tiber in a giant tube. These early sewers are still visible in Rome today (see Source 1).

Aqueducts

By the fourth century BCE, the rapidly growing city created a greater demand of the Tiber River's water supply. The Romans invented **aqueducts** to transport fresh water from mountain springs into the city. The aqueducts were a series of tunnels, pipes, bridges and archways that supplied water to fountains, latrines, public bath houses and wealthy residences across the city. The Roman geographer, Strabo, celebrated that "almost every house is furnished with water-pipes and copious fountains." Once constructed, these aqueducts could not be shut off, which meant they ran constantly. They were used to power mills and machinery, and flushed the city's wastewater into the sewers, improving sanitation.

Learning intentions and success criteria

Key content video: Urban planning in Rome

alluvial made of sand and earth that is left by rivers or floods

History

latrine the early name for toilets

aqueduct a human-made channel for transporting water

Source 1 Outlet of the Cloaca Maxima into the Tiber River.

12.3

The Roman aqueducts used gravity and required a slight slope for the water to flow (see Source 2). They were costly, requiring maintenance and protection to ensure the water quality was safe from debris. By the third century CE, eleven aqueducts served the city and up to 700 people were employed to manage them.

The aqueduct system grew so large that historians estimate they could have supplied 1,000 litres of water to each Roman per day. As the empire grew, aqueducts were built right across the Mediterranean. The Roman aqueducts are one of the earliest examples of **hydraulic engineering** and laid the foundations for modern plumbing systems. Some aqueducts are still in use today.

hydraulic engineering
the planning and management of the flow, pressure and storage of water

Mountain spring | Water intake | Open air inspection shafts | Settling tank | Covered bridge | Distribution tank | Rome
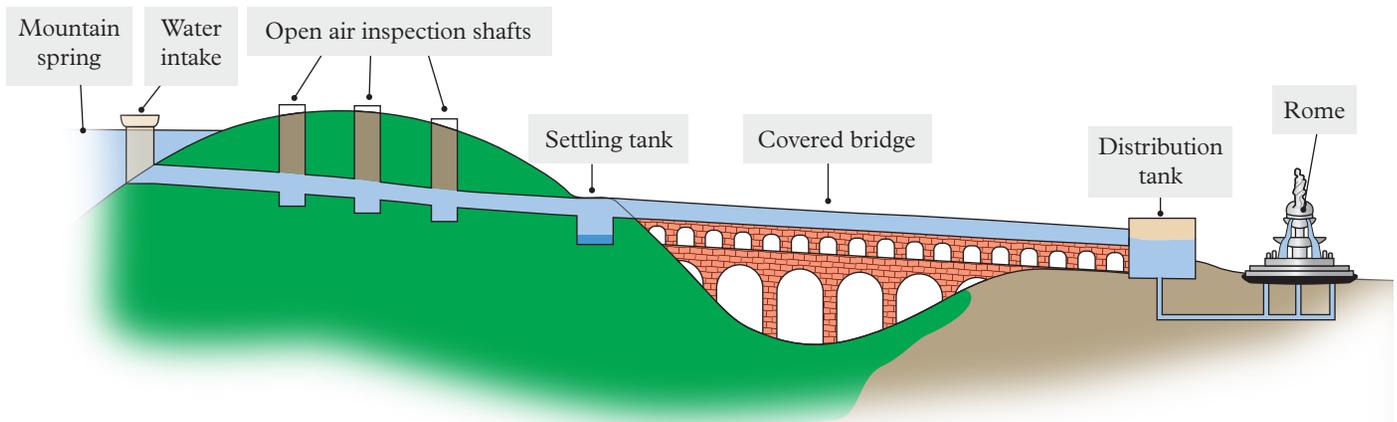
Source 2 The engineering of an aqueduct using gravity.

garrison a group of soldiers living in a town to defend it

Source 3 An existing section of the Via Appia (sometimes called the Appian Way), a road built by the Romans from 312 BCE to connect Rome to the south-east of Italy.

Urban planning and roads

A key strength of the Roman Empire was their ability to build long, straight roads for military use. The road system, which was planned by surveyors, reached up to 400,000 kilometres in length with 80,000 kilometres paved. This massive network enabled Rome to efficiently communicate and control a huge area. The road network began in the area known today as northern England, and finished near Egypt. This is the origin of the phrase you might have heard, "All roads lead to Rome."

As new **garrison** sites were created for the expanding empire, the Romans developed a grid pattern known as "centuriation". This grid pattern was originally used to help plan the placement of soldiers' tents, with specific instructions given to ensure there was a two-chariot-wide gap between each tent and no tents erected in the centre of the camp. This layout was used to establish the garrison into a town, define clear property boundaries and plan the placement of canals and minor roads. Many major cities in the Roman empire were planned according to centuriation, with Pompeii being the best-preserved example.

Key concepts & skills Historical significance

The Roman Forum

The Roman Forum was the political, religious and economic centre of Rome. This rectangular plaza originated as a marketplace and was essential for daily life activities with open air markets and shops lining the paths. The Forum served many purposes over time – in early Rome it contained the palaces of kings, during the Roman Republic it provided a meeting place for the Senate, and throughout Imperial Rome it was primarily a place of religious ceremony. By 410 CE, it was abandoned and left as a cattle-grazing field.

Beginning in the eighteenth century, excavation of the Roman Forum showed that the Romans never maintained an even street level. While they were remarkable urban planners, they could not stop the build-up of soil layering and sediment deposits from the Tiber River when it flooded. When the ground became unsteady under buildings, the Romans demolished them. Instead of levelling the street as we would today, they erected new buildings on the rubble. This means that the street level was constantly raised.

The remains of the Forum show how buildings were stacked on top of each other, at varying heights (or *strata*), like a game of Tetris (see Source 4). It is an excellent example of stratigraphy (described in Stratigraphy in Lesson 6.10 Scientific techniques, page 242) and supports the common phrase, "Rome wasn't built in a day". The Forum is now part of a protected archaeological park, which includes the Colosseum and Palatine Hill where archaeological research and preservation is ongoing. In 2008 an entry fee to the site was introduced and millions of visitors walk on some of the oldest roads in the world annually.

For more information on historical significance, see to Lesson 6.7 Historical significance (page 235).

Source 4 The Roman Forum ruins provide a good example of the varying foundation height of monuments.

Quiz me! Urban planning in Rome

Check your learning 12.3

Check your learning 12.3

Review and understand

1 **Describe** two methods used to manage water in ancient Rome.
2 **Identify** one positive and one negative of flooding in ancient Rome.

Apply and analyse

3 Brainstorm reasons why an entry fee may have been introduced to enter the Roman Forum.
4 **Summarise** three reasons why the Roman Forum is historically significant.

Evaluate and create

5 Based on the innovations outlined in this topic, **evaluate** which one was the most important to people living in ancient Rome and why. Remember, when you evaluate something you should weigh up its strengths and weaknesses and explain your answer.
6 Which innovation do you think is most important to our lives today? **Discuss** your answer with a partner or in small groups.

12A Concepts & skills in context
Pompeii

Introduction

Founded near two intersecting fault lines, ancient Rome was significantly affected by volcanic activity. The most well-known event is the eruption of Mount Vesuvius in 79 CE, which destroyed the cities of Pompeii and Herculaneum, both within 10 kilometres of the volcano.

With no previous records of the volcano being active, Pompeii was established as a wealthy town with flourishing farming and produce. However, on 24 August 79 CE a massive blast occurred. A huge plume of ash and gas erupted high into the sky and covered Pompeii in a thick blanket of smoke, making it difficult to breathe. This was followed by a surge of hot gas and rock pouring out of the mountain at a rate of 100 kilometres per hour. The eruption lasted 24 hours and killed 16,000 people. Pompeii was covered in volcanic ash and abandoned for centuries.

In 1748 explorers started to dig the area and discovered that the ashes had preserved the city of Pompeii. Over time, the remains of the townspeople had been reduced to dust and bone. Archaeologist Giuseppe Fiorelli discovered that pouring plaster into the cleaned-out cavities revealed the shapes of the bodies such as those shown in Source 2.

Major fault lines on the Italian Peninsula

Legend
North–south fault
East–west fault
▲ Volcano
● City or town

ADRIATIC SEA
Rome
Tiber
APENNINES
Naples ▲ Mt Vesuvius
Herculaneum ● Pompeii
TYRRHENIAN SEA
MEDITERRANEAN SEA
Mt Etna ▲
N
0 100 200 km
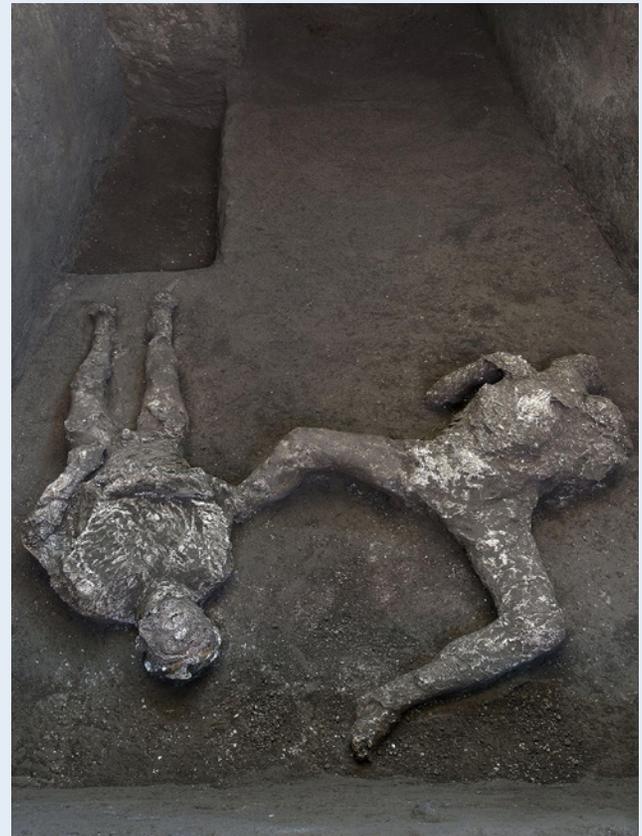
Source 1

Source 2 These two people were found in 2020 and are believed to be a master and his young slave based on the clothing and physical appearance.

Key concepts & skills Using historical sources

Analysing sources using DAMMIT

When presented with a historical source, it is important to ask questions. The use of an acronym such as "DAMMIT" can make it easier to analyse and structure your response. DAMMIT is explained in Lesson 6.4 Using historical sources (page 223).

Source 3 The DAMMIT acronym is a helpful way to remember

Letters of the acronym	The questions you should ask when looking at sources
Date	When was the source created? If it was created during the time you are studying, it is a primary source, but if it was created after that then it is a secondary source. A primary source may show attitudes or describe an experience whereas a secondary source is often a factual interpretation.
Author	Who is the author of the source? Think about the gender, age, social status and profession. For example, they could be a historian, a leader, an aristocrat, a soldier or a prisoner.
Material	Is the source written, oral or visual? It could be a newspaper, letter, diary, photograph, textbook, online blog or tweet, even statistics in the form of a graph or map.
Motive	Why did the author produce this source? Was it for official government use, a religious affiliation, the media or personal reasons? A historian tries to establish the context of the source to help understand the perspective of the person who created it.
Intended audience	Who was the source produced for? Was the source for public or private use, was it for academics or the general public? Was it intended to be viewed, or was it intended to be private?
Tone	How is the information in the source expressed? How does it make you feel? Words to describe tone can include persuasive, critical, questioning, funny or reflective. Often primary sources are more emotional than secondary sources, which tend to be factual as they are written in hindsight.

Source 4

You could hear the shrieks of women, the wailing of babies and the shouts of men ... Some were so terrified that they prayed for death. Many prayed to the gods for help, but even more were of the view that there were no gods left, and that the universe had been plunged into eternal darkness ... We stood up every now and then to shake the ash off or we would have been crushed under its weight.

Translated extract of a letter to Tacitus from Pliny the Younger, c. 104 CE

Practise the skill

1 Copy the following table. **Examine** Source 4 and complete the table.

Acronym	Source 2
D	
A	
M	
M	
I	
T	

Extend your understanding

1 Write a paragraph **analysing** the source using the DAMMIT acronym to help guide the structure of your response. See Analysing sources using DAMMIT in Lesson 6.4 Using historical sources (page 223) for more information on how to write a paragraph. Imagine you are a tour guide in Pompeii today. **Create** a script including the important information you would tell tourists when visiting the town.

Lesson 12.4
Key groups in ancient Roman society

Learning intentions and success criteria

Introduction

The social hierarchy of ancient Rome was guided by a complex set of rules and customs. There were clear distinctions between rulers and those they ruled; between free-born people and slaves; between the wealthy and the poor; and between men and women. Arguably, the biggest distinction was made between those who were citizens and those who were not.

Romans could only acquire citizenship if their parents were both legally married and citizens themselves. Citizens had legal and social advantages over non-citizens, including the right to vote, own property, hold political positions and be entitled to legal rights in a courtroom. Citizens could not be tortured or whipped, whereas non-citizens – particularly slaves – could be. As the empire expanded the proportion of non-citizens increased. In 64 BCE, the Roman writer Cicero said, "This is Rome, a state formed by the gathering of nations."

Source 1 outlines the social groups of ancient Rome in more detail.

▶ **Key content video:** Key groups in ancient Roman society

Source 2 Painting by Cesare Maccari, 1888, depicting Roman Senator Cicero accusing a fellow senator of plotting to assassinate several elected senate members.

Source 1 Social groups categorised into citizens and non-citizens

Citizens	Non-citizens
Patricians **(upper class)** • were a small, elite group of wealthy landowners • were descendants of ruling class of Rome • only married other patricians • held leadership positions; could interpret and veto the law • did not take part in trade or commerce	*Peregrinus* **(foreigners)** • were free men from outside Rome • had some rights, but not those of citizens, e.g. could conduct business and marry citizens • by second century CE, made up 80 per cent of the Empire's population • were given full Roman citizenship in 212 CE
Equites • were high ranking military officials, e.g. knights and cavalry of Roman army • were initially made up of patrician men, but over time wealthy plebeians who provided their own horse could also join • were influential in politics and business	*Liberti* **(freed men)** • were slaves who were set free or who paid for freedom • had a restricted form of citizenship • were obliged to keep working for their master, often taking the master's family name • could run small shops or farms
Plebeians **(middle/lower class)** • most of the population were considered lower class, with jobs such as shopkeeper, artisan, soldier or farmer • some were property owners and took part in the law through a citizens' assembly; others were poor • in 494 BCE, plebeians revolted against the patricians; over next 200 years, gained more rights including the right to marry a patrician and run for government positions	*Slaves* • had no rights • were prisoners of war, foreigners or people sold by their families and bought as "goods" • by first century BCE, made up 30–40 per cent of population • mostly worked on farms, in mines or building roads • were treated cruelly and had a life expectancy of 17 years

The political structure in ancient Rome

Rome's political system was an interesting mix of **republic** and a **democracy**, inspired by the Greeks. The Roman Republic lasted from 509–527 BCE and was ruled by the **Roman Senate**. The word "senate" derives from the Latin word "senex" and means "board of old men". Each year, two consuls were elected from the Senate to exercise power.

Plebeians could meet in democratic assemblies to have their say. As Rome grew, it was agreed that plebeians could elect representatives.

By the early first century BCE, the Senate had approximately 300 members. While the type of government and positions of power in Rome changed over time, the elite Roman Senate remained throughout.

Quiz me! Key groups in ancient Roman society

republic a system of government in which the people and their elected representatives (such as a president, politicians or senators) have power

democracy a political system in which people hold the power, either directly or through representative democracy

Roman Senate a group of officials (senators) with ruling power in ancient Rome

12.4

📋 **Check your learning 12.4**

📝 **Worksheet:** The Law of the Twelve Tables

Review and understand

1 Why did the Romans want a "board of old men" to govern the people?

2 **Identify** three social groups from ancient Rome.

Apply and analyse

3 **Analyse** Source 2 using the DAMMIT acronym to help structure your answer (see Analysing sources using DAMMIT in Lesson 6.4 Using historical sources, page 223).

4 **Explain** what happened to the plebeians after 494 BCE.

Evaluate and create

5 In small groups **create** a dramatic play that involves some of the key groups in society or the rulers of ancient Rome. Some suggestions include:

  a the life of a slave who becomes a *liberti* from their master

  b an emperor ruling the country or perhaps a story to fit Source 2

  c a plebeian who wants to marry a patrician

  d a citizens' assembly discussing rights and matters which affected their daily life

  e senators and judges working to advise the leader (king, consuls or emperor).

6 The Romans created many important laws. Research the *Law of the Twelve Tables* and find out what aspects of Roman life they covered. There is a worksheet on Oxford Digital to help you get started. **Create** a mind map of some of the main features and specific rules that it set out.

Lesson 12.5
Role of women in ancient Rome

📑 Learning intentions and success criteria

▶ **Key content video:** Role of women in ancient Rome

Introduction

Although women in Rome could technically be considered citizens, they had few rights. The main role of women in Roman society was to raise children and run the household. In general, most sources that remain from ancient Rome were written by men and reflect these beliefs. For example, a man reflecting upon the death of a mother in the second century BCE wrote: "She gave birth to two sons … Her conversation was pleasant, and she moved gracefully. She looked after the house and made the wool."

In ancient Rome, the most important role of a woman was that of wife and mother. In fact, in 14 CE Emperor Augustus told his wife before he died, "Always remember whose wife you have been."

Roman families

paterfamilias
a Latin word meaning "father of the family"; male head of a household in ancient Rome

The Laws of the Twelve Tables were created in 451 BCE. These laws clearly outlined the expected family structure and a woman's role within that.

A household in ancient Rome typically included parents, married and unmarried children, and slaves. The *paterfamilias* (Latin for "father of the family") was the

term given to the oldest male in the household who had power over his family. Under law, the *paterfamilias* had power to decide whether newborn children in his household lived or died, and who his daughters married. In fact, in the Roman Republic, the *paterfamilias* could legally kill his wife or daughter if she questioned his authority.

Daughters were in their father's custody until they were married, which could start as early as the age of 12. Marriage was often seen as a convenient way to make an alliance with another family, especially among the patricians. Once married, women had to obey their husbands, who held guardianship over them in most aspects of their lives. Any property or money they brought to the marriage automatically belonged to their husbands.

Source 1 An artist's impression of patrician ladies and a servant in ancient Rome.

Changes to women's rights

The Punic Wars (see Lesson 12.13 Change through conflict, page 424) did much to change the lives of many women in Rome. With the men away fighting, many had to manage on their own (with their slaves). After these wars, the widows of soldiers often received large sums of money – similar to a war pension today. This further boosted their self-reliance, although it is important to note that at this time in history women were vulnerable. It was common practice for greedy men to go "legacy-hunting" by befriending childless women in their old age. Their intention was to make a quick profit by inheriting a widow's wealth when she died.

Around the second century BCE, conditions of marriage for women in ancient Rome changed, giving women more financial advantages and social freedom. Wives could join their husbands at dinner parties, gladiator fights, chariot races and religious festivals, and regularly went to the public baths. Not all men were happy about this.

Many upper-class women soon achieved a new prosperity and social standing, which encouraged them to behave more confidently. This development worried Rome's ruler Augustus (63 BCE to 14 CE), who believed Rome would only be strong if its people were moral. As part of his reforms, he introduced strict laws to restrict women's behaviour. He banned them from public events and even had his own daughter, Julie, exiled. Under Augustus, a woman's freedom depended on how many children she had. If she had given birth to three children, she no longer required a male guardian. This was a reward to women in the hope of boosting the birth rate in Rome.

Think, pair, share

- Think about the laws Augustus introduced to restrict women's behaviour. Do these seem fair?
- Discuss your ideas with a partner.
- Share your thoughts with the class.

History

12.5

Key concepts & skills Using historical sources

Understanding perspectives

"Perspective" refers to someone's point of view. This might include someone's social, religious or political points of view.

When reading primary sources, it is important to ask questions about who created the source and why. For example, primary sources about Roman women generally represent a male point of view. The Latin poet Juvenal wrote the following extract about women. Read Source 2 and think about the perspective in it. Practise analysing this source by answering the questions on the next page.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Source 2

Better, however that your wife should be musical than that she should be rushing boldly about the entire city, attending mens meetings, talking with unflinching face ... to Generals in their military cloaks ... This same woman knows ... what the Chinese and Thracians are after, what has passed between the stepmother and the stepson; ... who loves whom... she picks up the latest rumours ... and invents some herself: ... how cities are tottering and lands subsiding, she tells to every one she meets at every street crossing.

A translated extract from *Satire VI* written by the Latin poet Juvenal, *c*. 115 CE

Source 3

If you give women equal freedom with men, do you think this will make them easier to live with? Far from it! If women have equality, they will become men's masters.

A translated extract from the writing of Livy, a Roman historian (59 BCE to 17 CE).

Practise the skill

1 **Identify** who wrote Source 2.
2 Using your knowledge of the social hierarchy in ancient Rome, **explain** how the author is likely to have viewed women.
3 In your own words, **summarise** what Source 2 is about. What do you think the purpose of this source is?
4 **Explain** how this source might have been written differently if it was written by a woman.

Source 4 The status of women in ancient Rome.

Restrictions on women	Opportunities for women
Could not vote or own property	Had greater personal freedoms than the women of other ancient civilisations, such as ancient Greece
Had no legal control over their children	Were taught how to read and write
Had to be escorted by a male guardian in public	Could become highly respected figures
Most had a less formal education than boys	Some were able to work or run their own businesses, or helped their husbands with theirs
Had no active role in civic or political life	Could play an active role in preparing sons for civic life

Source 5 Cornelia Gracchus (190–100 BCE) was a trailblazer for women's independence. Refusing to remarry after her husband's death, she educated her sons independently, nurturing their political careers, and establishing a political discussion club. She was a virtuous mother-figure but also a strong-minded woman.

Quiz me! Role of women in ancient Rome

Check your learning 12.5

Check your learning 12.5

Review and understand

1 How did the *paterfamilias* influence the household in ancient Rome?

Apply and analyse

2 Source 1 depicts patrician women and a servant.

a **Describe** the appearance of the women depicted.

b The caption does not explain which women are the patricians and which is the servant. Look closely at the image and decide who you think are the patrician women and who you think is the servant. **Explain** how you made these decisions.

3 **Summarise** the point of view that Roman men appeared to hold towards women.

4 Read Source 2. With a partner, rewrite this quote in your own words. Share your responses with the class.

Evaluate and create

5 Think about the historical concept of continuity and change. Copy the table below and **compare** the role of women today to women in ancient Rome based on your own point of view.

Vocation	Continuity	Change
Participation in politics		
Social status		
Marriage		
Family life and children		
Education		
Employment		

Lesson 12.6
Significant individual: Julius Caesar

Introduction

Julius Caesar was a gifted Roman general and politician, who increased Rome's territories and power (especially in western Europe) through various successful military campaigns. Caesar played a critical role in the transformation of the Roman Republic into the Roman Empire.

Learning intentions and success criteria

The early years

Caesar's father, Gaius Julius Caesar, was a *quaestor* (a financial officer) and governor. His mother, Aurelia Cotta, came from a politically influential family. As the son of a patrician, he would have received a good education and would have been expected to follow his father into a political career.

Caesar became the head of his family at 16 after his father's sudden death. Though still young, Caesar already knew that to succeed in Roman politics he needed to increase his personal wealth and know influential people. In 84 BCE, at the age of 18, he married Cornelia Cinilla, who came from a distinguished family. Unfortunately, Caesar and his family were considered to be enemies of Sulla, the dictator of Rome at the time. Caesar was forced to leave Rome to avoid being killed. While in exile, he joined the army, and for the next few years distinguished himself as a capable and courageous soldier.

quaestor
the lowest ranking elected official who usually looked after public spending and saving

Key content video:
Significant individual – Julius Caesar

Caesar's rising popularity

Source 1

praetor an official who worked under the consuls; one praetor commanded the army while the other was a magistrate in the justice system

On Sulla's death in 78 BCE, Caesar returned to Rome to build his political career. He quickly gained popularity among the plebeians by using his excellent oratory (public speaking) skills at citizens assemblies, and also by bribing the right people.

By 68 BCE, he was elected as a *quaestor*, then a *praetor* (an official who ran the law courts) and governor of the province of Spain.

On his return to Rome from Spain in 60 BCE, Caesar made a pact with two other leading political figures, Pompey and Crassus. They agreed to help get Caesar elected as a consul, which occurred in 59 BCE. After his one year as consul, Caesar became governor of the Roman province of Gaul (most of modern-day France). This marked the beginning of his military career. Caesar was considered a brilliant military commander who was popular with the people and his troops. His victories in Gaul and elsewhere added staggering amounts of new territory, slaves and wealth to Rome. While plebeians were overjoyed, the victory reduced the value of gold held by patricians in Rome.

Caesar's civil war

The Senate was now led by Pompey, who no longer supported Caesar. The rest of the patricians in the Senate began to worry about Caesar, as he was beginning to act without consulting them. In 49 BCE, he was ordered by the Senate to give up his command in Gaul, but he refused unless Pompey did the same.

No Roman general could bring his army into the home territory of Rome, so when Caesar marched his strong army across from Gaul into Rome, he declared, "Let the die be cast" and prompted a civil war. Pompey fled to Egypt, where he hoped for protection as Caesar's pursuit continued. However, the boy king of Egypt, Ptolemy III, killed him, and his head was presented to Caesar upon his arrival in Egypt. Ptolemy had hoped to gain Caesar's favour by presenting the head of Pompey to Caesar, but Caesar was disgusted by the murder.

Source 2 Julius Caesar has been represented in popular culture for centuries, from Shakespearean plays to books to film productions.

Caesar and Cleopatra

King Ptolemy's older sister and co-ruler of Egypt, Queen Cleopatra, was more successful in winning Caesar's favour. They became romantically involved, and Caesar helped Cleopatra in her power struggle to gain the Egyptian throne for herself. Caesar and Cleopatra had a child, a boy named

Caesarion, born in 47 BCE. The three of them returned to Rome that year and Caesar threw himself into reforms. He introduced a new currency and a new calendar (called the Julian calendar). He ordered that new Roman colonies be set up in Africa, Gaul and Greece, and started building what would become Rome's chief law courts – the Basilica Julia.

Source 3 An artist's impression of the assassination of Caesar

Caesar's death

In February 44 BCE, Caesar was appointed as "dictator for life". However, Senators feared his ambition and wanted the old Roman spirit to return. On 15 March in 44 BCE, a group of about 60 senators, which included some of his friends and former allies, stabbed Caesar 23 times when he entered the Senate House and killed him. Caesar's death led to the outbreak of a civil war in Rome that lasted for about 15 years. His death marked the end of the Roman Republic.

Caesar's achievements

During his lifetime, Caesar held many important positions, including consul, tribune of the people, high commander of the army and high priest. He made new laws, reorganised the army and improved the way the Roman provinces were governed. On the new Julian calendar, the month of July was named in his honour.

Although he had many political enemies, Caesar was popular with the ordinary people. He spoke publicly to them, promising to solve problems such as rising crime, high taxes and unemployment. Caesar's famous words, "Veni, vidi, vici" (I came, I saw, I conquered) emphasised how rapidly he could win a military battle and expand Rome's power. In 42 BCE, he was officially deified (made a god) and a temple was dedicated to him in Rome.

Sequence this!
Julius Caesar

History

Check your learning 12.6

Check your learning 12.6

Review and understand

1 **Outline** why Caesar was seen as a threat to the Senate over time.
2 **Describe** the benefits of Caesar's victory in Gaul.

Apply and analyse

3 **Explain** why you think historians regard Julius Caesar as a significant person in history.
4 In your own opinion, what was the most defining moment of Caesar's career? Why?

Evaluate and create

5 Based on what you have learnt about Caesar, would you say he was a strong leader? **Justify** (give reasons for) your answer by:
   a creating a list of characteristics that you believe all good leaders have
   b deciding which of these characteristics Julius Caesar possessed.
6 **Create** a timeline of Caesar's life based on the dates and information in this topic.

12B Concepts & skills in context
Nero and the great fire of Rome

Introduction

In 54 CE, Nero became the fifth emperor of Rome. During the early years of his reign he acted generously, reducing taxes and banning the death penalty. However, Nero's behaviour became reckless and angered the citizens of Rome. By 62 CE Roman senators suspected he was going insane as he had killed both his mother and first wife. In the summer of 64 CE the Great Fire of Rome burnt down 70 per cent of the city over six days and left half the population homeless. Nero was not in Rome when the fire started; instead, he was at a countryside villa. Furious Romans wanted someone to blame and they turned on their emperor for neglecting them as they suffered. Desperate to shift the blame away from himself, Nero cast blame on the Christians, who were a religious minority at the time.

Two years later, Nero visited Greece for 15 months as Emperor. In his absence, revolts occurred throughout the empire, and upon his return in 68 CE the Senate condemned him to death. Nero fled Rome and took his own life later that year.

Despite Nero's reputation, primary sources suggest he tried to assist his people as they struggled in the wake of the fire. Roman historian, Tacitus, wrote that the rumours about Nero were probably based on the idea he may have been in the countryside, completely unaware a fire was raging in Rome:

Source 1

> Nero ... did not return to Rome until the fire approached his house. It could not however be stopped from devouring the palace, the house, and everything around it. However, to relieve the people, driven out homeless as they were, he threw open to them the Campus Martius [a military training ground] and the public buildings of Agrippa, and even his own gardens; and raised temporary structures to receive the destitute multitude. Supplies of food were brought up from Ostia and the neighbouring towns, and the price of corn was reduced ... These acts, though popular, produced no effect; since a rumour had gone forth everywhere that, at the very time when the city was in flames, the Emperor appeared on a private stage and sang ...
>
> Tacitus' account of Nero's action during the Great Fire of Rome.
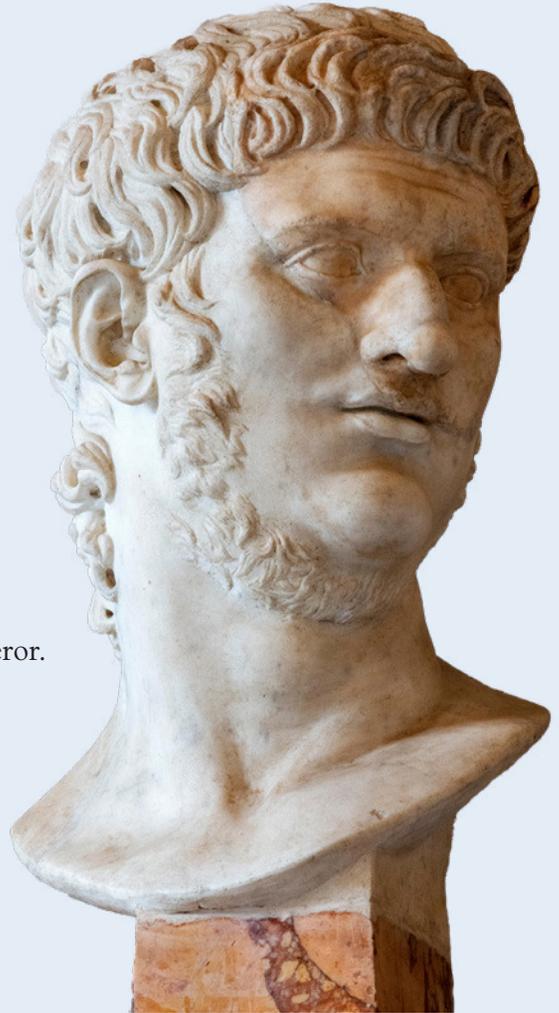
Source 2 A bust of Emperor Nero

Emperor Nero's reign has not been remembered favourably. Instead, he has been remembered as a power-hungry and murderous tyrant. Over time, the phrase "Nero fiddles while Rome burns" has become popular. It is used whenever someone – particularly a leader – is doing something unimportant during a state of emergency.

Writing an extended response

As a historian, you must look closely at sources and weigh up the evidence presented. From here you can then form your own opinion and make judgments about what may have happened in the past. This is known as an evaluation.

You will often be asked to put this opinion into writing. This can be done in an extended response, which might be a long paragraph or even an essay. Communicating how you have evaluated information and formed your own opinion is an important skill. You should always acknowledge various viewpoints or both sides of the debate before providing an overall opinion.

Source 3 An artist's impression of Nero performing while Rome burns.

Follow these steps to write an extended response.

- **Step 1: Think about the evidence.** What do the sources tell you? Do they provide a one-sided (biased) or balanced account? What is your opinion? You might like to discuss this with a friend to get a clearer idea before writing your response.
- **Step 2: Set the scene with an introduction.** Set the scene by outlining the 5W's (who, what, when, where and why) of history. Then signpost the different arguments that will be discussed in your response.
- **Step 3: Put your first argument forward.** The points you make in extended responses are known as "arguments". What is the first argument you will make? Be sure to use evidence from a source to back it up.
- **Step 4: Show an alternative argument.** To avoid bias, your second argument should show a different perspective than your first. Use linking phrases such as "however" or "on the other hand" to help you switch from your first argument to this one. Once again, provide evidence to back this point up.
- **Step 5: Give your own opinion in a conclusion.** Finish by explaining which argument you believe is the strongest and why. Sometimes your opinion might be based on a mix of both sides, or you might firmly be on one side. In your conclusion, you can also discuss whether you think information or evidence is missing.

For more information on communicating, see Lesson 6.8 Communicating (page 236).

Practise the skill

1 Following the steps above, write an extended response exploring whether you believe Emperor Nero's legendary bad reputation as a leader is accurate based on his actions.

Extend your understanding

1 In groups, **discuss** how Nero's actions would be seen during a similar disaster today, such as bushfires or floods.
2 Come together as a class and hold a debate on the topic: "True leaders become most evident during times of crisis."

Lesson 12.7
Religion in ancient Rome

Introduction

deity a god or goddess

The Romans worshipped multiple gods and they firmly believed that these gods had direct influence over their daily lives. It is believed that the Romans adopted gods and **deities** from other cultures, such as Greece, Persia and Egypt. The Romans renamed 35 of these gods to fit the *Via Romana* (the Roman way).

To please the gods, the Romans held festivals in their honour and made offerings to them. Rituals and ceremonies were the most important part of Roman religious practice. For example, certain parts of sacrificed animals were burned as an offering to the gods. Many ancient Roman festivals align with prominent days in our modern calendar, such as Christmas, New Year, April Fools' Day and Valentine's Day.

Priests and vestal virgins

The *Pontifex Maximus* (Chief Priest) was elected to the role for life and oversaw the *pontifices* (priests). The *pontifices* did not provide spiritual advice, but instead were elected officials who worked for the government. Their main task was to maintain peace with the gods. They did this by planning and overseeing ceremonies, funerals and carrying out sacrifices on behalf of the city.

While religion was largely dominated by men in ancient Rome, there was an exclusive role for women known as "vestal virgins". Six noble young girls were chosen at the age of 10 to tend the sacred flame of Vesta, goddess of the **hearth**. This flame represented life, and it was believed that Rome would suffer and collapse if the flame were ever to go out. The girls would undergo 10 years of learning, 10 years of duties and 10 years instructing others. They lived secluded in

hearth the Latin term for "focus"; the hearth fire in the home was used for cooking food, heating water and as a gathering place for family

a special house in the Roman Forum, and were only seen when tending the flame or assisting in ceremonies. Greatly respected and honoured, these women were allowed to return to society and marry after 30 years of service. However, most struggled to readjust to regular society.

Source 1 Roman mythology is still used in stories today. In the 2018 film *Aquaman*, Aquaman must retrieve the trident of Neptune, Roman god of the sea. In this poster for the film, he is holding the trident.

▶ **Key content video:** Religion in ancient Rome

Roman temples

To this day, the ancient Romans' dedication to religion can be seen with the remains of temples scattered across the empire. It is estimated that 424 temples, 304 shrines, and 157 statues of the gods (eight gold, 64 ivory and 85 bronze) were made in their honour. Temples were not just places of worship, but also acted as museums and libraries of precious objects such as artworks, gems and golden antiquities.

Christianity

The fact that Romans had traditionally worshipped many gods was the main reason why rulers such as Nero feared Christianity and its worship of one God. For about 300 years, Romans who converted to Christianity were often tortured or killed. However, St Paul helped to spread Christianity's message throughout the empire. It appealed to the poor masses and slaves as the religion preached to help those most in need. The idea that everyone was treated equally under one god was a risk worth taking.

Despite the efforts of many Roman emperors, secret gatherings would occur in underground tombs with growing numbers. By 313 CE Christianity was legal and churches were built in Rome. By 380 CE, Emperor Theodosius made it Rome's official religion. Today, the traditions of Rome's early Christian church have gone on to influence the beliefs and practices of many people in the modern world. The Vatican (the seat of the Roman Catholic Church) and the Pope are located in Rome to this day.

History
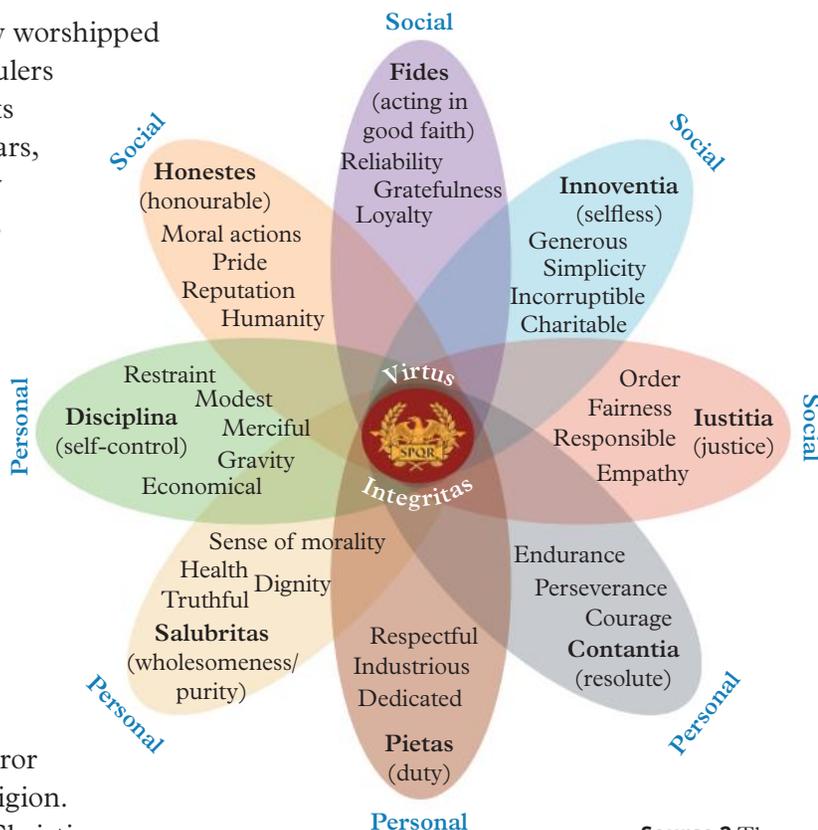
Source 2 The core values that Ancient Romans aimed to live by.

Roman values

The ancient Romans lived by a code of **values** that influenced their behaviours and attitudes in all aspects of their daily life (see Source 2). The *Via Romana* set certain expectations: for men, this was to uphold virtue (*virtus*) and for women, this was to strive for prudence and discretion. Every Roman was expected to practise these values at all levels of society, both personally and socially.

In 63 BCE Cicero told the Roman Senate to "Cling fast to *virtus*, I beg you men of Rome … All else is false and doubtful … only *virtus* stands firmly fixed, its roots run deep, it can never be shaken by any violence, never moved from its place."

value a quality of character that a society or community regards highly

Quiz me! Religion in ancient Rome

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12.7

Check your learning 12.7

Check your learning 12.7

Worksheet: Roman deities

Review and understand

1 **Describe** how Romans kept the gods happy.
2 **Outline** why emperors changed their views towards Christianity over time.

Apply and analyse

3 **Explain** the role of a vestal virgin in your own words.
4 In your opinion why were values an important feature for a society? **Explain** your answer using examples.

Evaluate and create

5 Working in small groups, **research** the gods and goddesses of ancient Rome. There is a worksheet provided on Oxford Digital to get you started. Each member should complete the table below for one deity.

Name of god	Role	Description of features and look	Festival celebrations

6 **Create** your own visual mind map, similar to Source 2, of four to eight key values you aim to live by each day.

Lesson 12.8
Everyday life for ancient Romans

Learning intentions and success criteria

Introduction

Everyday life in ancient Rome varied according to people's position in society – whether they were citizens or not, free-born people or slaves, wealthy or poor, male or female. The dominant role of men was shaped by the religious belief that women, children and slaves did not have souls.

Key content video: Everyday life for ancient Romans

Roman housing

Wealthy Romans lived very differently from the poor, who usually lived hard lives. In urban areas, the poor crammed into dark, tiny rooms in multi-storey apartment buildings called *insulae* (see Source 1). These blocks were usually poorly constructed at a rapid pace to make a quick profit and were often in danger of burning down or collapsing. The rooms were often smelly, without any heating or chimneys, and water was carried in pots from wells. People walked to a public toilet where, instead of toilet paper, they shared a communal sponge that was washed out after each use.

In contrast, the wealthy lived very privileged lives. Many patrician families maintained homes in Rome (called *domus*), as well as spacious country estates known as villas. They often had private baths and courtyards, decorated with beautiful artworks, mosaics and marble statues.

Source 1 Ruins of Insula del'Ara Coeli in Rome; this is one of the few examples of an *insula* still remaining today.

Fashion and grooming

The men and women of ancient Rome wore tunics (simple garments of various lengths, both with and without sleeves). Tunics were made from linen or wool and could be several different colours. Women's tunics were ankle length; men's were shorter. Tunics were the only form of clothing available to slaves.

Only male citizens could wear a toga (see Source 2). Togas consisted of around six metres of cloth that was wrapped around the body over a tunic. Togas were only worn in public, and the elite senators and emperor were the only citizens who wore the colour purple to signify royalty. This was an expensive colour to manufacture: it required thousands of snails and a lengthy chemical process to produce the dye.

Wealthy women wore *stola* (a garment similar to a toga) over their tunics. When in public they also wore a *palla* (cloak) and often covered their heads with a veil or part of the *palla* to mark their social status. They also often carried a parasol or fan of peacock feathers.

Both men and women often wore wigs made from the hair of slaves. Blond and red were popular hair colours. The clean-shaven "short-back-and-sides" look for men became the fashion after the second century BCE. For women, hair was a major indicator of status. A natural or comfortable hairstyle was associated with the poor. Patrician women often wore curls, braids, golden hairnets and crystal hairpins. It took many maids to create an individual look for one patrician woman.

Wealthy women also spent time caring for their hair and skin. They lightened their complexions using chalk, and coloured their lips using mulberry juice. Jewellery was worn by both men and women, but rich people never wore bracelets because they were similar to chains used on slaves.

Women's tunic   Men's tunic   *Stola*   *Toga*

Source 2 Clothing of Roman men and women

See, think, wonder

Look at Source 3.
· What do you see?
· What do you think?
· What do you wonder?

Source 3 A fresco from Pompeii of a woman holding a stylus and a writing tablet.

Education

Education was a privilege of the wealthy, and then usually only for boys. Girls did learn to read and write, but most of their training related to domestic skills such as spinning cloth and weaving. Teachers in the home were often educated slaves. Subjects studied typically included music, history, geography, astronomy, mathematics, reading and writing, along with Greek and Latin.

They were also taught the Roman values (see Source 2 in Lesson 12.7 Religion in ancient Rome, page 405) that would guide their behaviour and attitude throughout their life.

Boys generally completed their schooling around the age of 16. Their "graduation" was celebrated by putting on a new toga and going out to register on the census (an official count of the population) as a full Roman citizen. The occasion was a family celebration.

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12.8

 Quiz me! Everyday life for ancient Romans

Check your learning 12.8

 Check your learning 12.8

Review and understand

1 Choose five terms about everyday life in ancient Rome and **outline** what they mean.
2 **Describe** two aspects of daily life in ancient Rome that have changed today and two that have continued.
3 **Outline** the differences between togas and *stolas*.

Apply and analyse

4 **Examine** Source 3 closely.
   a Identify the features that suggest this woman may have come from a wealthy family.
   b Is this source a primary or secondary source? Explain your answer.
   c How useful is this source in helping us understand women in ancient Rome?

Evaluate and create

5 **Create** a Venn diagram that shows the similarities and differences in everyday life between the rich and poor.
6 In pairs, **discuss** the continuities (similarities) and changes (differences) between education in ancient Rome and today. Share your answers with the class.

Lesson 12.9
Roman baths

Personal cleanliness, hygiene and grooming were very important in ancient Rome. With a minimal fee of only one *quadrans* (the smallest coin denomination), visiting the baths became a daily routine, and part of the Roman culture. By the fourth century CE, there were 11 public baths and about 1,000 private baths in Rome.

In addition to pools, Roman baths featured a variety of areas that included saunas, reading rooms and library, and gardens where people could stroll or chat, or play games such as dice and knucklebones. In the hair care area, barbers, hair pluckers and hairdressers used scissors (invented in ancient Rome), heated tongs and hair combs to keep hair and wigs neat. Romans oiled their bodies and then scraped them (along with any dirt and grease) with an implement called a *strigil*.

Learning intentions and success criteria

12.9

The public baths of ancient Rome were evidence of the advanced level of Roman technology. They were often very large facilities, accommodating up to 1,600 bathers. The baths combined stately architecture with complex heating and plumbing systems. The *hypocaust* was a room with huge wood-fired furnaces. Hot air from these furnaces was forced up through tunnels to heat the floors and hollow walls of the warm and hot rooms. The furnaces would also heat up large tanks of water. Pipes from aqueducts or reservoirs supplied the water to the tanks. Another system of pipes fed hot and cold water up to the pools.

The public baths were places to get clean as well as relax, eat, meet friends and conduct business. Evidence from Pompeii suggests women would visit in the morning, usually to meet friends and gossip. Men would attend in the afternoon and to exercise before having a bath. However, not everyone saw the bathhouses as places to get clean. Emperor Aurelius reflected in his personal journal that they were full of "oil, sweat, dirt, filthy water, all things disgusting".

▶ **Key content video:**
Roman baths

? **Quiz me!** Roman baths

c Swimming pool

b Hair care area

a Reading rooms and library

Source 1 An artist's impression of a Roman public bath.

a Reading rooms and library
b Hair care area – barbers, hair pluckers and hairdressers used scissors (invented in ancient Rome), heated tongs and hair combs to keep hair and wigs neat.
c Swimming pool for exercising
d Masseurs
e *Laconium* (sauna)
f *Frigidarium* (cold pool)
g *Tepidarium* (warm pool)
h A *strigil*
i Drains carrying away waste water to the Tiber River
j *Hypocaust* (furnace) – a room with huge wood-fired furnaces; hot air from these furnaces was forced up through tunnels to heat the floors and hollow walls of the warm and hot rooms. The furnaces would also heat up large tanks of water. Pipes from aqueducts or reservoirs supplied the water to the tanks. Another system of pipes led hot and cold water up to the pools.
k *Caldarium* (steamy hot pool)

f *Frigidarium* (cold pool)

g *Tepidarium* (warm pool)

e *Laconium* (sauna)

h A *strigil*

d Masseurs

k *Caldarium* (steamy hot pool)

i Drains

j *Hypocaust* (furnace)
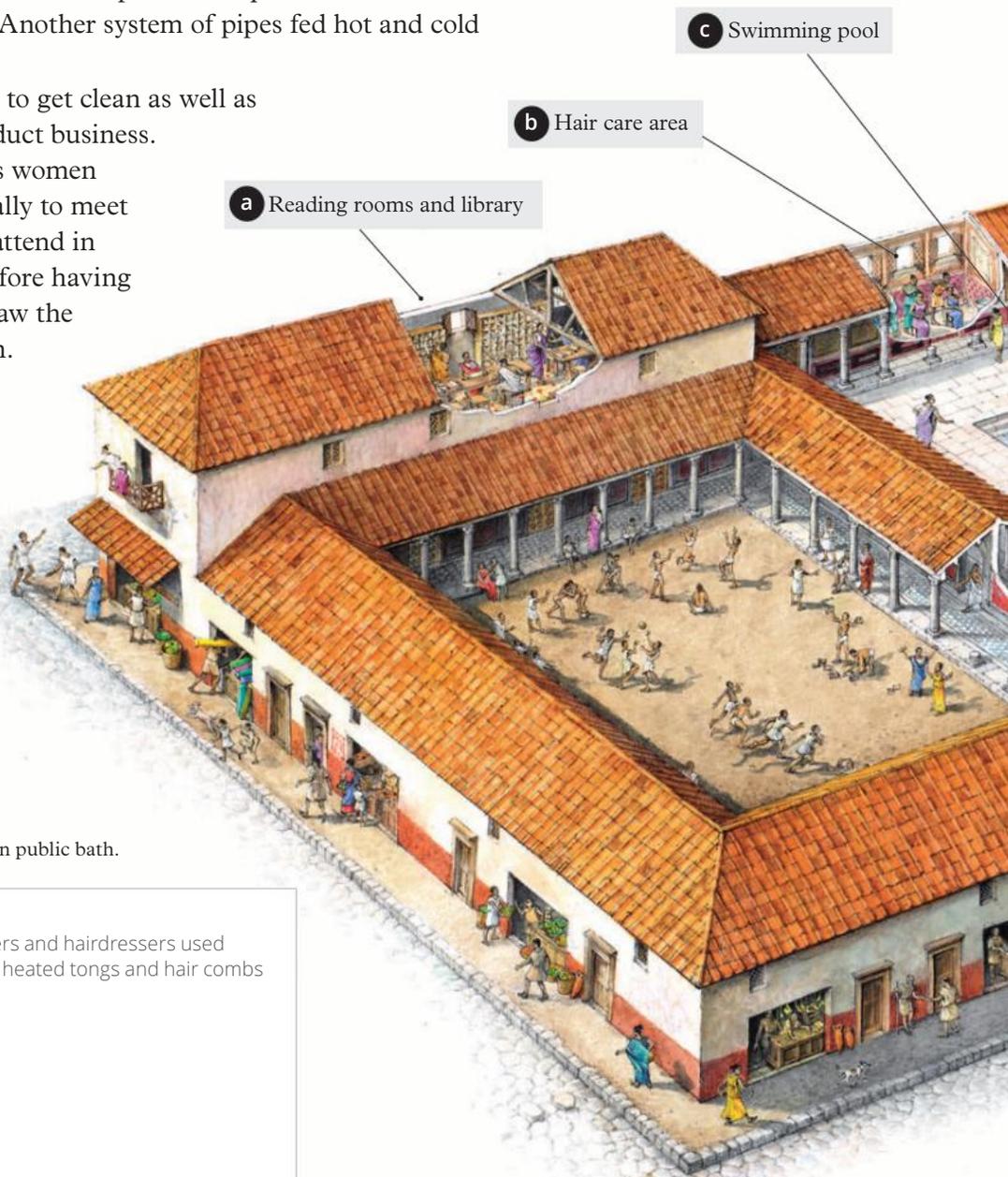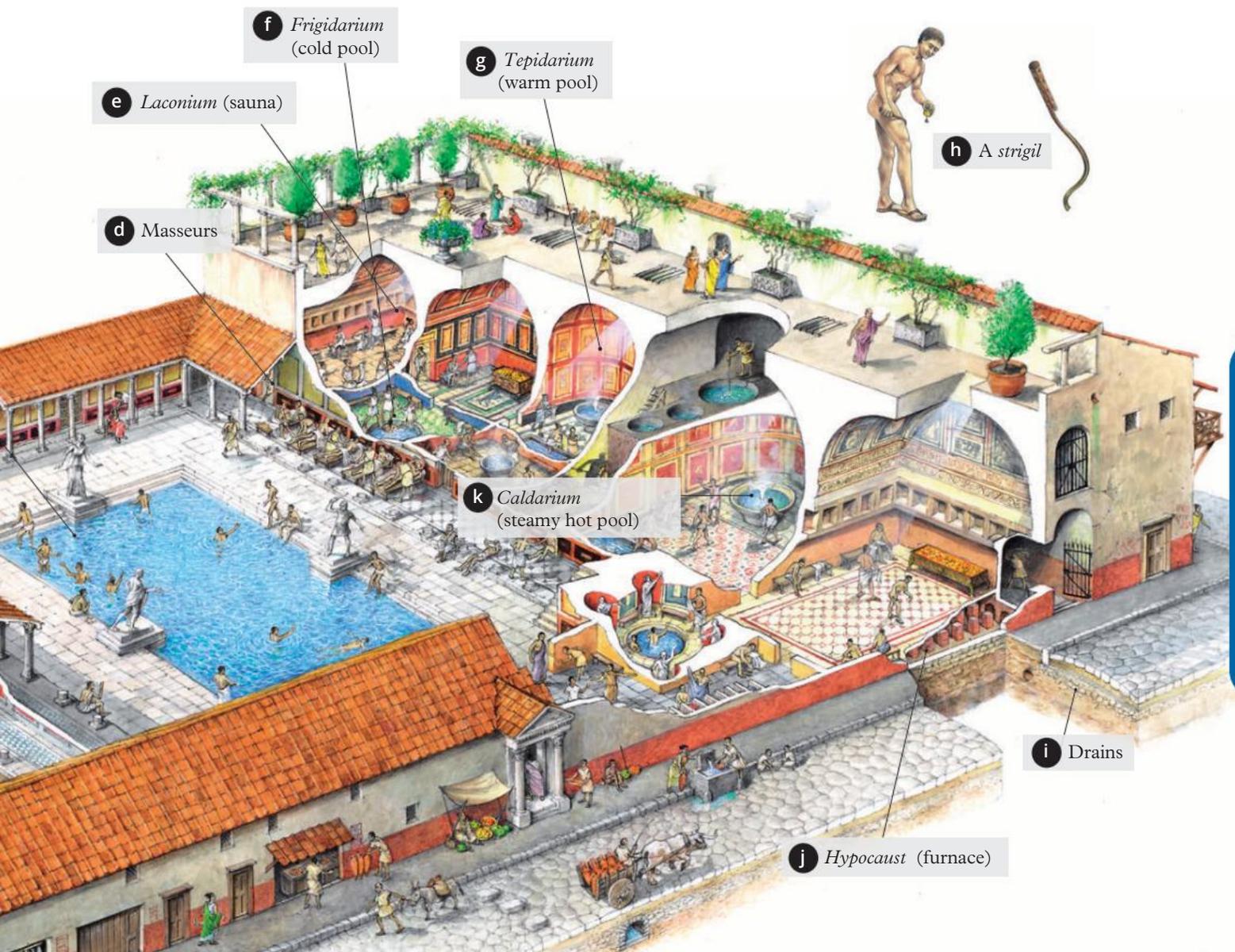
Check your learning 12.9

Check your learning 12.9

Review and understand

1 Why was a *hypocaust* such an important part of the Roman baths?

Apply and analyse

2 "The baths were the place to be in ancient Rome. Of course, people went there to wash, but that was almost beside the point!" In a short paragraph, **explain** what is meant by this statement, using at least two specific examples from Source 1.

Evaluate and create

3 Using the internet, **research** the usefulness of Roman baths as a source for investigating life in ancient Rome.

a List five areas of Roman life and culture that are better understood because archaeologists and historians have studied the ruins of Roman baths.

b Include references to show where you found your information. There is more information about how to reference in Recording relevant sources in Lesson 6.2 Historical questions (page 216).

Lesson 12.10
Public entertainment

Introduction

Most ordinary Romans lived hard lives. At times, it was a source of envy and irritation for the poor to see how the rich lived and the privileges they enjoyed. To combat this and keep the peace, Roman rulers organised free entertainment for the common people. This ensured they did not become restless and rebellious.

By the end of the first century BCE, entertainment was provided for the people on 159 days of each year in Rome. A day out at the Circus Maximus, which could seat close to 250,000 people, meant watching horse-drawn chariots thunder around the track some 610 metres long and 190 metres wide. Death and terrible injuries were common, but this was considered part of the fun. Roman writer Juvenal captured the atmosphere when he wrote: "All Rome is in the Circus today. The roar that assails my eardrums … the races are fine for young men: they can cheer their fancy and bet at long odds."

For those who could not handle the bloodthirsty entertainment, Roman **amphitheatres** also offered dramatic performances similar to those of the Greeks, including both tragedies and comedies. It was said by writers at the time that the people were kept happy and peaceful by two things – bread and circuses.

amphitheatre
an ancient versions of today's football stadiums, where raised seating rose up around a flat central area where events or performances were held
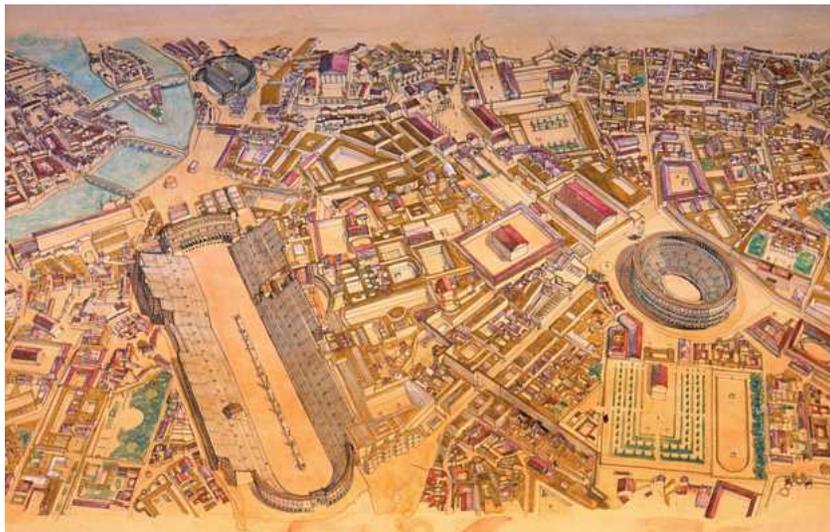
Source 1 An artist's impression of the Circus Maximus.

Gladiator games

Colosseum
a large amphitheatre built and used during the Roman Empire to stage gladiator fights and other forms of public entertainment

Perhaps one of the most popular forms of ancient Roman entertainment were the gladiator games. The massive **Colosseum** in the heart of ancient Rome, was the place to go for gladiator fights (see Source 2). Romans flocked here to watch gladiators fight and kill animals or each other. Gladiators were forced to fight to the death.

Most gladiators were unwilling participants. They were slaves, criminals or prisoners captured from around the empire. Popular gladiators who won many fights became famous in Rome and were treated in a similar way to sporting stars today. They were often granted their freedom after a time and became trainers of other gladiators.

Types of gladiators

To make fights interesting for the Roman audiences, there were several types of gladiators. Most fought on foot. Others, such as the *equite*, fought on horseback. Some were heavily armoured, while others fought almost naked. Some gladiators were female. There were even "clown" gladiators, known as the *andabatae*. Their helmets had no eye holes. They would be pushed towards each other, hacking wildly with their weapons, for the enjoyment of the crowd.

Source 2 An artist's impression of typical gladiator duels. Pairs were typically matched to make the fight fair. One gladiator's advantage was the other's disadvantage.

History

Source 3
A sculpture of Spartacus in the Louvre Museum, Paris

Key concepts & skills Causes & consequences

Spartacus and the slave revolts

In 73–71 BCE, the gladiator Spartacus led an uprising of thousands of slaves. He escaped in 73 BCE with eight others. They seized weapons and made their way to another town, where their actions inspired other slaves to join them. The army, which made a base near Mt Vesuvius, is said to have reached 100,000 men. In the next two years, the slave army defeated four Roman armies and took control of parts of southern Italy. In 71 BCE at the Battle of the Silarius River, Roman forces defeated the slaves. Historians agree that Spartacus was killed in this battle. Over 6,000 slaves were then crucified along the main road to Rome to serve as a warning to others.

12.10

◄ In 60 CE, Greek historian, Diodorus Siculus, wrote about how the treatment of slaves contributed directly to the cause of the slave revolt: "The Sicilians, being very rich and elegant in their manner of living, purchased large numbers of slaves. They ... branded them with marks on their bodies ... the hatred of the slaves burst forth one day ... without pre-arrangement, many thousands quickly gathered together to destroy their masters."

revolt a protest against authority, especially that of a government, often involving violence

Directly following the **revolts**, many Romans treated their slaves less harshly than before out of fear that another revolt was coming. By 50 CE, the legal rights of slaves began to change and an act was created which made it legal for slaves to become freed men if they were abandoned or set free by their masters. This act also made the murder of slaves illegal.

While Spartacus died during the Battle of the Silarius River, his brave actions have inspired generations after him, including leaders in the French Revolution.

For more information on causes and consequences, see Lesson 6.6 Causes and consequences (page 233).

Quiz me! Public entertainment

Check your learning 12.10

Check your learning 12.10

Review and understand

1 In your own words, **describe** the Circus Maximus.

Apply and analyse

2 **Compare** the atmosphere of the Circus Maximus, as described by Juvenal, to a sporting event you have attended.

3 The slave revolts had a significant impact on life in ancient Rome.

  a **Identify** two causes of the slave revolts in ancient Rome.

  b **Outline** one short-term and one long-term effect of these revolts.

4 **Analyse** the strategy of Roman rulers to provide free entertainment for common people.

Do you think this was a good strategy, or could they have done something else to address the concerns of the people? Support your answer with specific examples.

Evaluate and create

5 Using the internet and library, **research** the different types of gladiators that fought for the entertainment of Roman crowds.

  a If you were forced to fight in the Colosseum in Rome, which of these gladiators would you choose to be?

  b Compare your choice with other students in your class. Which was the most popular choice? Why?

Lesson 12.11
Death and funerary customs in ancient Rome

Introduction

A Roman funeral was an important ritual to mark the transition from life to death. Proper burial ceremonies were held to ensure evil spirits did not rise from the underworld, roam the Earth and haunt those left behind. Roman attitudes towards death were influenced by other civilisations and religions, which evolved over time as Rome conquered more territory.

The afterlife

Mythology

A key influence on Roman beliefs about death was Greek **mythology**. Like the Greeks, many Romans believed their souls were transported into the afterlife once they died. The souls of the dead went to the underworld, known as **Hades**. There were several sections in Hades. For example, wicked souls ended up in Tartarus – a place of everlasting torment and misery. The souls of the brave went to the Elysian Fields – a peaceful and happy place. Dead souls reached Hades by paying the ferryman, Charon, to row them across the River Styx.

Source 1 An artist's impression of the ferryman, Charon, rowing the soul of a dead Roman over the River Styx to Hades.

Learning intentions and success criteria

Key content video: Death and funerary customs in ancient Rome

mythology a series of beliefs that the ancient civilisations used to explain life and the natural world

Hades the ancient Greek god of the Underworld; also the name of the Underworld itself – the place that the souls of people went when they died

History

Christianity

Christianity offered the Romans a new perspective on death. While mythology claimed a heaven only existed for the gods and goddesses, Christianity promised people that if they were strong in faith, they may experience eternal life in Heaven. This was a much more appealing belief, and helped Christianity become adopted as the dominant religion by 391 CE.

The burial process

The ancient Romans regarded dead bodies as pollution, and those who tended to them as "polluted". Polluted people could not perform certain civic and religious duties until they had carried out purification rituals. This meant funeral workers and executioners were constantly "unclean". As a result, they became social outcasts and had to live outside their cities and towns. Based on various ancient sources, we know that there were five distinct parts to the funeral ceremony (see Source 2).

Source 2 The five stages of burial in ancient Rome

Stage	Description
Stage 1: Procession	The corpse would be moved through the streets with a crowd of mourners. Wealthy families travelled at the back of the procession, while paid professional mourners were at the front. They would wail loudly, scratch their faces and rip out their hair as a display of grief. For poor families, a procession probably included only a flute player and the immediate family.
Stage 2: Cremation or burial	Cremation was the main method for disposing of the dead. A person's belongings were often burned with their body, then the ashes were put in an urn and buried or placed in a tomb. At the end of the first century CE burials became common practice.
Stage 3: Eulogy	The eulogy was offered to share the memories of the deceased. It were reserved for citizen men or elite women. An orator would stand upon the *rostra* (platform) to give a eulogy.
Stage 4: Feast	The feast was not just an opportunity to eat, but an important ritual that marked the moment when the deceased could continue their journey to the underworld. This also meant that the family could move forward from their grief.
Stage 5: Commemoration	Certain days were set aside each year to remember the dead, including the *Parentalla* festival in February, which honoured a family's ancestors. Families would gather around the tomb and make an offering to signify to the spirit in the underworld that their existence was not forgotten.

Source 3 Romans often painted lifelike images of a person on their sarcophagus. This level of detail in artwork was not achieved again for at least 700 years.

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12.11

Graves and funeral clubs

Poor people in ancient Rome often belonged to funeral clubs called *collegia*. Membership gave Rome's poor some comfort that they would have the honour of a decent burial. While still alive, members would meet for a few glasses of wine while discussing their funeral arrangements. The ashes of members, after being placed in an urn, were often stored in one tomb. Each person had a pre-arranged spot for their remains.

Those who could not afford a burial plot or tomb were usually buried in a mass grave on the Esquiline Hill outside Rome. Typically, the corpses of the poor were carried there at night, often by slaves. Each corpse might be wrapped in cloth or covered with a sack before being placed in the grave. When the grave started to fill up with corpses, it was filled in with dirt. Mass graves were also used for Roman soldiers who died bravely in battle a long way from home.

Some people, though, did not receive the respect of even a "bulk burial". The corpses of outcasts, such as sex workers and people who took their own lives, were left out in the open for wild animals to eat.

The Law of the Twelve Tables (Source 4) outlined many changes to the funerary customs to reduce air pollution from cremations, looting of graves and constant noise from the frequent processions within the city. The death of an emperor was the one exception to these laws, as it was believed that when emperors died, they became gods rather than spirits. They were buried in the city with impressive commemorative monuments erected.

Source 4 Some of the Twelve Table laws implemented in 450 BCE regarding funerary customs in ancient Rome.

Sacred Law, The Twelve Tables

- A dead person shall not be buried or burned in the city.

- Expenses of a funeral shall be limited to three mourners wearing veils and one mourner wearing an inexpensive purple tunic and ten flutists ...

- Women shall not tear their cheeks or shall not make a sorrowful outcry on account of a funeral.

- A dead person's bones shall not be collected that one may make a second funeral. An exception is for death in battle and on foreign soil.

- Whoever wins a crown himself or by his property, by honor, or by valor, the crown is bestowed on him at his burial ...

- Gold shall not be added to a corpse. But if any one buries or burns a corpse that has gold dental work it shall be without prejudice.

- It is forbidden ... to build a new pyre or a burning mound nearer than sixty feet to another's building without the owner's consent.

History

Check your learning 12.11

Check your learning 12.11

Review and understand

1 **Describe** the Christian approach to death and the afterlife.
2 **Identify** the purpose of a funeral club.

Apply and analyse

3 There are similarities and differences between the funeral services of ancient Rome and the funeral services of today.

   a Copy this table and complete it using Source 2 to help you.

Similarities in funerals today and ancient Rome	Differences in funerals today and ancient Rome

   b Write a short paragraph exploring the continuity and change of the funeral service from ancient Rome to today.

4 Choose two of the laws outlined in Source 4 and **explain** why you think it was important to change each custom.

Evaluate and create

5 **Create** a Venn diagram showing the differences and similarities in funerary customs between rich and poor Romans.

I used to think, now I think

Reflect on your learning about ancient Roman beliefs on the afterlife and complete the following sentences.
- I used to think ...
- Now I think ...
What has changed in your understanding?

Quiz me! Death and funerary customs in Ancient Rome

Lesson 12.12
Warfare in ancient Rome

Learning intentions and success criteria

Key content video: Warfare in ancient Rome

Introduction

Military service was a part of life for Roman citizens. It was needed at first to help increase Rome's territory and then to defend it. For a time, the most important Roman god was Mars – son of Jupiter, and god of war.

Through intense and disciplined training, Rome's army became strong and known for their relentless attitude. Even if multiple battles were lost, Romans would continually come back to fight again until they had won the war. The high resilience and grit shown was reflected in the Roman virtue, *virtus*, and seen amongst the ruling class. Losing was simply not an option!

This changed, however, from around 250 CE. The Roman empire had incurred many debts to pay for the upkeep of the army and the impoverished population began to lose faith in the *Via Romana* values. This led to a breakdown in order and self-discipline within the army itself, which is one of the factors that contributed to the downfall of Rome's Western Empire.

Early days

In the early days of the Republic, men had to be landowners before they could enter the army. Some were wealthy enough to own horses and buy armour and weapons. These men formed the **cavalry**. By 260 BCE, the army gained control of the country that we now know as Italy. As its territory grew, Rome needed a larger and more permanent army. Around 10 BCE, a Roman **consul**, Marius, declared that men no longer had to own land to join the army. Consequently, thousands of men (including the very poor) joined.

cavalry soldiers on horseback

consul a chief magistrate in ancient Rome

The organisation of the army

The Roman army was a very disciplined organisation with a strict hierarchy (see Source 1). Roman soldiers were known as legionaries. The army itself was made up of around 30 **legions**, each of which was led by a *legatus* (general).

legion a military unit in the army of ancient Rome made up of 60 centuries (i.e. around 6,000 soldiers); soldiers in a legion were called legionaries

Source 2 A Roman legionary in uniform.

A *Legatus* (general) was in charge of a **legion**.

The legion consisted of up to 6,000 soldiers, so was split into 10 **cohorts**.

Each cohort was then broken down again into groups of about 100, known as **centuries**. They were each led by a **centurion**.
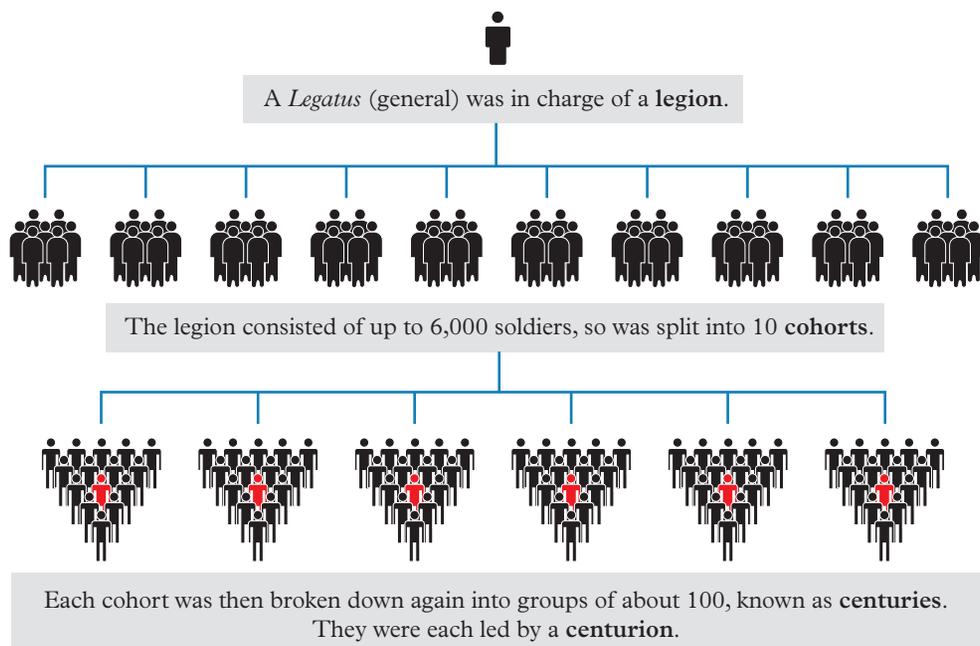
Source 1 The structure of a Roman legion; the Roman army was made up of around 30 legions, each with this hierarchy.

Roman soldiers in the second century BCE were organised for battle according to age. At the front were the young men, the spearmen. Behind them were the *principes*; these were soldiers in the prime of their lives. At the rear were the older soldiers.

A typical Roman foot soldier would be dressed in a red woollen tunic over which was worn body armour (see Source 2). The armour for the torso was made up of overlapping iron plates. They also wore a helmet, a scarf to protect against chafing from their helmet and armour, a belt with studded leather strips for groin protection, and leather sandals.

Their weapons generally consisted of a dagger, sword, javelin (spear) and a large shield called a scutum. The cavalry required a smaller round shield to ride on horseback. The symbol for the army, as seen on their shields, combined the wings of an eagle with thunderbolts to represent the king of the gods, Jupiter.

Siege warfare

Roman generals were highly skilled military strategists. One strategy employed by the Roman army to give an advantage over its enemies was siege warfare tactics. Siege warfare involved surrounding an enemy city and starving those inside into submission. It often involved slaughtering the enemy after they surrendered. A common approach was to build two parallel walls around the city. The inner wall was a barrier to stop food being brought into the city. The outer wall provided protection for the Roman troops in case warriors or supporters of those inside the city tried to attack.

The Romans had an extensive array of siege equipment (see Source 3), often adopted from other empires. They would further improve the design to make them easier to transport into battle.

History

Source 3 Siege equipment used by the ancient Roman army.

Weapon	Description
Battering ram	A structure on wheels that contained a long, suspended log encased in iron to breach the enemy gate.
Siege tower	A multistorey tower constructed on wheels to move towards city walls; archers would attack from the top level, while a battering ram was often placed on the lower level. It enabled soldiers to cross over the top of forts.
Catapult	A larger engine that hurled stones from a long arm when it was suddenly released from tension
Scorpio	A small catapult that was placed on higher ground and could fire with power and precision up to 100 metres, like a modern-day sniper weapon.
Onager	A large slingshot which would fire projectiles long distances; it was used to break down walls or forts
Testudo	A defensive manoeuvre that required soldiers to align their shields to create a boxed wall and protect them from enemy attack
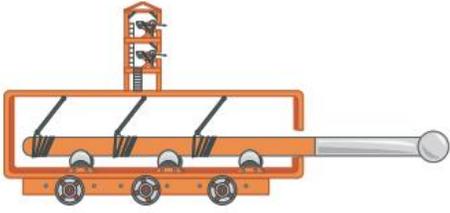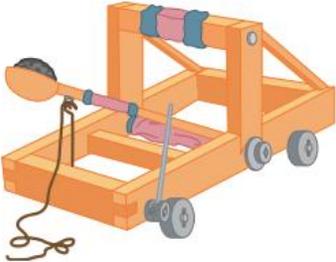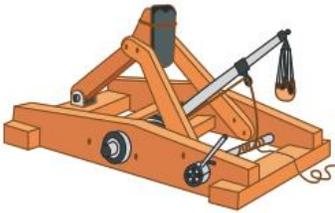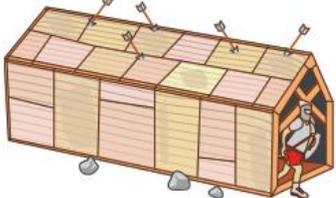
Source 4 An artist's impression of Roman soldiers building a siege tower in readiness to lay siege to a city.

Analyse this! Warfare in ancient Rome

Check your learning 12.12

Check your learning 12.12

Review and understand

1 **Describe** how the Roman army honoured the gods.
2 Give examples of why the Roman army was considered to be strong and relentless.

Apply and analyse

3 **Examine** Source 4. Using the information in Source 3, identify as many weapons and siege tactics as you can.
4 **Explain** how the Roman army gave a sense of leadership and teamwork to its legionaries. Use Source 1 to help you answer this question.

Evaluate and create

5 Plan a battleground set up for attacking an enemy fort. Annotate your diagram with reasons for the positioning of various soldiers and siege weapons.
6 **Evaluate** the Roman legionary uniform (as seen in Source 2) by answering the following questions:
   a What were its strengths?
   b What were its weaknesses?
   c What is your overall opinion of it?
   Use evidence to support your answers where you can.

12C Concepts & skills in context
Pax Romana

Introduction

Pax Romana is Latin for "Roman Peace". It is a common term used to describe a 200-year period of relative peace in Imperial Rome. Many classify Pax Romana as the time of the "five good emperors", those being Nerva (reigned 96–98 CE), Trajan (98–117 CE), Hadrian (117–138 CE), Antoninus Pius (138–161 CE) and Marcus Aurelius (161–180 CE).

During this time, the empire expanded under a strong army, citizens felt secure under law and order, and the economy prospered as the empire's population grew to around 70 million people.

Many historians regard the Pax Romana as a high point in human history. With such peace came many developments in engineering, architecture, the arts, literature and entertainment. Historian Edward Gibbon coined the phrase "Pax Romana". In his book *The History of the Decline and Fall of the Roman Empire*, he writes:

Source 1

> ... the tranquil and prosperous state of the empire was warmly felt and honestly confessed by the provincials as well as Romans ... They affirm that, with the improvement of arts, the human species was visibly multiplied. They celebrate the increasing splendour of the cities, the beautiful face of the country, cultivated and adorned like an immense garden; and the long festival of peace, which was enjoyed by so many nations.
>
> Edward Gibbon describing the era of Pax Romana

Source 2 This carving is from the Altar of Ara Pacis showing the Goddess of Peace, Pax.

Plotting events on a timeline

Timelines are a very important tool for historians. They allow the reader to easily identify what happened when, and how much time went by between events.

Follow these steps when creating a timeline:

- **Step 1** Determine the type of timeline required, i.e. horizontal or vertical.
- **Step 2** Establish the total time span you need to cover with your timeline. Consider:
  - the starting date of the timeline
  - the end date of the timeline.
- **Step 3** Enter the most significant dates on the timeline and provide key facts and information about the events that took place on each date. Be sure your written text is clear and concise.
- **Step 4** Make sure each event date is entered chronologically (in order) from left to right (for horizontal timelines) or top to bottom (for vertical timelines).

For more information on chronology, see Lesson 6.3 Chronology (page 220).

Practise the skill

1 Follow the steps provided to **create** a timeline of the five good emperors of Rome.

Extend your understanding

1 Using the internet, conduct some **research** to create a timeline of key events and achievements during Pax Romana (27–180 CE). Your timeline should include a range of dates covering various facets of society from the following list:

   a the period of reign for the five good emperors during Pax Romana

   b four key buildings erected during Pax Romana; for example, the Pantheon, Colosseum, Trajan's Column, Hadrian's Wall, Temple of Peace, and so on
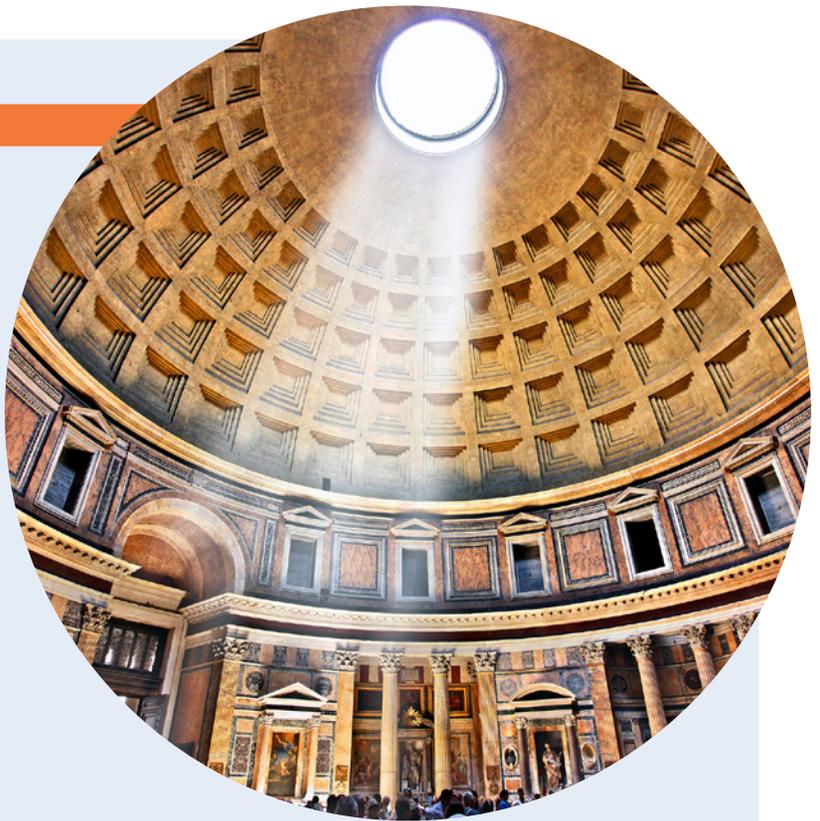
Source 3 The Pantheon temple in Rome was constructed during the reign of Emperor Hadrian. It is an architectural marvel, with a 43-metre-diameter concrete dome roof and Roman columns reaching 12 metres tall.

   c three public bathhouses erected; these could include Thermae Etrusci, Baths of Nero, Baths of Titus, Baths of Domitian or the Baths of Trajan

   d two famous literary works during *Pax Romana*; this was called the Silver Age of Latin Literature

   e one aqueduct or other engineering project completed during this time.

2 Why do you think this peaceful period brought economic prosperity to all Romans? Use Source 2 and Source 3 to help you answer.

3 Imagine what it would have been like to live during Pax Romana. Write a letter or diary entry describing your week based on what you have learnt about daily life in Rome. Think about your social status, gender, employment, leisure and entertainment activities. Refer to Using empathy in Lesson 6.4 Using historical sources (page 223) for more information on empathy.

Lesson 12.13
Change through conflict

Punic Wars

Carthage was a port city located on the north African coastline of the Mediterranean Sea, which was an ideal location for trade. After many centuries of peaceful co-existence with Rome, Carthage was threatened as the Romans advanced towards Sicily (a strategically located island under Carthage's control). As a result, the Punic Wars broke out – three wars that spanned almost 120 years from 264 to 146 BCE and were fought on land and sea. Triumph in these wars eventually gave Rome total control of the Mediterranean Sea.

First Punic War

Lasting from 264 to 241 BCE, the First Punic War had many battles, victories and stalemates over 20 years. There was huge loss of life on both sides. Battles occurred on the island of Sicily, in north Africa and at sea.

The Roman campaign was funded by wealthy patricians, which contributed greatly to their victory. Sicily became the first foreign province of the Roman Empire, and Carthage was forced to pay Rome 3,200 talents of silver over the next decade.

Source 1 An artist's impression of Hannibal's troops crossing the Alps.

Second Punic War

The Second Punic War was fought between 219 and 202 BCE. Carthage was now led by Hannibal, whose father had suffered defeat in the First Punic War. In 218 BCE, his army embarked on a 2,000-kilometre-long journey to descend upon Rome. Starting in modern-day Spain, the Carthaginian army traversed along the northern Mediterranean coastline, crossing rivers, mountains and even the Alps during winter (see Source 1).

Hannibal's forces were made up of 38,000 soldiers, a further 8,000 horsemen and 37 elephants. His army had initial success defeating the Romans in southern Italy, but ultimately, the Roman forces claimed victory once again.

Third Punic War

The Third Punic War lasted only three years and resulted in the destruction of Carthage. The Roman Senate decided it was time to conquer Carthage; at that time Senator Cato would end every speech at the Senate by saying, "Carthage must be destroyed".

The Romans either killed or enslaved the population of Carthage and secured the western side of the Mediterranean for themselves. Rome controlled the African coastline by 146 BCE, greatly increasing its territory.

Barbarian invasions

After many further conquests around the Mediterranean and beyond, the Roman Empire reached its peak early in the second century CE. As the empire grew, it became too large to govern properly.

There was growing corruption in the army and economic problems back home. Instead of focusing on protecting their borders, Roman armies began fighting each other. As a result, many outside invaders were able to enter Rome and wreak havoc. These invaders included the Huns, Goths, Franks, Vandals and Saxons. The Romans referred to these people collectively as "barbarians" because they lived outside the borders of the Empire.

Emperor Diocletian decided to split the Empire in 284 CE (see Source 2), hoping that it would make the empire easier to manage.

The Western Empire only became weaker. The barbarian invasions continued until, eventually, the Goths took over Rome in 476 CE. This is known as the Fall of Rome, and the time Rome entered a period in history known as the Dark Ages.

The eastern half of the Roman Empire received a new name – the Byzantine Empire. The Byzantine Empire lasted for another 1,000 years.

Sequence this! Conflict in ancient Rome

Western and Eastern Empires of Ancient Rome

Legend
- Western Empire
- Eastern Empire

NORTH SEA
ATLANTIC OCEAN
Trier
Centre of western emperor's rule
BLACK SEA
Rome
Byzantium
Centre of eastern emperor's rule
MEDITERRANEAN SEA
RED SEA

N

0   400   800 km
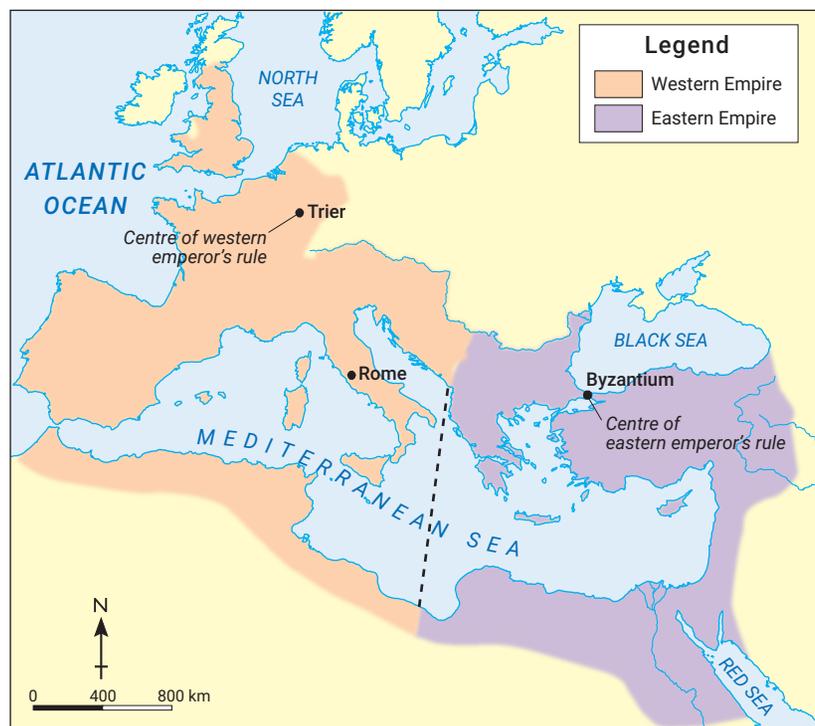
Source 2

Enlarged map: Western and Eastern empires of ancient Rome

Check your learning 12.13

Review and understand

1   List the main dates and events of the Punic Wars.
2   **Describe** the characteristics of Hannibal's journey to Rome that make it legendary and impressive.

Apply and analyse

3   Using Source 2 and a world map, such as the one in the back of the Student Book, **determine** which modern countries became part of ancient Rome after the Punic Wars.

Evaluate and create

4   Wars can have a huge impact on the civilian population. Working in groups, **create** a mind map with three branches coming out from the centre concept titled, "Changes to daily life during war times". The three branches should be titled economic factors, social factors, and political factors. Brainstorm the effects a war can have on the home front and organise your thoughts under a specific factor on your mind map.

5   Imagine you are a solider in Hannibal's army on its 2,000-kilometre march towards Rome. Write a letter that describes where you are marching and the conditions you are experiencing.

Lesson 12.14
Change through trade

Introduction

Trade was vital to ancient Rome's development from a small farming settlement to a massive empire. With their prosperous farming economy, the Romans were able to **export** food and produce while also **importing** new products as the empire grew. Trade also encouraged change in society by bringing the Romans into contact with different kinds of people, who introduced new ideas about religion, fashions, processes and skills to the empire.

Ancient Rome's trading empire

The peak era of Roman trade was between the second century BCE and second century CE, as the highest number of recorded workers were involved in different jobs in trading. This included the people who produced the food, those who transported it from place to place, and those who sold it. Jobs in trade were generally considered suitable for the middle and lower classes, not for the elite patricians.

Learning intentions and success criteria

export the selling and transporting of goods to another country

importing bringing in a product or service to one country from another

Key content video: Change through trade

Source 1 The wreathed head of Caesar on a Roman coin.

Common Roman imports

a	Olive oil	l	Spices
b	Precious metals	m	Silk
c	Ivory and wild animals	n	Grain
d	Precious stones	o	Amber
e	Wine	p	Furs and hides
f	Honey	q	Papyrus
g	Marble	r	Slaves
h	Non-precious metals	s	Salt
i	Lead	t	Cattle
j	Timber	u	Glass
k	Cotton	v	Horses
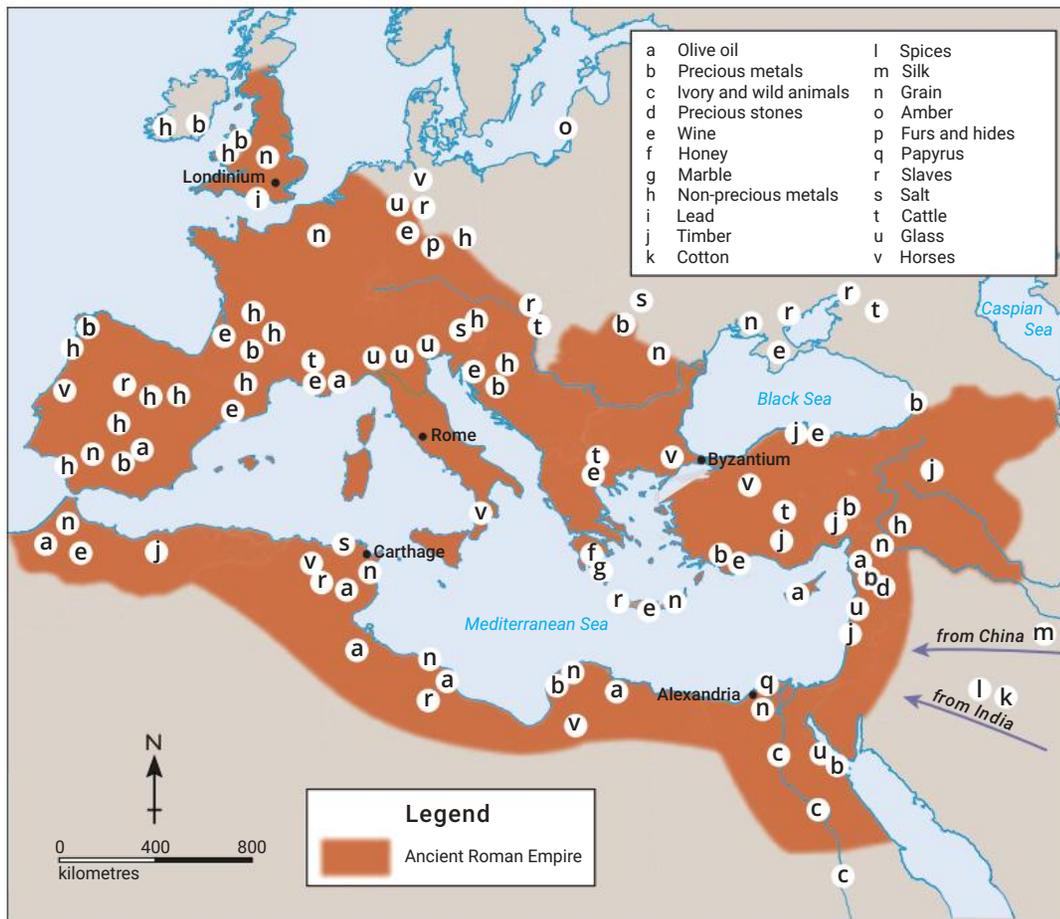
Source 2

Enlarged map: Common Roman imports

Around 167 BCE, Rome seized control of Spanish gold and silver mines, which boosted the republic's treasury. Historian Diodorus of Sicily wrote in 70 CE that this land possessed "the most abundant and most excellent known source of silver, and to the workers of silver it returns great revenues". As the empire prospered, so did its people – the Senate reduced taxes for the Romans because of this discovery. With access to these mines, coins became used as a common form of currency within Rome. It was Julius Caesar who first ordered his portrait be displayed on coins.

Trade with the East

In addition to trade by sea, the Romans also traded by land. Having expanded the empire into Egypt in 30 BCE, the Romans inherited access to trade with China and India through the **Silk Road**. The Silk Road was a series of trade routes that stretched from China to the eastern shores of the Mediterranean Sea, and provided some of the first economic, cultural and religious interactions between the East and the West.

Silk Road
a trade route stretching west from China to the Mediterranean Sea; the main route by which silk was introduced to the West

Merchants travelled across the Silk Road, using donkeys, camels and oxen to carry their goods. A silk trade boomed between China and Rome. Silk became so popular that the Senate tried to ban it – in part, due to the economic impact of money being spent *outside* of the Roman economy, but also because it was not a modest fabric for women to wear!

Rome exported glass, golden cloths and rugs to China; however, trade became increasingly difficult as the Parthian Empire (located in modern-day Türkiye, Afghanistan and western Pakistan) blocked trade routes in an effort to maintain control and profit between the Roman and Chinese empires.

Source 3

> In truth, it needed but to look at their complexion to see that they were people of another world than ours.
>
> The first clearly documented visit from China in Rome, written during the reign of Emperor Augustus, around 20 BCE, by the Roman historian, Florus.

Quiz me! Change through trade in ancient Rome

Check your learning 12.14

Check your learning 12.14

Review and understand

1 Using the world map at the back of your book, **identify** the modern countries from which ancient Rome once imported the following: marble, ivory, timber, horses.

Apply and analyse

2 **Examine** Source 1.
   a **List** three metals, three foods and three clothing items that Rome imported.
   b What are some ways that these goods might have been used by the Romans? How might these have changed people's lifestyles?
3 "The Silk Road is considered by many historians as one of the most significant achievements in the history of world civilisation." Write a paragraph (150 to 200 words) to **explain** why you think this is the case. Use evidence from this topic to support your answer.

Evaluate and create

4 **Research** "Constantinople and the great chain" and discover why its location was ideal for a port and trade.

12D Concepts & skills in context
Tacitus: A Roman historian

Introduction

Publius Cornelius Tacitus was a Roman senator, consul and historian who lived from 56 to 117 CE. He wrote many historical works describing life in Rome through his eyes.

His peers would criticise him for not boasting enough about Rome. However, Tacitus wrote Rome as he saw it portraying the "inglorious … petty trifles" of the Republic. In doing so, he, created a series of primary sources that historians today agree provide an honest account of life in Rome.

In Source 2 and Source 3, Tacitus describes how two key leaders spoke to their troops before battles that occurred in Roman Britain. In the first extract, Tacitus writes to commemorate (remember) his father-in-law Gnaeus Julius Agricola, a Roman general who led the conquest against the Celts in modern-day England. In the second extract, Tacitus gives his account of the Celtic Queen Boudicca summoning her people to avenge the Roman occupation of Britain. Both were written by Tacitus, many years after the actual events.
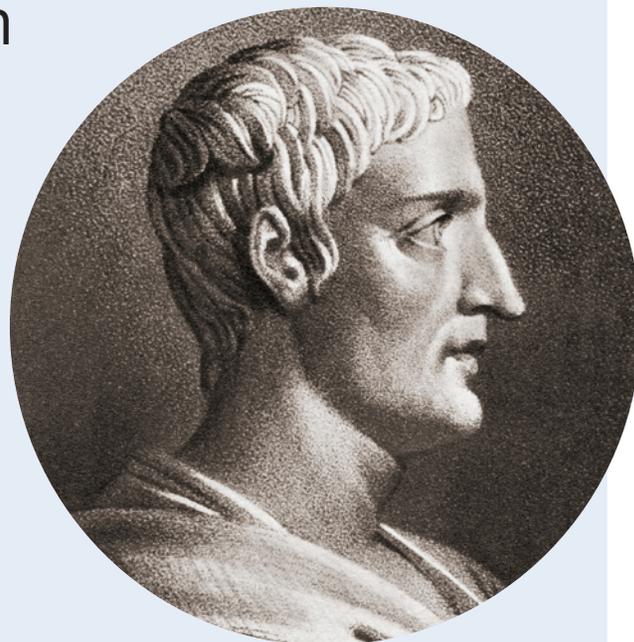
Source 1 Portrait of the historian, Tacitus

Source 2

Agricola, who, though his troops were in high spirits and could scarcely be kept within the entrenchments, still thought it right to encourage them, spoke as follows:

'... As it is, look back upon your former honours, question your own eyes ... Of all the Britons these are the most confirmed runaways, and this is why they have survived so long. Just as when the huntsmen penetrates the forest and the thicket [thick bushes], all the most courageous animals rush out upon him, while the timid and feeble are scared away by the very sound of his approach, so the bravest of the Britons have long since fallen; and the rest are a mere crowd of spiritless cowards ... that you might achieve in it a splendid and memorable victory. Put an end to campaigns; crown your fifty years' service with a glorious day ...' While Agricola was speaking, the ardour [eagerness] of the soldiers was rising to its height, and the close of his speech was followed by a great outburst of enthusiasm. In a moment, they flew to arms.

Tacitus, *Life of Gnaeus Julius Agricola* (98 CE)

Source 3

Boudicca, with her daughters before her in a chariot, went up to tribe after tribe, protesting that it was indeed usual for Britons to fight under the leadership of women. 'It is not as a woman descended from noble ancestry, but as one of the people that I am avenging lost freedom ... heaven is on the side of a righteous vengeance; a legion which dared to fight has perished; the rest are hiding themselves in their camp, or are thinking anxiously of flight. They will not sustain ... the shout of so many thousands, much less our charge and our blows. If you weigh well the strength of the armies, and the causes of the war, you will see that in this battle you must conquer or die. That is what I, a woman, plan to do! Let the men live in slavery if they will."

Tacitus, *The Annals of Imperial Rome* (118 CE)

Understanding purpose, perspectives and empathy

Purpose

Most primary sources are created for specific purposes; for example, a letter might be intended to share news with a friend, and a statue might be created as a gift to the gods. Even factual secondary sources, such as a history website or documentary, can have another purpose, such as to make money or entertain. Therefore, we need to be able to interpret the perspective or attitude presented in a source, and then decide whether it is useful and relevant.

Ask yourself:

- Why was the source written or produced?
  - Are there personal motives?
  - Are there political reasons?
  - Is it propaganda?
- How was it written or produced?
  - Does it give a particular point of view?
  - Does it give a detached, balanced account?
  - Is it biased either for or against the issue?

Perspectives and empathy

Primary sources are often useful in conveying the perspective or point of view of someone living at the time. Such information enables us to develop empathy for what it would have been like to live during the time being studied. When we can put ourselves in someone else's shoes, we can then form our own perspective.

- **Step 1** Identify the purpose of the source. Why was the source written or produced?
- **Step 2** Identify how the source has been produced. Is it written or perhaps an artwork that has been created?
- **Step 3** Look for the perspective in this source. Does the author bring in both sides, or is it more one-sided? Would you consider it to be biased?
- **Step 4** Using empathy, consider how the author may have been feeling at the time of

writing. Is the creator of the source detached or emotional?

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Practise the skill

1 Using the steps above, **analyse** the perspectives in Source 2 and Source 3. Make sure you follow all steps for both sources.

Extend your understanding

1 Historians from the time and more modern historians may have different perspectives of an event.
  a **Create** a list of pros and cons about historians who wrote at the time. What are the strengths and weaknesses of being there at the time and providing an eyewitness account?
  b **Create** another pros and cons list about a historian who writes secondary sources.

2 Using the DAMMIT acronym (see Analysing sources using DAMMIT in Lesson 6.4 Using historical sources, page 223), write a paragraph **analysing** either Source 2 or Source 3.

Source 4 Queen Boudicca led an uprising against the Roman occupation of Britain.

Review: Ancient Rome

Review activity

Read this extract from a letter by Roman philospher Seneca and answer the questions.

A lively bathhouse

Source 1

I have lodgings right over a bathing establishment. So picture to yourself the assortment of sounds, which are strong enough to make me hate my very powers of hearing! When the stronger gentleman, for example, is exercising himself by swinging leaden [heavy] weights; when he is working hard, or else pretends to be working hard, I can hear him grunt; and whenever he releases his imprisoned breath, I can hear him panting in wheezy and high-pitched tones. Or perhaps I notice some lazy fellow, content with a cheap rubdown, and hear the crack of the pummelling hand on his shoulder, varying in sound according as the hand is laid on flat or hollow. Then, perhaps, a professional comes along, shouting out the score; that is the finishing touch. Add to this the arrest of a pickpocket, the racket of the man who always likes to hear his own voice in the bathroom, or those who plunge into the swimming-tank with unconscionable noise and splashing ... imagine the hair-plucker with his penetrating, shrill voice – to attract more attention ... never holding his tongue except when he is plucking the armpits and making his victim yell instead. Then the cakeseller with his varied cries, the sausageman, the confectioner, and all the vendors of food hawking their wares, each with his own distinctive intonation.

Roman philospher Seneca (3 BCE–65 CE), *Letter 56*

Source 2
Roman baths can still be seen in the modern-day city of Bath in England.

1 **Identify** whether Source 1 is a primary or secondary source. (1 mark)

2 Do you think the author of Source 1 might have had a different perspective on bathhouses if he had not lived above one? **Explain** why you think this. (3 marks)

3 Based on the information gathered from Source 1, **describe** the atmosphere of the bathhouse. (2 marks)

4 The concept of continuity and change is important to history, as it helps us understand that some things stay the same while others change. **Compare** the various aspects of the bathhouse to similar businesses or places we may visit today. What is similar and what has changed? (4 marks)

5 **Discuss** how useful Source 1 is in understanding the experience of the Roman bathhouse. Do you think it is accurate? What other evidence could help you understand what the bathhouse was like? Provide examples to support your opinion. (6 marks)

6 **Analyse** Source 1 using the DAMMIT acronym. In your response, provide examples from the source and from what you have learnt about ancient Rome. (4 marks)

(Total: 20 marks)

Module checklist: Ancient Rome

Module review quiz: Ancient Rome

Module

13

Ancient China

**Sub-strand: Investigation:
Ancient societies (10 000 BCE–600 CE)**

Overview

Ancient China is a society characterised by its rich and distinctive culture. Isolated from the rest of the world, the Chinese collectively forged their own destiny. By 4000 BCE, their modest farming regions had grown into large settlements. Their disciplined approach to life and their strong work ethic respected the social order and valued the role of education. They believed in the forces of nature and living a balanced, harmonious life. While internal conflicts occurred when various kingdoms fought to assert their rule, the ancient Chinese did not glorify war. The establishment of the Silk Road provided an opportunity to make contact with other societies, and through trade, the traditions and legacies of ancient China were discovered by other parts of the world. Ancient China became a large and powerful society and its significance remains strong to this day.

Source 1 Hundreds of terracotta warriors were found in the tomb of Emperor Qin Shi Huang of the Qin Dynasty.

Lessons in this module

Lesson 13.1
Ancient China: a timeline

Source 1 A timeline of significant events in ancient China.

Learning intentions and success criteria

c. 1700
The use of bronze commences in China. It is widely used for ceremonial vessels and spiritual relics.

c. 1046
Start of Zhou Dynasty, China's longest-ruling dynasty – ending in 221 BCE

c. 1600
Start of Shang Dynasty, during which a system of writing emerged and large cities were built – ending in 1122 BCE

c. 600
The use of cast iron begins in China, improving the strength of farming tools and military weapons.

c. 2000 BCE
Possible start of Xia Dynasty, China's first dynasty – ending in c. 1600 BCE

| 2400 BCE | 2200 | 2000 | 1800 | 1600 | 1000 | 600 |

c. 563
Siddhartha Gautama (later known as Buddha) is born; his teachings will form the basis of Buddhism.

551
Chinese philosopher, teacher and author Confucius is born.

A bronze wine cup found at the archaeological site of Erlitou, the possible capital of the Xia Dynasty

A statue commemorating Confucius, whose teachings are still relevant today

481
Start of Warring States period lasting around 260 years, in which there will be almost constant conflict between different Chinese states fighting for power and control

220
Qin Shi Huang begins work to join up and extend a number of separate mud-brick defences built by lords during the Zhou Dynasty. This will become one of the strongest defensive structures ever built – the Great Wall of China.

An artist's impression of Wu Zetian, China's only empress

690 CE
Wu Zetian becomes the only woman in the history of China to rule as Empress Regent, she forms her own dynasty, the Zhou, interrupting the Tang Dynasty for 15 years.

c. **100**
The manufacture of steel begins in China.

581
Start of Sui Dynasty – ending in 618 CE

History

| 400 | 200 | 1 CE | 200 | 400 | 600 | 800 CE |

221
Start of Qin Dynasty and rule of China's first emperor, Qin Shi Huang – ending in 206 BCE

140
The sixth Han emperor, Wu Di, commences rule. He will be best known for expanding Chinese territory – under his rule, China doubles in size, making it larger than the Roman Empire.

206
Start of Han Dynasty, during which time China's bureaucracy expands and strengthens – ending in 220 CE

220
The Han Dynasty ends and the empire is divided into the three kingdoms of Wei, Shu and Wu, which fight each other for control of China for 60 years.

618
Start of Tang dynasty, known as the Golden Age of arts and culture – ending in 907 CE

Source 2 Pronunciation guide

Chinese name	English pronunciation
Qin	chin
Qin Shi Huang	chin sheh hwang
Qing	ching
Sui	sway
Wu Zhao	woo jow
Zhou	joe

Sequence this! Ancient China

Check your learning 13.1

Check your learning 13.1

Review and understand

1 **Identify** when the Warring States period occurred. What happened during this period?

2 **Identify** the first emperor of China. What was the world-famous structure he was responsible for?

3 **Identify** the technological innovations listed on the timeline. How may they have been used?

Lesson 13.2
Physical features of ancient China

Introduction

Ancient China was located on the eastern side of the Asian continent. The dawn of ancient Chinese society dates back to early farming practices in 4000 BCE. Its growth was supported by physical features of the land including long rivers, huge mountain ranges and a mild climate.

Ancient China was geographically isolated from other societies of the time. Without outside influence, it was able to grow and remain strong for 2,000 years. The ancient Chinese people considered China to be the "centre of civilisation" or "Middle Kingdom", surrounded by barbarians.

Natural boundaries

Due to a variety of physical features, ancient China was a well-protected society. On all sides, China was bordered by natural protection (see Source 1).

China's northern border was the least well-protected by natural geographical barriers. The Mongols – tribal warriors who lived as nomads – would often raid cities in northern China. To protect China from these attacks, work began on a huge defensive structure in 220 BCE: the Great Wall of China (see Source 2).

Source 1 China's natural borders and protection

To the east	The Pacific Ocean, which provided access to travel by sea as well as a natural coastal protection against others
To the south	The dense tropical rainforests of modern-day Burma, Laos and Vietnam, which were nearly impossible for others to travel through by foot
To the south-west	The Himalayan mountain range provided the highest physical barrier in the world; with its extreme climate and high altitude, the Himalayas were an excellent shield from others
To the north-west	The harsh cold deserts such as the Gobi Desert, as well as grasslands that could only support a nomadic lifestyle

Source 2 A section of China's Great Wall showing some of the steep mountain terrain.

Rivers and climate

China has two major river systems – the Yellow River and the Yangtze River. The early people of China settled along these two rivers. Different settlements were ruled by individual kings. The rivers provided the settlements with fresh water, food and transportation.

The Yellow River

The Yellow River, also called the Huang He River, is where the first settlements were founded. It is the sixth-largest river in the world, measuring 5,464 kilometres in length. This river flowed across a plain and it flooded each spring, creating fertile yellow soil called loess. This river system was ideal for growing millet (a type of grain), for fishing, and for grazing sheep and cattle. It was also a fresh water resource for the people living nearby. The climate in this area was generally dry with very cold winters. The early people referred to the Yellow River as "China's Sorrow" because the annual flood caused significant damage to villages located on the low riverbanks. Over time water management practices such as canals, terraces and stone **embankments** were created to control the river's flow.

embankment a wall or bank made of stone or earth made to keep water back

Source 3 This is part of a map of the Yellow River, measuring 12 metres in length, on display at the Metropolitan Museum of Art in New York City. It was drawn in 1690 CE and reflects a high level of accuracy in surveying and cartography. The plain and the loess soil are quite distinctive across the landscape.

History

The Yangtze River

The Yangtze River is in the south of China. It is the third-largest river in the world (6,380 kilometres long) and is very wide. This made it a very difficult river to cross, so there were many times in the history of ancient China where it operated as a political boundary between northern and southern China.

This area experienced more rainfall than the north. It was the first area in the world where rice was grown in large paddy fields. Some historians suggest that this could have been even before 5000 BCE. Rice was a highly nutritious food and could support a greater population using the same area of land as millet.

Farmers gradually migrated south as the area supported a variety of crops, boosting its economy and increasing farmers' wealth.

Explore it! A virtual field trip to China

Check your learning 13.2

Check your learning 13.2

Review and understand

1 **Identify** the name given to the Yellow (or Huang He) River by the Chinese people. Why did they call it this?
2 Why were farmers attracted to the Yangtze River valley?

Apply and analyse

3 Ancient China's growth was supported by its physical features.
    a Create a list of the strengths of China's physical features.
    b Create a list of the weaknesses of China's physical features

Evaluate and create

4 Which of China's surrounding barriers (natural and built) do you think would have posed the greatest challenge for an invading force? **Justify** (give reasons for) your opinion. Suggest what an invading force might have had to do to overcome this obstacle.

13A Concepts & skills in context
China's physical features

Introduction

China is the third-largest country in the world, with a land area of about 9.6 million square kilometres. Close to 70 per cent of its land surface consists of rugged mountains, plateaus and hills. The other 30 per cent is made up of river basins and lowland plains, which is where most of the Chinese people settled.

Source 1 The flowing Yellow River in Yanan, Shaanxi, China.
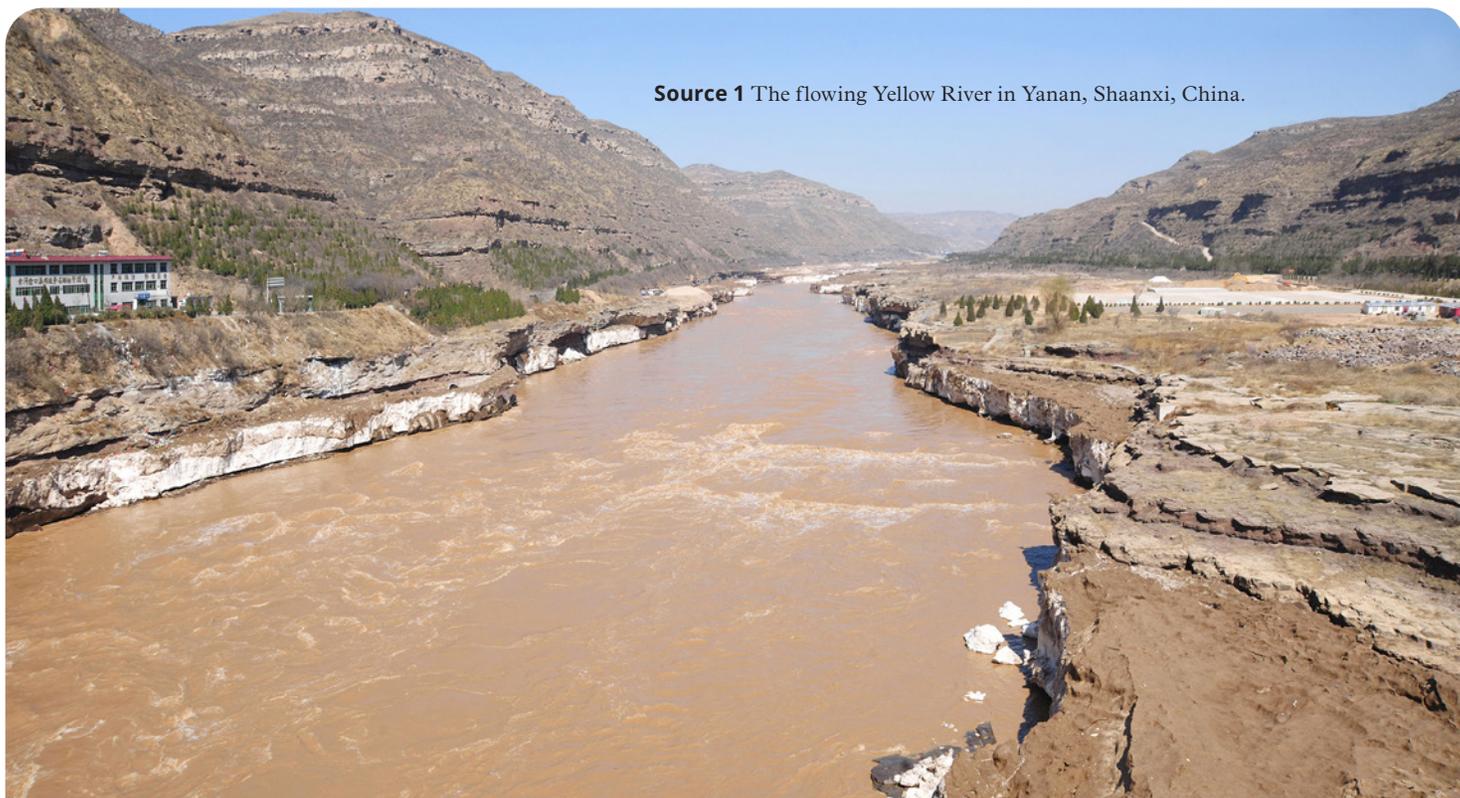
Key concepts & skills Causes & consequences

The impact of causes and consequences

Causes and consequences help us understand how events develop, and their flow-on effects. The physical features of ancient China influenced the location and development of farming land and cities. For example, the locations of mountains and deserts as well as the need to be close to water led to decisions on where settlements could begin. Many settled on the low riverbanks by the Yellow River, which was prone to flooding. The consequence of this is that the Chinese people had to develop ways of managing and preventing flood damage in the future.

Maps are geographical representations of all or part of the Earth's surface. They are an important source of primary information for historical inquiries.

Use the list below to help you understand and analyse the information provided on maps.

- **Orientation** – It is convention for cartographers (map makers) to place a north point on maps. This helps the reader to work out position and direction.

- **Title** – Like a newspaper headline, the title of a map should tell the reader "what", "where" and "when" about the map. The date should help the reader fit the map into its proper chronological period.

- **Legend** – This is a key that explains the symbols used by the cartographer. To visualise reality, you need to be able to convert various shapes, colours and textures into the features they represent.

- **Scale** – This is the proportion of map to the ground. It helps the reader to judge actual distances. Scale is most often shown as a linear measure (for example, 1 centimetre on the map represents 100 kilometres of actual distance).

- **Grid** – Maps often show parallels of latitude and meridians of longitude, so that the area can be placed in its proper geographic location on the globe.

For more information on causes and consequences, see Lesson 6.6 Causes and consequences (page 233).

Physical features of present-day East Asia, including China
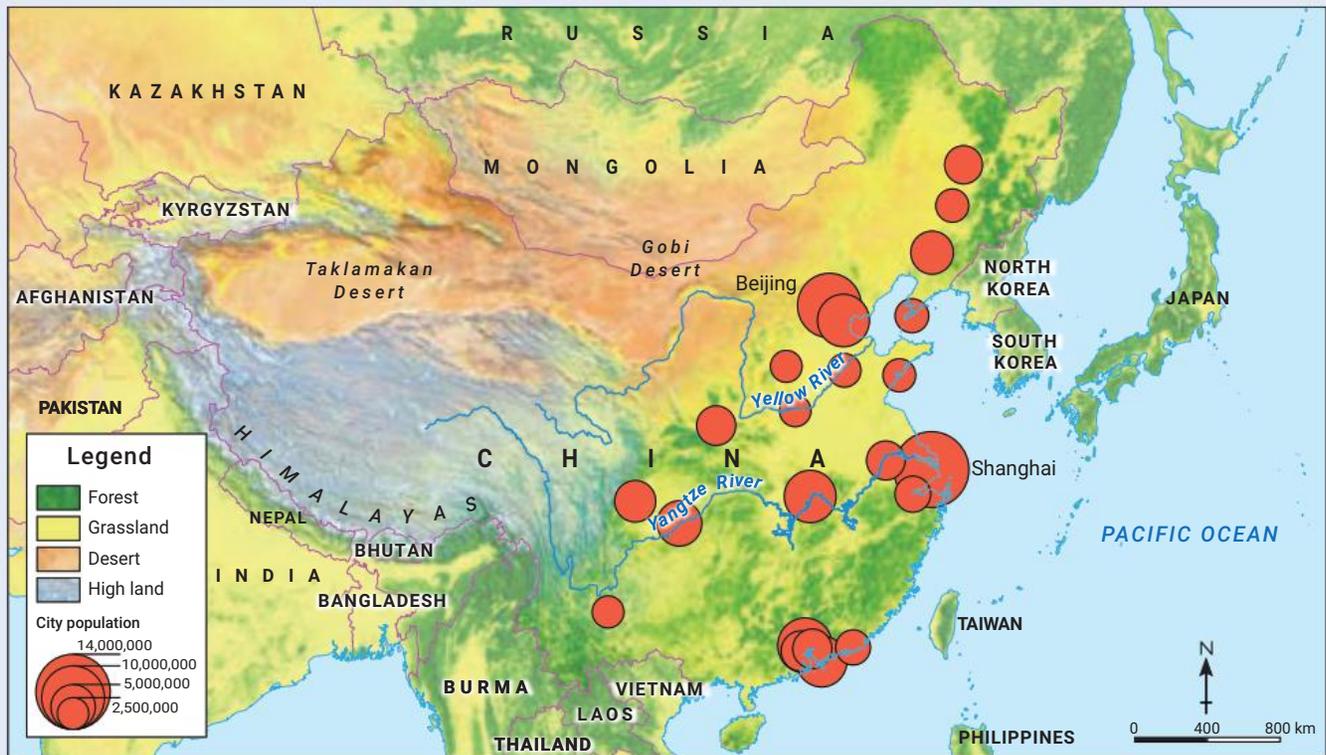
Source 2

Practise the skill

1 Look carefully at Source 2 and use the legend to **identify** the different landscapes and physical features of modern-day China. Then answer the following questions, recording your observations in point form.

   a Consider the different landscapes and physical features shown on the map. How many are there? Which of these features act as natural barriers?

   b Which areas would have been the best sites for farming in ancient China? Why?

   c Do you think the areas of cropland today would be the same or different from those in ancient China? **Explain** your answer.

   d **Determine** (decide) which geographical feature you think was most influential in the development of ancient Chinese society. Why do you think this?

2 Using the information you have gathered in question 1, write a short paragraph (150 words) to **explain** the causes and consequences that various physical features had on ancient China. How have they influenced settlement patterns and borders?

Extend your understanding

1 **Create** your own map of East Asia.

   a Copy (or trace) the main elements of the map in Source 2. Include the main countries and their borders, major rivers, deserts and mountains. Make sure you also include BOLTSS – border, orientation, legend, title, scale and source.

   b Use an atlas or an online map to locate the Great Wall of China. Think of an appropriate symbol or legend to represent this feature, and then add it to your map.

2 Look again at Source 2. Start at any point on the Chinese border. Extend a ruler from this point, in any direction, to another point on China's border. This represents the journey you will travel.

   a In order, list all the physical features and landscapes you will cross as part of your journey. **Research** further if you need to.

   b Which feature do you think will represent the greatest challenge, and why?

Lesson 13.3
Political structure of ancient China

The rise of dynasties

Around 5,000 years ago, the Yangshao culture was the dominant culture of peoples in northern China. They were early farmers, who spread out along the banks of the Yellow River. Over time, ruling families (known as **dynasties**) emerged from this group. The head of the family was called the king or emperor who would rule the land. When the ruler died, the eldest son would usually take over.

The Chinese people believed these rulers had been chosen and blessed by the gods. Many dynasties fell after losing a battle with another rival family. Each dynasty expanded the size of ancient China in these early years, reaching half the land size of modern-day China (see Source 1).

Learning intentions and success criteria

dynasty a period of rule by members of the same family who come to power one after the other

History

Shang Dynasty (*c.* 1766–1122 BCE)

The Shang kingdom was established at the base of the mountains along the Yellow River in northern China. This area had fertile farming land and metal deposits that were mined to develop tools, artworks, religious artefacts and weapons. Their discovery of and ability to mine bronze marked the beginning of the Bronze Age in China.

Over time, more walled cities developed south of the Yellow River and the Shang Dynasty built palaces, elaborate burial sites and bronze statues.

China: Expanding territories of early dynasties

Legend
- Shang
- Zhou
- Qin
- Han
- Present day
- Great Wall

PACIFIC OCEAN

N

0   400   800 km

Source 1

The Shang followed an early form of **feudalism** whereby the king had several lords or chiefs to help oversee the farming population outside of the walled cities. These lords ruled their own smaller kingdoms and would tax the population to fund more construction.

The people of the Shang Dynasty were also strong fighters, making and using chariots in battle against their opponents. Lords from the smaller kingdoms provided armies to protect the king as a sign of loyalty.

feudalism a social system that existed in Europe and Asia in which people were given land and protection by a lord, and had to work and fight for him in return

Historians mainly found evidence of the Shang Dynasty from oracle bones (see Source 2). These relics show us that the Shang used a written script or language, similar to that used in China.
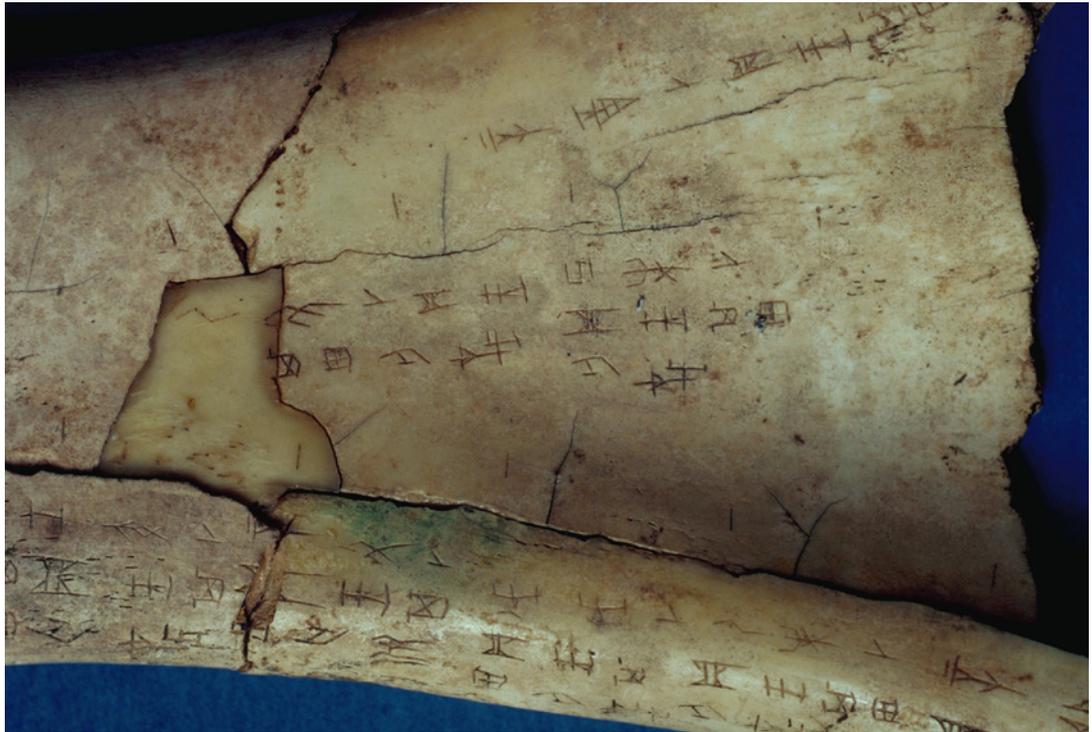
Source 2 A cracked oracle bone discovered in China. Oracle bones were used to predict the future with questions such as, "Will we win the war?" or "Will I have a son?" They have provided historians with information about the Shang Dynasty.

Zhou Dynasty (c. 1046–256 BCE)

The Zhou kingdom was originally part of the Shang Dynasty. However, in 1045 BCE the head of the Zhou family sent his army to defeat the Shang army at the battle of Muye.

King Wu Wang established a new dynasty and moved the capital from Erlitou to the Wei Valley. The Zhou Dynasty strengthened the feudal system and expanded their territory, connecting with native peoples in the Yangtze Valley. They mastered the use of bronze and introduced cast iron around 600 BCE, which improved the durability of tools and weapons (see Source 3).

Up until 771 BCE, this dynasty lived quite peacefully. However, over the next 200 years the king of the Zhou lost control. Many lords began to fight with leaders of other states over territory. The Chinese philosopher Confucius lived during this time and was disheartened by the conflict. He taught people about living together in peace, and these teachings had a lasting impact on Chinese culture.

By 481 BCE, the Zhou Dynasty was in a state of constant warfare known as the Warring States period. Eventually, around 150 small states were merged into seven large states: Chu, Han, Qi, Qin, Wei, Yan and Zhao. After 260 years of conflict, the Qin kingdom conquered all other warring states and established the Qin Dynasty in 221 BCE.

Qin Dynasty (221–206 BCE)

The name China originates from the word "Qin". This dynasty established the first empire in China, with the leader Qin Shi Huang known as the first emperor of China.

Emperor Qin established an **imperial** capital city in his home kingdom, located in the modern-day Xi'an area. This was different to the feudal system that had been operating in China up until this point, as it meant that Qin was the one leader that ruled over everyone.

The Qin Dynasty now controlled a large area of land incorporating both rivers and a large population. To control society, Qin introduced a concept called "legalism". It was based on the idea that people were naturally selfish and short-sighted, and needed laws to keep them in control. In order to maintain an obedient population, Qin imposed strict punishments using his powerful army. Han Fei, an **official** for the emperor, wrote a book about **legalism** explaining that "hardly ten men of true integrity and good faith can be found today ... therefore the way of the enlightened ruler is to unify the laws … to lay down firm policies instead of longing for men of good faith".

The Qin Dynasty pioneered many things, including writing script, developing a currency, and using weights and measures. They also built a network of roads and canals to improve trade. The Great Wall of China was built under Emperor Qin, who ordered it to be built to prevent attacks from the nomads in the north.

After Qin's death in 210 BCE, rebellions occurred throughout the empire. The Chinese people wanted to remove the harsh rules of legalism that Qin had put in place. Eventually, after eight years of warring, a peasant named Liu Bang led an army to defeat the Qin forces, and he founded the Han Dynasty.

Source 3 A product of the manufacture of cast iron in ancient China. Molten iron was poured into moulds dug into beds of sand to make metal shapes for tools and weapons.

imperial belonging or relating to an empire or the person or country that rules it

official a person who is in a position of authority in a large organisation

legalism a belief that people need to be controlled by laws

Han Dynasty (206 BCE–220 CE)

The Han Dynasty lasted more than 400 years. Its founder, Emperor Gaozu (formerly Liu Bang), gained support from the people by removing the harsh laws of Emperor Qin.

To maintain control, Gaozu allocated kingdoms in eastern China to his supporters and he focused on ruling the western regions where border attacks were more likely. He looked after the people by lowering taxes and making legalism more bearable.

Under Gaozu's rule, China experienced a long period of peace. This allowed the empire to focus on other things, such as developing large cities and establishing the Silk Road (see Lesson 13.13 Change through trade (page 470) for more information). The population also grew in this time.

Think, pair, share

- Think about the usefulness of oracle bones as a primary source of evidence. What new information might be gained from studying them?
- Discuss your ideas with a partner.
- Share your Han Dynasty (206 BCE–220 CE) ideas with the class.

census an official count or survey of something, especially a country's population

A **census** conducted in 2 CE tells us that China had the largest population in the world at the time, with 57.5 million people.

Under the Han Dynasty, emperors followed the teachings of Confucius and promoted men within the government based on their talent and skills, rather than their family ranking. Emperor Wu Di ruled for 54 years (140–87 BCE) and worked alongside his scholars to establish a university. The Han Dynasty also set guidelines on a "proper" lifestyle, outlining suitable material possessions dependent on your social rank. For example, clothing was an important symbol of a person's prestige.

However, by the third century CE the threat of invading nomads placed a great deal of pressure on the Han Dynasty. The government had to focus on protecting the borders, which was very costly as it involved supporting a growing army. With the population continuing to grow, there was less available farmland for people to work on, and many peasants could not afford to buy food or pay taxes. The army suffered from many rebellions, which weakened the Han Dynasty. China then divided into smaller regions with many ruling families.

Quiz me! Political structure of ancient China

Check your learning 13.3

Check your learning 13.3

Review and understand

1 Who was Liu Bang?
2 Study Source 4. **Describe** what may have been "proper" clothing attire for an emperor such as Wu Di.

Apply and analyse

3 **Explain** how feudalism worked to control the population in the Shang Dynasty.
4 **Explain** the concept of legalism in the Qin Dynasty.
5 Consider how dynasties usually began and ended in ancient China. **Explain** the common link and how it contributed to the end of many dynasties.

Evaluate and create

6 Write a paragraph to **discuss** which dynasty you would have preferred to live in and why. In your answer, also explain why you did not choose the other dynasties.

Source 4 Emperor Wu Di of the Han Dynasty (r. 140–87 BCE), attended by two courtiers (attendants).

Lesson 13.4
Key groups in ancient Chinese society

hierarchy a way of organising things (or people) from top down in order of importance or significance; ancient societies had strict hierarchies with a ruler at the top and peasants at the bottom

deference behaviour that shows that you respect somebody or something

Introduction

Ancient Chinese society was based on a strict social **hierarchy**. Everyone had their place and by maintaining it, they could live together in harmony. This was reinforced by the Chinese philosopher Confucius, who taught people to show **deference** and obedience towards those with a higher rank or older age. Within each social class it was expected that a person's selfish desires would come second after what was good for the group.

The emperor and imperial family

The emperor ruled over all of society and had the power to enforce people's obedience. Owning all the land, he was also responsible for protecting them and was expected to uphold his title by behaving in a respectable manner.

The emperor and his family lived in luxurious palaces, and enjoyed food, treasures and silk garments. They drank tea or rice wine, and were entertained by watching dancers and musicians or playing board games.

The *shi* – nobles, officials and scholars

The *shi* were an elite class who made up 1% of the population. They managed government administrative duties, legal matters, tax collection and advised the Emperor.

Under each dynasty, this class grew as more officials were needed to support the growing population. To become a civil servant, a man required a recommendation from a noble. By 124 BCE, men also had to pass a difficult exam and hold a university degree to become an official.

The *shi* also enjoyed leisure and entertainment. Liu Shen, son of Han Emperor Ching, once said, "A proper Lord should spend his day listening to music and delighting himself with beautiful sounds."

Source 1 An artist's impression of the Chinese philosopher, Confucius.

Source 2 The *shi* were often adorned with elaborate jewellery made from gold, bronze or iron such as this belt buckle.

History

The *nong* – farmers

About 90 per cent of the ancient Chinese population were farmers. They were often poor and lived a hard life, struggling to keep fertile land and pay taxes. However, they were recognised as being valuable for providing food and income to the country.

Farmers wore simple clothes and lived in small mud huts with straw roofs. They ate grains, rice, beans or vegetables and sometimes fish. They used communal wells for water, cooked outdoors and had poor sanitation.

The *gong* – artisans and craftspeople

The *gong* were highly skilled labourers who had usually mastered their craft over many generations within the family. They were generally poor, but some did make a profit from running their own business or working for the government.

This group included people who produced textiles, pottery, artworks and jewellery as well as builders, carpenters, painters and architects. Successful and skilled artisans could employ apprentices and additional workers. Despite being lower on the social hierarchy than farmers, artisans earned more than them.

The emperor and imperial family

The *shi* – nobles and officials

The *nong* – farmers

The *gong* – artisans and crasftspeople

The *shang* – merchants and traders

Source 3 The social hierarchy of ancient China and the key social groups within it.

The *shang* – merchants and traders

The *shang* class consisted of shopkeepers, bankers, sellers and traders who usually lived in towns and provided goods and services. They were wealthy, but were considered the lowest social class in ancient China. People believed that they did not contribute to the good of the whole society but only worked for their own gain.

The *shi* believed the government should not be concerned with money, which meant the *shang* were unable to apply for government jobs and were placed at the bottom of the social hierarchy. Despite this, as trade increased throughout the empire, the *shang* could become very wealthy.

Slaves in ancient China

Roughly 1 per cent of the population in ancient China was made up of slaves. Slaves were either born into slavery, sold into slavery or captured during war.

While they often worked on farmland, they did not receive the same respect as the *nong*. Slaves were also used to build roads and notably built the Great Wall of China. When their master died, they too would be killed in order to serve their master after death. The Qin Dynasty was especially ruthless towards slaves, which led to other dynasties discouraging the use of slavery.

Quiz me! Key groups in ancient Chinese society

Check your learning 13.4

Check your learning 13.4

Review and understand

1   In your own words, **define** "social hierarchy".
2   **Identify** the hobbies of the emperor and the *shi*.

Apply and analyse

3   **Explain** why farmers and officials were both highly respected in ancient China.

Evaluate and create

4   In small groups, **create** a role play for the class about some aspect of life in ancient China that clearly shows the roles and responsibilities of different social groups.
5   Is Source 3 a reliable source? What type of source is it, and what are its strengths and weaknesses?

History

Lesson 13.5
Women in ancient China

Introduction

Women in ancient China were lower than men in the social hierarchy. They were expected to do what their fathers and husbands said. In general, families preferred male children and considered the birth of a girl to be a sign of bad luck.

Women were rarely educated, although wealthy women might receive some education. Poorer women typically cooked, cleaned, wove cloth, raised the many children they were expected to have, and helped on the land if they were married to farmers.

Learning intentions and success criteria

Marriage

Women obeyed their fathers, brothers, husbands and sons. Their father decided when and who they would marry. Once married, women had to live with their husband's family, and please them by producing many sons.

dowry money and/or property that, in some societies, a wife or her family must pay to her husband when they get married

polygamy marriage to more than one person at the same time

Marriage was not based on love or affection. Instead, the bride's family would pay a **dowry** to the husband's family. Belonging to a household was a necessary form of survival because women had no way to independently make money. The financial burden of the dowry was another reason why people wanted their babies to be born male.

Men outnumbered women in ancient China. For every three women, there were five men. **Polygamy** gained popularity, especially amongst the *shi*.

The age of marriage was thirteen. Despite Confucius suggesting women should marry at age 20, the government reduced the age to boost the population for a larger workforce. Historians suggest that another reason for keeping the age of marriage at 13 was because life expectancy only ranged between 22 and 35 years.

Key concepts & skills Causes & consequences

Foot binding

In ancient China, girls' feet were bound because tiny feet improved a woman's social status – and hence the status of her family. For a time, bound feet were essential for a "good" marriage. Tiny feet were considered beautiful and were thought to make a woman walk in a more feminine fashion. The practice began among the wealthy but became more widespread. A poor girl might have her feet bound to improve her family's social prospects.

Source 1 These shoes were once worn by a wealthy Chinese woman.

Bones in a girl's feet were broken and the feet were tightly strapped until she was fully grown. The U-shaped foot had all its toes except the big toe curled under the sole. The foot might only be 10 centimetres long.

The effect of foot binding was to inflict great pain on a woman and leave her with lifelong disabilities. Walking more than a few metres was impossible. Poor women with bound feet had no choice but to work, so they often did so on their hands and knees. Foot binding also made women dependent on their husbands and families, as they could not go very far beyond their home on their own.

For more information on causes and consequences, see Lesson 6.6 Causes and consequences (page 233).

Empress Wu

Confucius argued that a woman in leadership would be as unnatural as having a "hen crow like a rooster at daybreak". Despite this, one woman named Wu Zetian did break through the rigid social structure to become the only empress of China.

Born in 624 CE during the Tang Dynasty, Wu Zetian came from a noble family and received an education. By the age of 13, Emperor Tai Tsung and his son, the future Emperor Gaozong, had noticed her for her intelligence, beauty and wit.

Wu Zetian was recruited as a **concubine** and gave birth to two sons and a daughter. Over time, Wu Zetian gained the trust of Emperor Gaozong, who removed his first wife to remarry her.

In 660 CE, Gaozong had a stroke, so Wu Zetian took over many of his duties because she had the experience and skills to do so. After allowing her sons to both rule as emperors, by 690 CE Wu Zetian decided to stop being the "power behind the throne" and crowned herself empress and set up her own dynasty.

As empress, she challenged the traditional views towards women. She made many key achievements during her rule (outlined in Source 3). Empress Wu died in 705 CE, at the age of 80, after controlling the empire for almost half a century.

Source 2 An artist's impression of Wu Zetian.

Quiz me! Women in ancient China

Source 3 Some key achievements of Wu Zetian.

Wu Zetan's key achievements
Introduced labour-saving techniques such as improved irrigation schemes to increase farming productivity
Reduced taxes for farmers as an incentive to increase food production
Introduced a system of workplace promotion based on merit, not social position or wealth
Promoted the role of women as active contributors to society
Established Buddhism as the preferred state religion and built many Buddhist temples

concubine a woman who lives with a man, often in addition to his wife, but who is less important than the wife

History

Check your learning 13.5

Check your learning 13.5

Review and understand

1 **Identify** three ways in which women were treated less favourably than men in ancient China.
2 Give one reason why girls were married at such a young age.

Apply and analyse

3 Write a paragraph to **summarise** why Empress Wu Zetian is considered a historically significant figure.
4 **Compare** the experience of women with that of slaves (see Slaves in ancient China in Lesson 13.4 Key groups in ancient Chinese society, page 445). Who do you think had a better experience in ancient China and why?

Evaluate and create

5 **Create** the diary entry of a young girl living in ancient China. Describe her family background, social status and daily life. Try to capture her perspective and possible thoughts and feelings about her current life and her future.
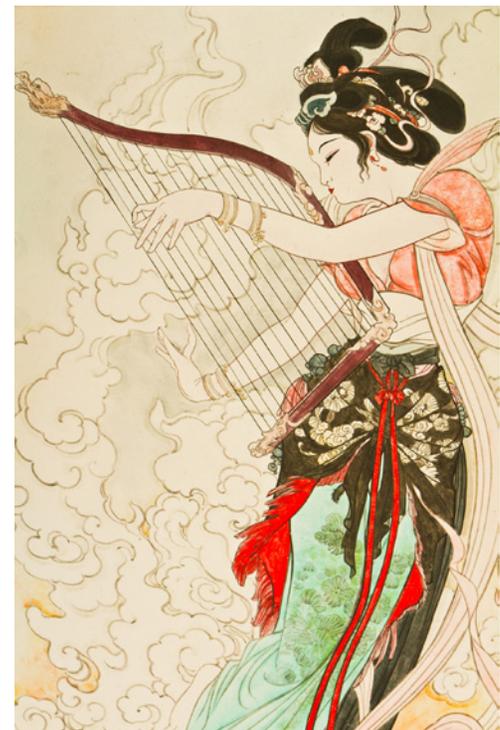
Source 4 A woman playing the konghou, a harp-like instrument.

Lesson 13.6
Significant individual: Qin Shi Huang

regent a person who acts as head of state if the true ruler is too young, too ill or missing

autocrat a person who rules with unlimited authority

standardised to bring together (into one order) activities that have similar features

Early life

As a child, Qin Shi Huang was known as Ying Zheng. He was born in the state of Qin in north-western China in 259 BCE. At the age of 13 he was formally declared the king of Qin, which at the time was the most powerful of all the Chinese states. As a child, Zheng ruled Qin with the help of a **regent**.

In 238 BCE, at the age of 21, Zheng took power in his own right. During the Warring States period, Zheng used the military strategy and force of his generals and troops, along with espionage and bribery, to ultimately overpower all the other six kingdoms (see Source 2). By the time he had taken control and united these states in 221 BCE, he was 38 years old. The victory unified a country that had been divided by wars between rival kingdoms for 260 years and created a unified empire. In the same year, Ying Zheng declared himself China's first emperor and changed his name to "Qin Shi Huang", meaning "first magnificent god of the Qin".

Source 1 An artist's impression of Qin Shi Huang, painted during the nineteenth century.

Source 2 The seven Warring States during the Zhou dynasty; the Qin state was very large and had conquered all other states by 221 BCE.

The empire's new government

To strengthen his hold over his new empire, Qin Shi Huang divided the conquered states into 36 prefectures (administrative divisions), each with a governor in charge who answered to him. He forced the nobles who had ruled over the states to live near his imperial court at the capital, Xianyang. There he could watch over and control them.

Qin Shi Huang did much to organise, unify and protect the new empire. He was an **autocrat** but a very clever manager. Before Qin Shi Huang, the feudal system allowed each state to have its own code of laws. Qin Shi Huang set up one code for all of China called legalism (see Qin Dynasty (221–206 BCE) in Lesson 13.3 Political structure of ancient China, page 441), which **standardised** everyday life. He also built good roads connecting the provinces to his

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13.6

capital. The code of laws and system of roads helped to keep the empire united. Qin Shi Huang even planned and began work building the Great Wall of China.

Qin Shi Huang's iron rule

Despite his many positive achievements, Qin Shi Huang was also a very fierce leader who was feared by his people. He took steps to prevent rebellion in his empire. Believing knowledge about the past was dangerous, as were ideas encouraging free and independent thinking; he banned the teachings of Confucius. He ordered books and writing that did not support his ideas to be burned. Scholars found reading the works of Confucius were killed or enslaved. About 460 scholars were buried alive for the crime of owning banned books.

Qin Shi Huang also taxed the people heavily and forced them to serve in the army and work on his projects. Punishment for crime was formalised across the state and often ruthless. Slaves were also treated poorly.

Such behaviours eventually angered his people. Qin Shi Huang began to fear he would be killed. Perhaps because of this, he became more isolated and obsessed with his death. Emperor Qin believed he could empty his inner self and allow the forces of the universe to freely act through him. He began to drink substances that he hoped would give him eternal life, such as mercury, which we now know is poisonous.

He died while on a journey during a hot summer in 210 BCE. He was buried in an elaborate tomb, prepared for him during his life. He was "protected" by an army of over 7,000 life-size terracotta soldiers, horses and chariots.

Source 3 A selection of Qin Shi Huang's key achievements during his reign.

Qin Shi Huang's key achievements
Introduced a common currency, common weights and measures, and a common language throughout China (based on the same 3,000 characters)
Built grand public buildings and palaces
Made significant progress on the planning and construction of the Great Wall of China
Built a network of canals and bridges to connect the provinces
Ordered carts to be built with the same wheel axle width in order to make travelling on roads within the empire easier

Think, pair, share

· Think about the achievements of Qin Shi Huang. Do they justify his harsh treatment of the people?
· Discuss your ideas with a partner.
· Share your thoughts with the class.

Quiz me! Qin Shi Huang

History

Check your learning 13.6

Check your learning 13.6

Review and understand

1 In your own words, **define** "autocrat".
2 **Outline** the method used by Qin Shi Huang to control his new empire.
3 **Describe** how the painting in Source 1 shows the power of Qin Shi Huang.

Apply and analyse

4 **Explain** which of Qin Shi Huang's key achievements you believe was most important and why.

Evaluate and create

5 **Create** a feature article or front-page newspaper report that summarises why the leadership of Qin Shi Huang is considered historically significant in your opinion. Choose a headline for your article highlighting your point of view about the emperor.
6 **Evaluate** Qin Shi Huang's strict way of ruling. What are its strengths and weaknesses? Do you think it was an effective way to rule? Explain your answer using examples.

13B Concepts & skills in context
A woman's place

Introduction

Although women were low in the social hierarchy of ancient China, some sources show a different perspective. The first female historian, Ban Zhao (*c.* 45–120 CE), provides another insight into women of the time. Unlike most women, Ban Zhao received an education, which enabled her to mingle in politics at the Emperor's Court.

Despite being married at age 14, Ban Zhao's husband died soon after their marriage, leaving her a widow. She then became a teacher and writer for the Emperor's family. Her most famous book, *Lessons for Women*, outlined how women should behave in society. Male scholars at the time disagreed with some of her writing. For instance, Ban Zhao insisted girls should be educated and that they must "think of themselves last in all situations".
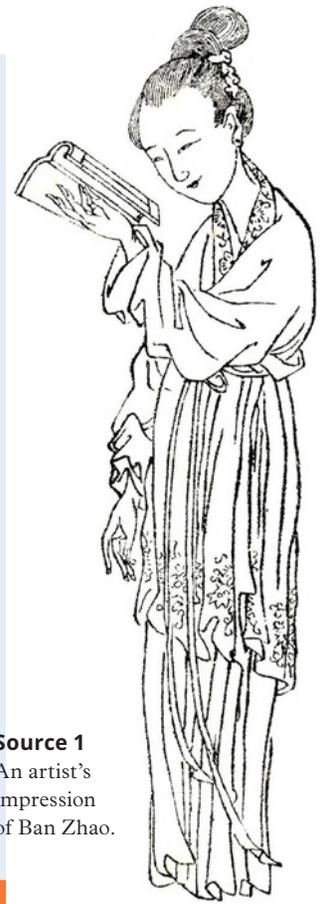
Source 1
An artist's impression of Ban Zhao.

Key concepts & skills Using historical sources

Understanding perspectives

A perspective is a way of thinking about something. Historical sources often convey the creator's perspective about an issue or event. When studying a topic, historians aim to understand a wide variety of perspectives to form a balanced opinion.

There are three key elements to look for in a source when analysing a perspective (see Source 2). For visual sources you look for parts of an image that express a perspective, whereas for written sources it is best to annotate, highlight or colour code the source text according to each element. Source 3 provides an annotated example.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Source 2 Three things to look for when analysing perspective

What to look for	Explanation
Context	Context is the situation in which the source was produced. What background information do you have about the creator of the source and their society at the time?
Opinions	Ask yourself: what opinions are expressed in the source? Sources can show a bias when they convey strong thoughts or feelings which are one sided. If the source is written, ask yourself which specific words or phrases show the writer's attitudes and feelings. This is called emotive language as it causes people to feel strong emotions. Visual sources can also make you feel strongly.
Inferences	An inference is an indirect message or perspective that is implied (hinted at) in the source but not outright stated. People do not always spell out what they are thinking. The reader needs to use clues in the text to "read between the lines" and infer meanings. The creator's attitude towards something can usually be inferred by what is written and how it is expressed.

Opinions: shown through emotive language

Inference: she was from a noble family

Context: she was educated and married at 14

Inference: repetition suggests an indirect message regarding the many rules placed on women

[Women] are ignorant and by nature unclever. I was favoured because of my ancestry, and, relying on the teachings of governess … at fourteen I clutched dustbasket and broom [as a young wife] … Let a woman retire late to bed, but ride early to her duties … Let her not refuse to perform domestic duties whether easy or difficult. Let a woman be composed in demeanour … Let her live in purity and quietness [of spirit] and keep watch over herself. Let her not love gossip and silly laughter. Let her bear contempt; let her even endure when others speak or do evil to her. Always let her seem to tremble and to fear … If a husband does not control his wife, then he loses his authority. If a wife does not serve her husband, then … [the natural order] are neglected and destroyed.

Source 3 Annotated excerpt from Ban Zhao's *Lessons for Women, c.* 106 CE

The following primary sources provide us with a range of evidence about the perspectives held towards women in ancient China.

Source 4

Bitter it is to have a woman's shape!

It would be hard to name a thing more base.

If it's a son born to the hearth and home

He comes to earth as if he's heaven sent,

Heroic heart and will, like the Four Seas,

To face ten thousand leagues of wind and dust!

To breed a girl is something no one wants,

She's not a treasure to her family.

A poem written by Fu Hsuan in the third century CE

Source 5

The band would be playing military music. The Princess personally beat the drums and rose in righteous rebellion to help me establish the dynasty. How can she be treated as an ordinary woman?... As you know, the princess mustered an army that helped us overthrow the Sui dynasty. She participated in many battles, and her help was decisive in founding the Tang dynasty. She was no ordinary woman.

Words of Emperor Gaozu, father of Princess Pingyang, after her death in 623 CE; recorded in Chinese literature

Practise the skill

1 Read Source 4 and Source 5 and **analyse** the perspective of each creator using the table below to collate your information:

	Context	Opinions	Inferences
Source 4			
Source 5			

2 For each source, **summarise** the perspective of the writer towards the role of women in one or two sentences.

3 Which source do you think shows the most bias? **Explain** why and provide examples of some emotive language used.

4 **Compare** the perspectives described in Source 4 and Source 5 to views held in society today. Write a paragraph reflecting on what is similar and what has changed.

Extend your understanding

1 **Research** a significant ancient Chinese woman and explain why she is considered historically significant. Present your information in a suitable manner. A list of possible women to research is provided on Oxford Digital.

Document: Significant women in ancient China

Lesson 13.7
Religion in ancient China

Source 1 A Qing Dynasty print showing Confucius presenting Gautama Buddha to the philosopher Lao-Tzu.

Learning intentions and success criteria

ancestor a person in your family who lived a long time ago

Introduction

The people in ancient China held a variety of different religious beliefs, values and traditions. For thousands of years, they worshipped gods, **ancestors** and spirits. The Chinese people believed that the gods controlled the forces of nature. When a natural disaster like a flood occurred, they saw it as a sign that the gods were unhappy. Therefore, to please the gods the Chinese people established many rituals and festivals to honour them.

The ancient Chinese people had three main belief systems. These were Confucianism, Taoism and Buddhism. Together, these were known as the Three Teachings. While some emperors favoured only one belief system, others believed it was possible to follow all three within one day!

self-cultivation the development of one's mind or capacities through one's own efforts

Confucianism

Confucius (*c.* 551–479 BCE) was a highly respected philosopher born during the Warring States period. His fear was that this conflict would tear China apart. He developed a set of ideas, called Confucianism, that he thought would help. Confucianism was not a religion but a code of behaviour. However, it was encouraged by many dynasties as a "religion" for all men to study.

The goal of Confucianism was to pursue **self-cultivation** to become a *junzi* ("gentleman" or "superior being"). Confucius believed that all people could become a *junzi*, not just members of the noble class. He told people to obey their ruler and honour their ancestors. He promoted rituals and ceremonies, whether they were a sacrifice or celebration, as important processes that developed empathy. Today this is often referred to as mindfulness. Confucius died in 479 BCE, but his students kept his teachings alive. Eventually Confucianism spread throughout much of Asia. Today, people in China celebrate his birthday as Teacher's Day. Many of his sayings are known all around the world.

Source 2

Do not do unto others, what you would not want others to do to you.

If you make a mistake and do not correct it, that is called a mistake.

Do not plan the policies of an office you do not hold.

Exemplary persons do not promote others because of what they say, nor do they reject what is said because of who says it.

Exemplary persons are steadfast in the face of adversity, while petty persons are engulfed by it.

Never give a sword to a man who can't dance.

Excerpts from *The Analects of Confucius, c.* 400 BCE

Taoism

Taoism (or Daoism) began with the teachings of Lao-Tzu (600–531 BCE). Lao-Tzu believed that, to live forever, people had to become one with the life force (the Tao or "the Way"). This effort required constant change to balance within oneself the yin (female) and yang (male) forces that he believed made up everything in the world. Two things helped this spiritual struggle. The first was meditating, usually at shrines built in beautiful natural spots. The second was exercise, such as kung fu and t'ai chi.

Yin and yang are seen as two equal but opposite forces that together control the world. They have to be in balance. The yin includes things that are cold, closed, dark and still; the yang, things that are hot, open, bright and active.

Today we still see both the meditation and exercise aspects of Taoism reflected in the lifestyle of many Chinese people. Taoists believe in a simple life where people do not need to argue or be persuaded, but instead just be themselves.
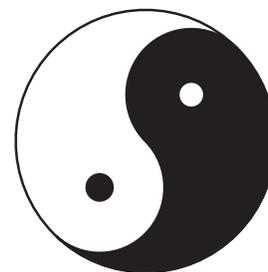
Source 3 The yin–yang symbol. Yin and yang are concepts central to many branches of classical Chinese philosophy and spiritualism, including Taoism, Confucianism and Buddhism.

Buddhism

Travellers from India brought Buddhism to China during the first century CE, via the Silk Road. By the middle of the fifth century CE, it was the state religion in China. It was created by a wealthy Indian prince, Siddhartha Gautama, who was born around 563 BCE. He was upset by the suffering and poverty he saw as a young man, so he turned his back on his inherited wealth to search for more spiritual meaning. He called this process looking for "the truth".

The state of nirvana (in Buddhism, the final spiritual state) he sought was one where there was no more hurt or pain. A person who reached it, as he did, became one with the universe, or Buddha, which means "the enlightened one". That person was then freed from all the bad things about being human, such as wanting to kill, cheat or lie. To reach nirvana, a person might have to be **reincarnated** many times. Each life lived, with its unique experiences, taught the person more.

reincarnation the process of being born again; to live life again in another body (human or animal)

Key concepts & skills Historical significance

Dragons and festivals

The dragon was a legendary creature in Chinese mythology as a powerful symbol of strength. Emperors often wore clothes with dragon symbols embroidered on them. The dragon was often depicted in precious jewellery and carved from jade. People also believed the dragon had control over water, rainfall and floods.

Ancient Chinese mythology followed a unique lunar calendar. The Chinese Zodiac of twelve animals was based on astrology and helped people to count the years, months,

Source 4 Parades, dancing dragons and lanterns are all features of the Chinese New Year celebrations.

History

days and hours in a calendar. It was officially recognised during the Han Dynasty. The lunar calendar showed the order of the animals and was used to determine a person's birth year. Each animal held a meaning and certain characteristic which may help or hinder you throughout life. The year of the dragon is considered to be the luckiest year for a baby to be born into.

The Chinese celebrated a number of national festivals, many linked to particular days in the lunar calendar.

Many Chinese festivals based on the calendar are still celebrated today (see Source 5).

For more information on historical significance, see Lesson 6.7 Historical significance (page 235).

Source 5 The festivals linked to the lunar calendar in ancient China.

Festival	When?	Description
Chinese New Year	First day of the first month	It began in a small village during the Shang Dynasty, with people using firecrackers and drums to scare off monsters. Today it is a key part of Chinese culture. A 15-day festival is celebrated worldwide, and dragon dancing and the colour red are significant elements.
Dragon Boat festival	Fifth day of the fifth month	It originated during the Warring States period of the Zhou dynasty when a famous poet Qu Yuan killed himself by jumping into a river after his homeland had been conquered. Traditions include dragon boat racing, eating rice dumplings and wearing a perfume pouch to ward off evil sprits.
Night of the Sevens festival	Seventh day of the seventh month	First celebrated during the Han Dynasty, this festival is based on a legendary love story where a couple who had been separated for a long time reconnected on this day. This festival is similar to the modern Valentine's Day.

Watch it! Religion in ancient China

Check your learning 13.7

Check your learning 13.7

Review and understand

1. In your own words, **define** the term "*junzi*".
2. **Describe** the process by which a person could become a buddha.

Apply and analyse

3. Out of the three teachings, which one would you have preferred to follow in ancient China and why? **Explain** why you did not choose the other two.
4. In a paragraph, **analyse** Source 2. Use the DAMMIT acronym to guide the structure of your response (see Analysing sources using DAMMIT in Lesson 6.4 Using historical sources (page 223).

Evaluate and create

5. **Create** a daily routine that a person could follow to ensure they incorporate the three teachings.
6. There were many festivals celebrated in ancient China. Working in small groups, each choose a festival from Source 5 to **research**. As a group, brainstorm some important research questions that you will attempt to answer, and decide how you will collaborate and share your information. For example, you could create a website, use a specific app, put together an audiovisual presentation or compile a tourist brochure or poster.

Lesson 13.8
Everyday life

Introduction

Confucian philosophy heavily influenced the daily lives and values of the Chinese people, especially from the Han Dynasty (206 BCE–220 CE) onwards. Confucius believed that China's people were all members of a big family. They should behave towards others as would be expected in a family. This meant being respectful, moral, fair, obedient, courteous and self-disciplined.

Learning intentions and success criteria

Family life

In ancient China, it was important to be a good person and family member. Families preferred to have sons, rather than daughters. Sons were highly valued in ancient China as they carried on the family name. Men often had a few wives to make sure they had many male **heirs**. Eventually, the eldest son would become the head of the family.

The family unit had its own hierarchy. The oldest man in the family set all the rules. He could not be challenged. The most important relationship was the one between a father and his son. The son was to follow the teachings of his father and obey him, never doing anything that would displease him. If they earned money, sons would give all their earnings to their parents. This same level of respect and devotion was also expected between younger and older brothers, husbands and wives, and even friends.

heir a person who has the legal right to receive somebody's property, money or title when that person dies

History

Key concepts & skills Using historical sources

Very old noodles

In *c.* 2000 BCE, an earthquake devastated the small village of Laija in the Yangtze River valley. Its remains were buried with ash, sediment and dirt. When excavating this village, archaeologists were surprised to find what they believed was a very old meal. It had been preserved in an upturned bowl. Scientific analysis confirmed what scholars expected – proof that these were very old noodles! It also confirmed that the noodles were made from millet.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Source 1 These noodles, discovered in the Yangtze River valley, are 4000 years old.

Education

Typically, only boys were educated. A boy's education was linked to his social status. Wealthy families made sure their son received a good education.

They would learn to read and write, compose essays and poetry, and spend hours memorising Confucius' teachings. This prepared them for the rigorous tests to become a scholar, with a new life as a government official if they passed.

Confucius believed education was the first step to being a better person. He warned against simply memorising facts, instead wanting the learner to act on their knowledge. He believed his main advantage in life was that he possessed a love of learning (see Source 2).

Despite this, girls were not normally educated. It was not until later, in the sixth century BCE, that Buddhist temples established schools for girls and boys. Much later, during the Ming Dynasty, many women from wealthy households learnt to read and write.

Source 2

In education there should be no class distinctions.

Learning without due reflection leads to perplexity.

To learn something and rehearse it constantly, is this indeed not a pleasure?

To be fond of learning is to be near to knowledge. To practice with vigour is to be near to magnanimity.

To one who is not eager I do not reveal anything, nor do I explain anything to one who is not communicative.

Walking along with three people, my teacher is sure to be among them. I choose what is good in them and follow it and what is not good and change it.

At fifteen, my heart was set upon learning; at thirty, I had become established … at seventy, I could follow my heart's desires without transgressing the line.

Excerpts from *The Analects of Confucius*, *c*. 400 BCE

Achieving life balance

The ancient Chinese people believed their lifestyle needed to follow the harmony and balance upheld by the Three Teachings (see Lesson 13.7 Religion in ancient China, page 454). Tea drinking, *feng shui* and martial arts were all elements to achieve this balanced lifestyle and are still practised widely today.

Tea drinking

Tea has been drunk in China for over 2,000 years. It was first drunk as a medicine or a stimulant. During the Tang Dynasty (*c*. 618–908 CE), it became more of a social tradition – a formal way of relaxing and mixing with others.

Source 3 Traditional Chinese tea

Feng shui

Feng shui means "wind and water" in Chinese. The practices of *feng shui* developed from the Chinese belief that people should plan their living spaces in harmony with the energy of the natural world (including the **cosmos**).

Good *feng shui* meant placing settlements and buildings so they faced a particular way (for good energy). It also meant arranging things, such as furniture and mirrors, in a particular way within rooms. In ancient times, this arrangement was believed to protect against evil spirits.

Today, good *feng shui* is said to promote good health, prosperity in business and happy relationships. Many people today consult experts to find out how to design their houses and furnish their rooms for good *feng shui*.

cosmos the universe

Martial arts

The martial arts (called Wushu) began in ancient China. At first, it was a type of self-defence practised by its soldiers. It has since become a unique part of China's culture, and its various forms are now also practised by many people around the world.

Kung fu is the code of skills from which a great many styles of martial arts, such as karate, have developed. It is perfected only with years of intense practice, study, meditation and self-discipline. A kung fu master learns to use the ch'i, described as the energy force of the universal power. This gives someone who is small and slight the ability to smash through a pile of bricks with a bare hand or a head. It also gives masters great athletic ability.

Source 4 A competitor at the Wushu championships in China, 2006, demonstrating kung fu skills.

Quiz me! Everyday life in ancient China

Check your learning 13.8

Check your learning 13.8

Review and understand

1 In your own words, **define** the term "*feng shui*".

2 **Describe** why having a son was so important to a family.

Apply and analyse

3 In your own words, **summarise** the key points raised by Confucius in Source 2.

4 **Describe** a typical week in the life of a teenage boy living in ancient China. Think about their activities, thoughts and feelings during this time.

Evaluate and create

5 Using the concept of continuity and change, **create** a table describing what features of the ancient Chinese lifestyle are the same in today's world and what has changed.

Lesson 13.9
Death and funeral customs

Learning intentions and success criteria

Introduction

The ancient Chinese worshipped their ancestors with great respect. To live a prosperous and happy life, a person's descendants would follow strict burial practices after the person died. They would also honour them with gifts and festivals. Families feared a dead person's spirit may become angry and bring bad luck to them if they were not honoured properly and remembered fondly.

Burial practices

Buddhists believed that the souls of the dead remained on Earth to protect their descendants. As such, graves were their home on Earth. Funerals were therefore important ceremonies that honoured and brought peace to the dead. People were often buried with many objects for the afterlife including food, pottery, clothing, mirrors and weapons.

Source 1 In 1968 the tomb of Han royals, Liu Sheng and Dou Wan, were discovered. They died around 100 BCE and were buried with nearly 300 objects and 12 horses. This jade burial suit contains 2156 jade pieces and 703 grams of gold thread.

Still today, the Qingming Festival is a day of sacrifice to the ancestors. Held in early April each year, families pray for protection and good luck from their ancestors. Traditions on this day include cleaning tombs or grave sites, flying kites, planting trees and only eating cold food. It is an important celebration, taken very seriously by families.

Jade

Jade (nephrite) was the most precious stone in ancient China. The ancient Chinese referred to it as the essence of Heaven and Earth because it was excavated from mountains (up high near Heaven) and riverbeds (representing the Earth).

Jade was particularly used for ritual objects and burials. A very hard stone, it was considered indestructible. For this reason, people buried it with members of their family, believing that it would provide them with immortality in the afterlife and stop the body decomposing.

Tombs and mausoleums

Historians believe that 65 per cent of the relics from ancient China have been unearthed from burial sites. Wealthy families and officials were often buried in elaborate **mausoleums** (tombs) with precious objects made from jade, gold, silver and bronze. These mausoleums may even have furniture or chariots placed inside them. Sometimes, when the head of a family died, any of their childless wives or servants were buried with them.

Grave robbing became a popular practice in ancient China because of the riches buried with the dead.

mausoleum a special building made to hold the dead body of an important person or the dead bodies of a family

The tomb and mummy of Xin Zhui

The best-preserved **mummy** in the world was found in China in 1971 (see Source 2). It was so well preserved that doctors were able to conduct an autopsy (a medical examination of a corpse) to find out how the woman died.

The woman, Xin Zhui, had been married to a wealthy Han ruler. She died from a heart attack about 2,200 years ago at approximately 50 years of age. She was 158 centimetres tall and overweight. When found, her skin was soft, her hair was completely intact, and her limbs were flexible. The blood in her veins was still red. Her body had been wrapped in many layers of silk after being dipped in a liquid that still puzzles scientists today.

Her tomb was extremely well constructed and protected. It had not been robbed and still contained about 1,000 items. These included lacquerware (objects such as combs and vases), silks, musical instruments and many containers of food (many types of meat, as well as grains, eggs and fruits). There were also 162 small-scale wooden servants to serve her in the afterlife.

mummy a body of a human or an animal that has been mummified

See, think, wonder

Look at Source 2.
- What do you see?
- What do you think?
- What do you wonder?

History

Source 2 The mummified remains of a wealthy Chinese woman, Xin Zhui, born in 100 BCE during the Han Dynasty.

Quiz me! Death and funeral customs in ancient China

Check your learning 13.9

Check your learning 13.9

Review and understand

1 **Identify** why the Chinese people believed it was important to remember and honour their ancestors.

2 **Outline** three interesting facts about the mummy of Xin Zhui.

Apply and analyse

3 **Explain** why jade was significant in ancient China.

4 **Analyse** the usefulness of burial sites as important sources in history. What makes them useful to historians?

Evaluate and create

5 **Research** the tomb of Lady Fu Hao and summarise what this site has been able to tell historians based on the primary source evidence uncovered.

Lesson 13.10
The terracotta warriors

Introduction

Qin Shi Huang built an underground mausoleum for himself in what is now the modern-day city of Xian. The tomb lay undiscovered until 1974. Farmers stumbled upon it when they were digging a well.

Archaeologists excavated the area to reveal a large pit of around 8000 life-sized soldiers made from terracotta, a type of fired clay. Another four pits have since been uncovered. The site covers more than 10 square kilometres and has still not been fully excavated.

Source 1 Emperor's Qin Shi Huang's terracotta warriors guard his tomb in Xian, China.

As well as the terracotta army, the site was full of priceless treasures made from bronze, including bronze-lined walls. It included the bodies of many cavalry men, soldiers and a few government officials. Historians suggest that up to 700,000 tomb workers may have been buried with Qin Shi Huang to make sure the tomb remained secret.

The actual burial tomb of Qin Shi Huang is about 5 kilometres away (seen as a pyramid shape in the distance). In 2005, the area around his tomb was found to have high readings for mercury. This raised safety concerns, which stopped any future excavations.

Quiz me! The terracotta warriors

Check your learning 13.10

Check your learning 13.10

Review and understand

1 **Identify** the number of warriors buried in the tomb of Qin Shi Huang.

Apply and analyse

2 What do you think the burial of the terracotta warriors with Qin Shi Huang tells us about his beliefs and fears?

3 Qin Shi Huang's mausolem is very grand. **Determine** (decide) what this tells us about him.

Evaluate and create

4 **Propose** (put forward) five reasons why the task of excavating this site has taken such a long time.

13C Concepts & skills in context
The original influencer

Introduction

Although he never held the position of emperor, Confucius' teachings significantly influenced the ancient Chinese people. He taught about an ideal way of living in society. As his ideas spread, people heard them and wanted to follow.

Confucius is, therefore, one of the original influencers. We know that influencers use social media to speak directly to their followers and spread their ideas. Just like Confucius, their values and ideas are not enforceable by law, but they do spread to people, drive conversations and set trends.

Background setting and colours used throughout

Body language and facial expression

Position and size of Confucius in the painting

Objects held and used

Common dress and hats

Stance
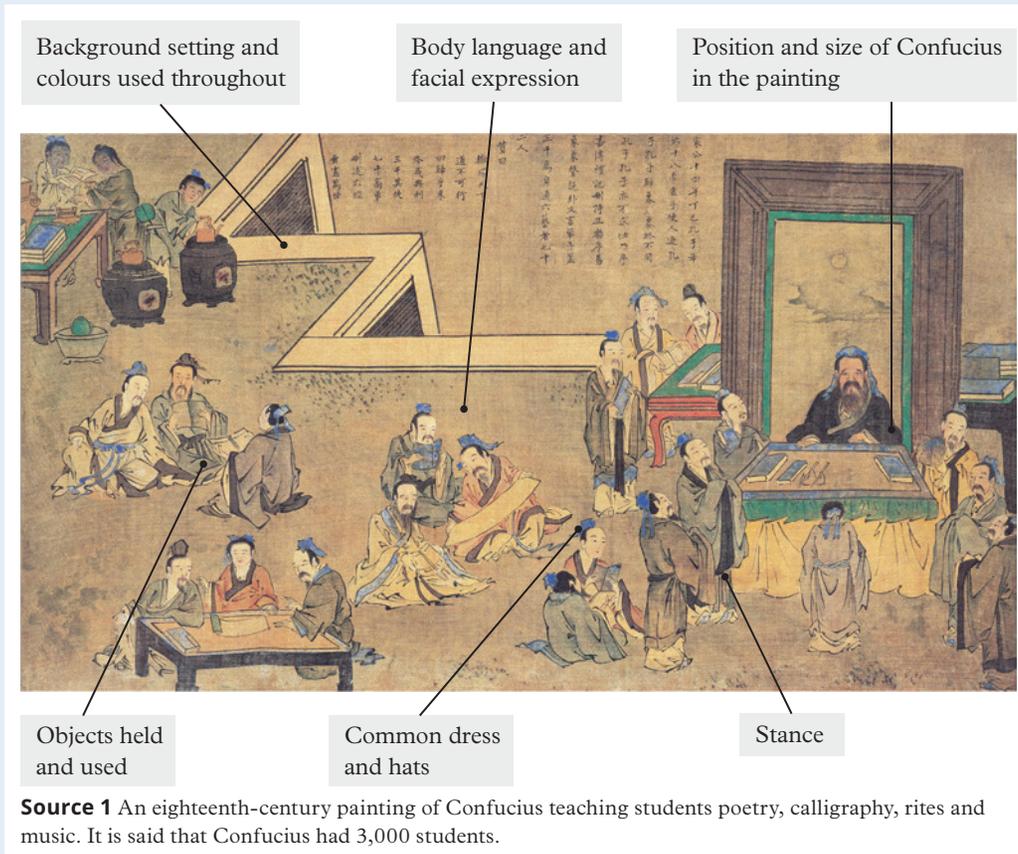
Source 1 An eighteenth-century painting of Confucius teaching students poetry, calligraphy, rites and music. It is said that Confucius had 3,000 students.

Key concepts & skills Using historical sources

Identifying features in visual sources

You may have heard of the phrase "a picture is worth a thousand words", but what exactly are those words? When you are presented with a visual source, it is important to identify what features show the creator's perspective or message. Some of the important things to look for in any visual source are outlined in the following table.

For more information on using historical sources, see Lesson 6.4 Using historical sources (page 223).

Source 2 What to look for in a visual source.

What to look for	Questions to ask yourself
First impressions	At first glance, what captures your attention? Where is your eye drawn? Also make sure you read the caption for any clues.
People: their clothing, body language and facial expression	Are there any people or figures in the source? If so, what are they wearing? This can tell us a lot about their social status or role in society. What about their body language and facial expression? Perhaps they are natural and relaxed, or maybe tense and formal. Do they seem to be feeling a positive or negative emotion?
Position, size and quantity	How are people positioned in the image? Are they placed higher, lower or as equals; bigger or smaller; in the foreground or background of the image? How many of them are there? Is there a crowd? If so, how much of the image do they take up?
Objects and symbols	What objects are being held in the image? Perhaps they are not being used but are placed nearby. Are these objects symbolic? For example, holding a pen or book suggests the person is educated.
Scenery, environment and structures	Where is the image set? How is the environment shown by the artist? What about the human-made structures? Does the architecture tell you anything about the time and period of the setting?

Practise the skill

1 **Examine** Source 1. Use the annotations to help identify the various features in the image. Create a dot point list to explain the relevance of each feature.

2 In your own words, **summarise** the overall message that the artist of Source 1 is trying to convey.

3 **Explain** how Source 1 shows the influence of Confucius.

Extend your understanding

1 Complete the following steps to analyse some visual sources.

a Use the internet to locate two visual sources from ancient China. Copy and paste the images into a new document.

b Annotate each source and highlight any features and their meaning. Ask yourself the questions in Source 2 to help guide your annotations.

c In a short paragraph, **analyse** each source using the DAMMIT acronym to assist the structure of your response (see Analysing sources using DAMMIT in Lesson 6.4 Using historical sources (page 223)). Remember to include references to show where you found your information.

Lesson 13.11
Change through conflict

Introduction

Conflict helped to shape the political and social structure of ancient China by leading to many important inventions. Generally, the ancient Chinese people did not encourage relentless violence like the ancient Romans or Greeks. This is largely because Confucianism promoted peace and harmony.

Conflicts were prompted by internal tensions and foreign threats. Internally, conflict marked the beginning and end of China's dynasties, and the regimes each of them introduced.

The army

The first permanent army in ancient China was not formed until the Han Dynasty (206 BCE–220 CE). During this dynasty, China was often at war, enlarging its empire and engaging in fights with northern tribes. Han rulers required all able-bodied men between the ages of 23 and 56 to enlist in the army for two years. They were also expected to serve again if there was a military emergency, such as an uprising or an attack.

Mostly farmers were **conscripted** to the army, boosting its numbers to hundreds of thousands. These farmer-soldiers were not trained. For some, the only exposure they had to battle skills and tactics was what they learnt "on the job" when called up. Soldiers did not receive pay but were fed and given weapons and a uniform. During wartime, taxes were raised significantly, and farms were often plundered by troops.

conscripted when somebody is ordered by law to join the armed forces

Source 1 Painting showing the arrangement of military units; flags were used by each division. A red bird symbolised the vanguard (frontline), a green dragon was the left wing, a white tiger represented the right wing, black tortoise was the rear guard and the Great Bear represented the commander and bodyguards.

13.11

Battle tactics and weapons

During the Shang Dynasty (1766–1122 BCE), battles were fought mainly using chariots. Ancient records tell us farmers had to plough their fields so chariot wheels could easily cross farmland in the event of a battle.

Later, the cavalry and armed foot soldiers played a greater role. By the late fourth century BCE, the cavalry was the strongest component of the army. Fighting on horseback was greatly helped by the Chinese invention of the stirrup around 350 CE. It enabled riders to sit more securely on a fast-moving horse while using their weapons.

Inventions

Early weapons, including spears and daggers, were typically made of bronze, then later, made of iron. Weapons made from bronze included battle axes, spears, swords and halberds (spears combined with axe blades).

The crossbow was invented in ancient China and used 2,500 years ago (see Source 2). It was the most distinctive feature of Chinese warfare, with the sword appearing much later. It fired bolts (metal arrows) with great force up to 200 metres. It had enough speed and force to penetrate armour. Over centuries, it became lighter and could be cocked with one hand. They also developed **artillery** versions, which were mounted on a swivel base.

The kite was another Chinese invention, first used about 2,500 years ago. Some early kites were made to spy on the enemy or to send messages.

artillery large, heavy guns which are often moved on wheels
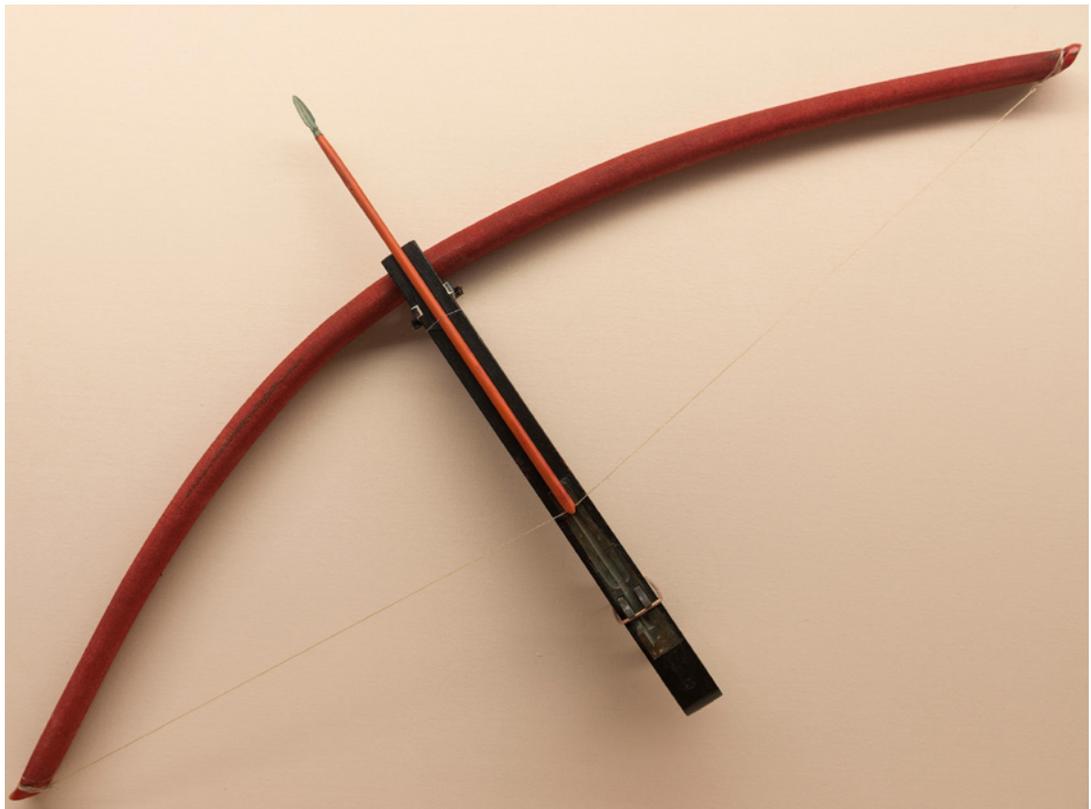
Source 2 A crossbow during the Qin Dynasty

Armour

The first armour of Chinese soldiers was made from wood or bamboo. Later, small overlapping pieces of leather or iron were joined together with fabric ties or metal studs. This made upper-body armour both sturdy and flexible. Helmets were also worn by soldiers from the Han Dynasty onwards.

Analyse this! Conflict in ancient China

Check your learning 13.11

Check your learning 13.11

Review and understand

1 What were the views of the Chinese people on warfare and conflict?

2 **Identify** the group of people who made up most of the army.

Apply and analyse

3 **Examine** Source 3, looking particularly at the soldier's armour. Draw labelled sketches to show how it could be modified with materials available during ancient times to provide more protection.

Evaluate and create

4 **Evaluate** the strengths and weaknesses of ancient Chinese warfare. Which element of warfare do you consider most valuable and why?

5 "Without conflict, the ancient Chinese people would not have created some of the greatest inventions." **Discuss** this statement with a partner. The best discussions always consider different viewpoints.

Source 3 Infantry units during the Han dynasty included a spearman, swordsman and crossbowman.

History

Lesson 13.12
The Great Wall of China

Introduction

One of the strongest defensive structures ever built is the Great Wall of China. It started out as a number of separate mud-brick walls built during the Zhou Dynasty. Qin Shi Huang started joining these walls and extending them in 220 BCE. This was needed to keep out invading tribes from the north (known as Mongols). Mongols lived in a harsh environment. Unable to produce enough crops to support their population, Mongols raided towns and settlements in China to plunder food and riches. The structure we see today was largely completed during the Ming Dynasty (1368–1644 CE). That was when the watchtowers and cannons were added.

Learning intentions and success criteria

Quiz me! The Great Wall of China

Check your learning 13.12

Check your learning 13.12

Review and understand

1 **Identify** the actual length of the Great Wall of China.
2 **Describe** what was used to fill the internal sections of the Great Wall.

Apply and analyse

3 **Explain** how the creation of the Great Wall is an example of China changing through conflict.
4 The Mongols were skilled archers and rode on horseback. **Analyse** the Great Wall's ability to protect against these two elements of attack.

Evaluate and create

5 What do you think is the most effective aspect of the Great Wall's design as a military defensive structure? **Justify** (give reasons for) your answer using specific examples.
6 The UNESCO World Heritage List considers the Great Wall of China to be of "significant physical evidence". Using the internet, **research** the significance of the site's social, political, military and economic features. Choose a method to present your information and remember to include references to show where you found your information.

Source 1 An artist's impression of the construction of the Great Wall of China.

a Battlements run along the wall's sides and around the perimeter of the watchtower roofs.

b As the crow flies, the wall is about 2,700 kilometres long. Its actual length is around 6,500 kilometres because it twists and turns so much through mountainous country.

c The Great Wall was built in sections. The two outer walls were built first. The space between them was then filled, reinforced and finally paved.

d Bamboo or timber scaffolding.

e The Great Wall ranges from about 5 to 9 metres thick and is as tall as 7.5 metres in parts. The road built on up (between the outer walls that enclose it) is about 6 metres wide.

f The fill included earth, sand, rocks – and lots of dead bodies. It was carried into position by hand. As a section of fill built up, vertical slats of bamboo or wood were hammered in to keep it in place.

g The builders were farmers (mostly), slaves and, later, criminals. Working conditions were shocking and fatal accidents were common. Guards forced the builders to work hard and stopped anyone from running away. Historians think that at least 100,000 men died building the wall. Their dead bodies were added to the fill.

h Watchtowers, about 12 metres high, were built along the wall. They were close enough for messages to be sent from one to the next, using fires (by night), smoke (by day), drums and flags.

History

Lesson 13.13
Change through trade

Learning intentions and success criteria

Introduction

Ancient China's isolation from other societies meant trade only occurred inside the region for a long time. The Chinese people were strong and resilient to hardship because they relied on their own natural resources for survival. Trade beyond China's borders did not begin until the Han Dynasty.

The Silk Road

alliance an agreement between countries or political parties to work together in order to achieve something that they all want

In 138 BCE, Han Emperor Wu Di sent his army general Zhang Qian on a mission to form an **alliance** with traders along the western border. Along the way, Zhang Qian was captured by the Xiongnu tribe and held captive for 10 years. When he finally escaped, Zhang Qian returned home and told the emperor about cultures and customs that, until then, China had never heard of.

This news prompted Wu Di to send further missions west, along the same path that Zhang Qian had taken. The Chinese discovered there was a strong demand for silk from other communities along this path. This is how the trade route became known as the Silk Road.

The Silk Road was a 6400-kilometre route crossing through modern Central Asia and the Middle East, reaching the Mediterranean Sea (see Source 1). It included connecting paths to other places such as India and became an important trade route for many empires.

Merchants moved goods back and forth through the harsh terrain using long lines of camels, known as caravans. It was not an easy journey – they crossed mountains, cold deserts and hot deserts.

Silk Road trade route
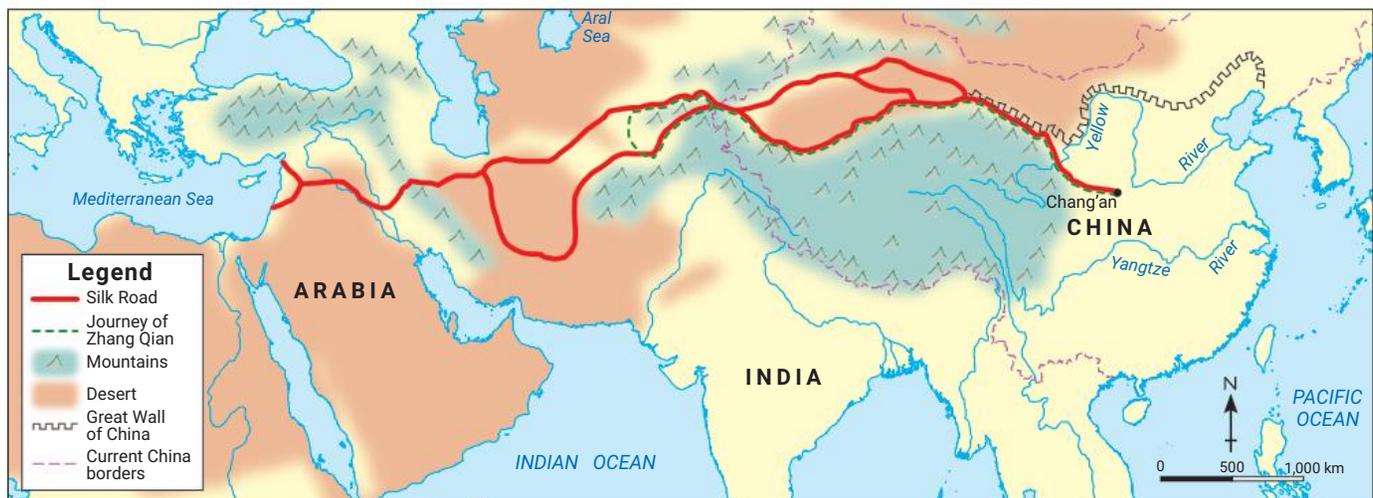
Source 1

Enlarged map: Silk Road trade route

Travellers set up rest stops near water sources to survive the journey. These stops were placed within a day's travel of each other as concerns grew that **bandits** would raid the caravans travelling the Silk Road.

Silk

Silk was ancient China's most important trade product. For a long time, only the Chinese knew how to make it. It is spun from the cocoons of silkworms, which feed on mulberry leaves. It became highly prized, particularly by the ancient Romans, who exchanged large amounts of gold for it. It was such a valuable resource to the Chinese that people were executed if caught stealing silkworm eggs or cocoons.

Source 2 A medieval atlas showing the caravans travelling the Silk Road.

bandit a member of an armed group of thieves who attacks travellers

Transfer of ideas, goods and disease

The Silk Road also became very important for the spread of new technologies, religions and philosophies to other societies between the East (eastern Asia) and the West (then the Mediterranean world). Many of the inventions and discoveries of the ancient Chinese were shared by Silk Road traders. For example, China's silk-making secrets were passed to the West this way. China also benefited from the introduction of new metalworking technologies.

Travellers along the Silk Road were exposed to many different cultures. That is how Buddhism was introduced to China. Unfortunately, this trade route was also how terrible diseases such as the bubonic plague were spread to new populations.

The Silk Road trade routes were a significant factor in the development of civilisations in ancient China, India, Persia, Europe and Arabia. Trade along the Silk Road boomed, and new cities, towns and forts sprang up along the way.

Map it! The Silk Road

Source 3 Trading and exchanging goods between ancient China and other societies along the Silk Road.

History

Check your learning 13.13

Check your learning 13.13

Review and understand

1 **Outline** the steps that led to the beginnings of the Silk Road.

2 **Identify** the modern countries through which the main routes of the Silk Road pass. Use a world map, such as the one at the back of the Student Book, to help you.

3 **Describe** what caravans were and what they were used for.

Apply and analyse

4 **Summarise** the causes and consequences of ancient China's trade with other societies.

Evaluate and create

5 In groups, **create** a travel journal that records what Chinese merchants travelling from Central Asia to the Mediterranean Sea might have seen and done while on the Silk Road. Include sketches and photographs of places and things you see on your journey.

13D Concepts & skills in context
The influence of farming

Introduction

Farming was a vital industry in the development of ancient China. As the earliest known rice farmers, the ancient Chinese developed irrigation techniques to make sure their paddy fields flooded properly. They also created bronze and iron tools, such as shovels, knives and ploughs, which improved efficiency.

The large-scale Dujiangyan irrigation system was built in 256 BCE and is considered a unique irrigation innovation. Another innovation was the Grand Canal, on which construction began in the fifth century BCE. The Grand Canal became the backbone of the empire's transport and communication system. It was vital for transporting farming produce from the fields to the cities, as well as messages from one region to another.

Source 1

> Many of the political and social changes that can be observed over the course of the ... Warring States period are closely related to changes in agricultural practices and technologies ... a science of agriculture came into existence, and men whose technological skills in farming were of practical value came to enjoy privileged status as teachers ...
>
> Historian Dr Robert Eno, Indiana University

Key concepts & skills Historical questions

Generating historical inquiry questions

One of the first and most important steps in conducting a historical inquiry is to generate key questions. These questions will direct your research.

Usually, historians generate one broad, overarching question for their inquiry, for example: How did farming innovations influence the development of ancient China? After that, they generate more specific questions. In history, the 5Ws and H refer to the most common questions asked: who, what, when, where, why and how. A proper inquiry will require a mixture of:

- closed or simple questions (such as "When did event X take place?"). This includes the questions starting with who, what, when and where.

- open or probing questions (for example, "Why did event X take place?"). This includes questions starting with why and how.
- questions that relate to historical concepts (for example, "Which perspective has the strongest evidence?" or "What other sources might be needed?").

The first step in generating questions is to create a table (see Source 2) and brainstorm all the things you know (in short statements) in one column. In the second column, generate a related question that will help to deepen or build your understanding. Remember to include a mix of the three question types described above.

For more information on historical questions, see Lesson 6.2 Historical questions (page 216).

Source 2 An example of a brainstorming table

Overarching inquiry question:	
What I already know	**Questions to help me deepen or build my understanding**
Point 1	Questions related to point 1
Point 2	Questions related to point 2

Practise the skill

Follow these steps to generate a range of questions related to the overarching historical inquiry question: "How did farming innovations influence the development of ancient China?"

- **Step 1** Copy the table below.
- **Step 2** In the first column, list what you already know from reading the passage about farming innovations.
- **Step 3** Generate related questions that will help to build your understanding. Include a mix of closed and open questions, as well as questions that relate to the historical concepts and skills: historical questions, chronology, using historical sources, continuity and change, causes and consequences, historical significance and communicating.

   The first few have been done for you:

Overarching question: How did farming innovations influence the development of ancient China?	
What I already know	**Questions to deepen my understanding**
Rice was an important crop in ancient China	Where did they grow rice? (closed or simple question)
	How did they irrigate the paddy fields? (open or probing question)
The Iron Age improved a farmer's output	How did iron change farming techniques? (question based on a historical concept/skill)

Extend your understanding

1 **Research** the following farming innovations of ancient China:
   a Two small-scale inventions, such as the iron plough, oxen plough, dragon backbone chain pump, waterwheel, wheelbarrow or well.
   b One large-scale project such as terraced hills, building canals or an irrigation project like the Dujiangyan irrigation system.

2 As part of your research, **compare** farming innovations during ancient China to similar tools, objects or projects used in the modern day. Present this information using a Venn diagram.

3 Based on your research, form a conclusion that answers the overarching question, "How did farming innovations influence the development of ancient China?" Answer the question clearly by providing your own opinion, backed up by your research. In your answer, include a reference to Source 1.

4 Decide how you will present your research.
   a Present your information as a report, poster or a presentation. Organise your research under each of your inquiry questions or use sub-headings.
   b Include any diagrams or images with captions and annotations.
   c Present a conclusion that addresses the overarching question.

Review: Ancient China

Review activity

Examine the sources, then answer the following questions.

Analysing sources

Source 1 A Tang Dynasty painting

Source 2

The Tang dynasty ... was the golden age of Chinese culture ... one of the greatest ... periods in the development of music, song, and dance during Chinese history. Its law code ... served as the basis for the law codes of premodern Japan, Korea, and Vietnam. The dynasty was the first to compile a national [medical book]. Both printing ... and gunpowder – developments that profoundly affected the emergence of the modern world – were invented during the period. The Tang was the golden age of Buddhism. The religion attracted large numbers ... amassed immense wealth, and exerted great influence at court. Finally, tea became the national drink during the dynasty.

Excerpt from the book *China's Golden Age: Everyday Life in the Tang Dynasty*, by historian Charles Benn, 2004.

1 **Identify** whether Source 1 and Source 2 are primary or secondary sources. (1 mark)

2 A legacy is something that exists today because of traditions, events or actions that occurred in the past. **List** three legacies mentioned in Source 2. (1 mark)

3 **Explain** how the sources enhance your understanding of the following:
   a   leisure activities in ancient China
   b   the importance of education. (6 marks)

4 Which class of ancient Chinese society is depicted in Source 1? What other evidence is needed to gain a more accurate understanding of daily life for all who lived during the Tang Dynasty? (4 marks)

5 **Analyse** the perspective (values, attitudes and beliefs) of each source. Provide an example from each source. Remember, when you analyse something you must break it down into smaller parts and explain how they relate to each other. (8 marks)

(Total: 20 marks)

Module checklist: Ancient China

Module review quiz: Ancient China

Module

14

Ancient India

Sub-strand: Investigation: Ancient societies (10 000 BCE–600 CE)

oxforddigital **This module is available on Oxford Digital.**

Overview

Modern-day India can trace its beginnings back to two of the oldest societies on Earth – the Indus Valley society and the Mauryan Empire.

The Indus Valley society began around 3500 BCE in a fertile river valley in north-west India. Here, well-planned cities developed along the banks of the Indus River, while people across Europe still lived in primitive huts.

Much later, around 321 BCE, the Mauryan Empire developed along the banks of India's holiest river, the Ganges. Inscriptions left by Mauryan kings have given historians a unique insight into this ancient society.

Two of the world's major religions – Hinduism and Buddhism – were created because of these ancient societies. The people of ancient India are also believed to have begun the development of modern mathematics and were the first to use the concept of the number zero.

Source 1 The Great Stupa is in the town of Sanchi in central India. It was built by Emperor Ashoka in the third century BCE during the rule of the Mauryan Empire. A stupa is a dome-shaped building that contains relics (religious artefacts). This image shows the detail and craftsmanship used by the ancient Indian people who constructed the stupa.

Lessons in this module

14A How did physical features influence the development of ancient India?

14B What shaped the roles of key groups in ancient India?

14C How did beliefs, values, contacts and conflicts influence life in ancient India?

Part 3

Economics and business
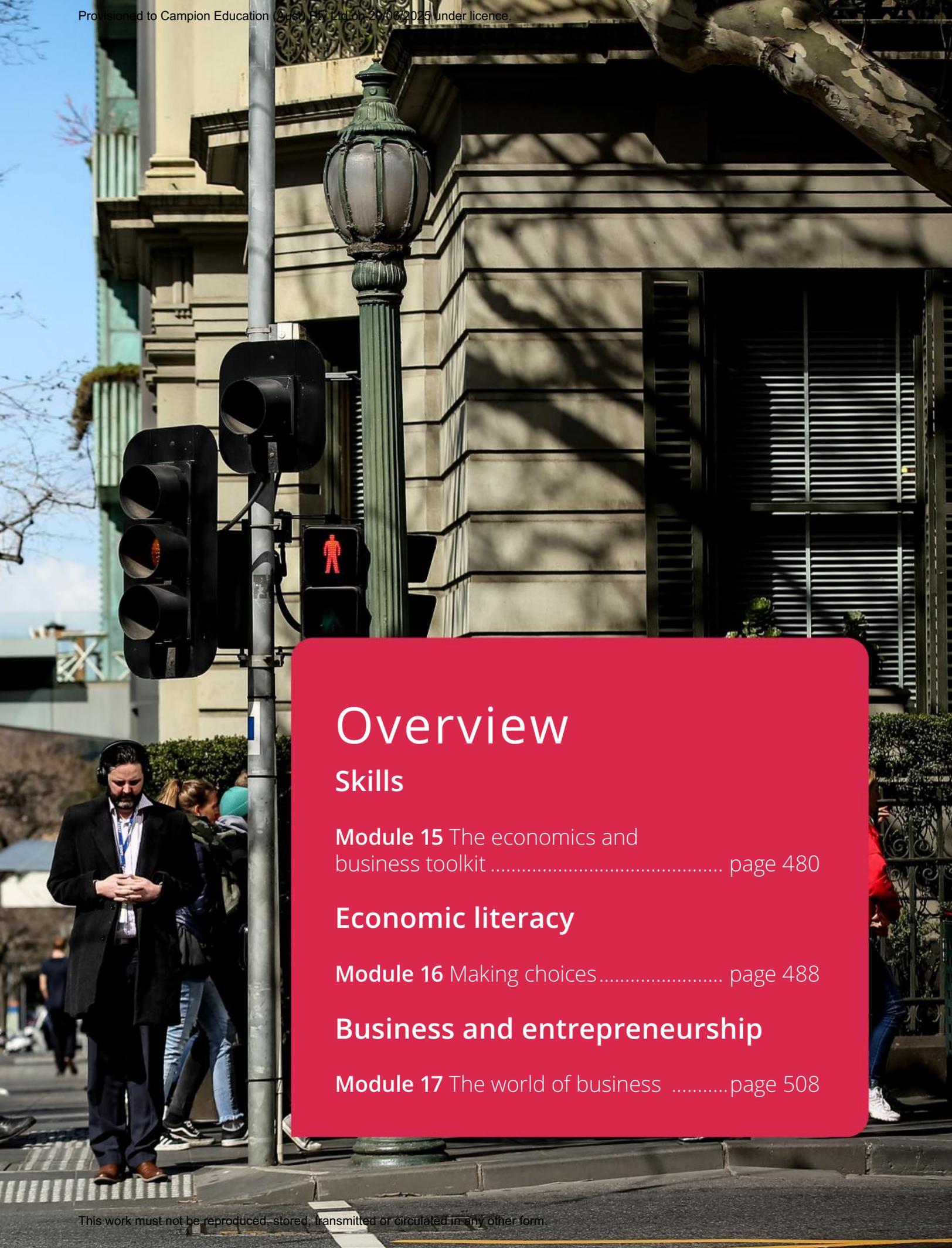
Overview

Skills

Economic literacy

Business and entrepreneurship

Module

15

The economics and business toolkit

Sub-strand: Skills

Overview

Economics is the study of how people use the world's limited resources to satisfy their needs and wants. Many people assume economics is simply about money and business, but this only makes up part of this area of study. Economics explores human behaviour – how people interact with one another locally and globally. Having an understanding of economics and business is useful as this will help you to make good decisions and avoid unnecessary risks.

Source 1 While economic growth is often measured with money, it is really about improving our quality of life through smart decisions about how to use our resources.

Lessons in this module

15A What are the economics and business skills?

Lesson 15.1
Economics and business skills

Introduction

Studying economics and business requires you to ask a range of questions and analyse information to find out more about a topic. Professionals in this field are known as **economists**.

economist a professional in the field of economics and business

Economics and business students generate questions, interpret information, make decisions and argue their point of view through studying real-life examples. Doing this will allow you to learn experientially and give you opportunities to be innovative, demonstrate leadership skills and practise making business decisions.

Each of the skills you will learn in your economics and business studies are shown below. These skills will enable you to form your own point of view and communicate your conclusions effectively. It might help you to think of each of these skills as tools in a toolkit.

1 Investigating
2 Interpreting and analysing data and information
3 Evaluating, concluding and decision making
4 Communicating
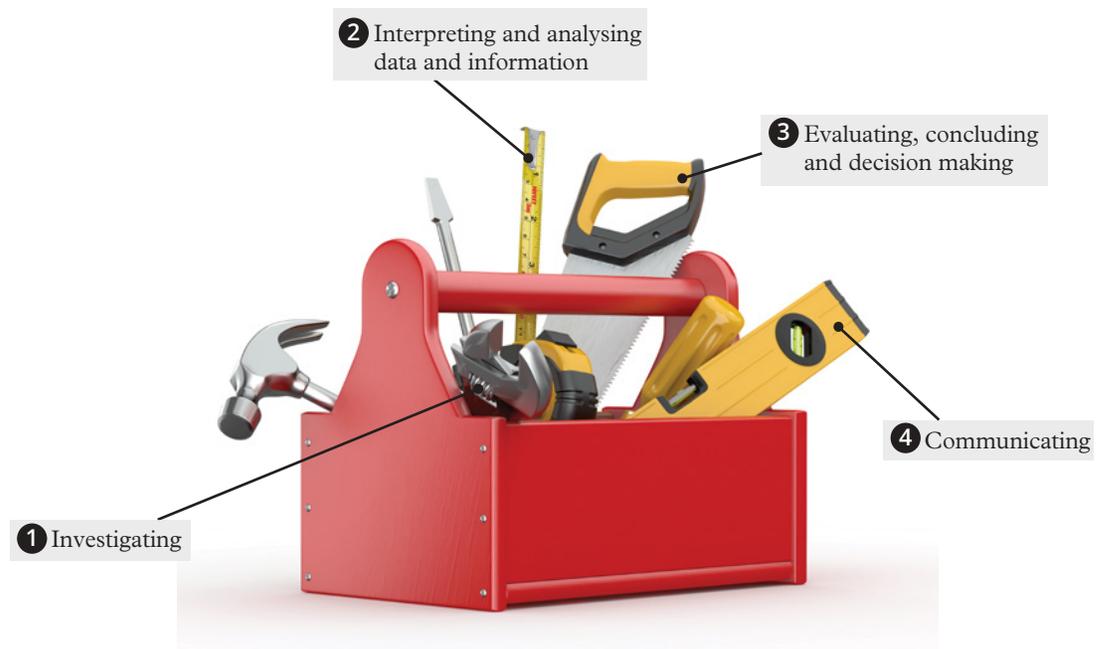
Source 1 Economists use several different skills. Each of these skills is like a tool in a toolkit.

Lesson 15.2
Investigating

Developing questions

Throughout your studies of economics and business, you will seek out real-life economic and business cases. This will allow you to learn from and avoid mistakes made by others in the past. By asking questions, checking facts and looking at arguments for and against specific issues, you will gain the necessary skills to form your own conclusions. This will require supporting your statements with evidence such as statistics, cases from the past, quotes from reputable sources and sound reasoning.

Source 1 demonstrates how a hairdressing business could start asking questions and conducting research to decide if it should change its opening hours.

Source 1 A guide for planning the direction of an economic or business inquiry.

Key question	Information needed	Possible sources of information
Is it a good idea, in response to customer demand, for local hairdressing salon Top Tangles to extend its opening hours to Sunday mornings?	• How much would it cost the business to open on Sundays from 9 am to 12 noon? • Are current employees willing and available to work on Sundays? • What is the expected increase in income from extending the opening hours? • Do other hairdressing businesses in the area open on Sunday mornings? • How will increased opening hours affect the hairdressing salon's public image and popularity? • Survey past and current customers of the salon about the idea. • Seek wider feedback from potential customers about appointment time preferences. • Contact staff to discuss the possibility of increased hours and availability. Check the weekend opening hours of competing salons by browsing websites and social media pages.	• Survey past and current customers of the salon about the idea. • Seek wider feedback from potential customers about appointment time preferences. • Contact staff to discuss possibility of increased hours and availability. • Check the weekend opening hours of competing salons by browsing websites and social media pages.

▶ **Key content video:** Developing questions in economics and business

Gathering data and information

Economics and business students collect information from a range of sources. These can take many forms, from written records in books or online, to live video and audio recordings. Some examples of sources include economic journals, newspaper articles, letters, government department or business websites, blogs, Facebook or X posts, cartoons and interviews.

Locating a range of relevant sources is a valuable skill, which usually involves several different research methods, such as:

• using online search engines, such as Google
• following social media, such as Facebook and X
• looking at newspaper and magazine articles in print or online

Economics and business

- contacting local businesses and entrepreneurs or asking people with expertise in the subject
- speaking with other class members or family members to gain an insight into their views on a particular issue.

▶ **Key content video:** Gathering information in economics and business

☑ **Check your learning 15.2**

Lesson 15.3
Interpreting and analysing data and information

Interpreting data

Data can be displayed in different ways.
For example, a source of data might appear as:

- a graph
- a graphic representation, such as a chart or infographic
- a statistical table
- a case study
- an interview
- a questionnaire or survey
- a simulation game.

Source 1 Information gathered from customer surveys can be used to make decisions about the future of a business.

Sometimes you will analyse sources created by others, while other times you might look at data from your own research. In both of these situations you will need to interpret the source data by identifying any trends, patterns or relationships present.

Identifying trends and patterns in data is an important part of all economics and business investigations. This will allow you to identify the cause of a problem or event and its likely outcome or consequences.

For example, Andy collected data on a phone company's advertising expenses. His data showed that the more money the company spent on advertising, the more phones they sold. Andy also recorded the number of complaints the phone company employees received during this time. He found that the amount of money the company spent on advertising seemed to have no effect on the number of complaints. This means Andy was able to identify that:

- there was a relationship between advertising and phones sold
- there was no relationship between advertising and the number of complaints received.

Economics is not a pure science; there are many different theories and approaches. This means there are often several different answers to the same problem. It is quite

common to see two **reputable** economists have completely different opinions on a topic or issue. For instance, another economist may collect different data or find different trends and think Andy is wrong and that there *is* a link between advertising and complaints. Many issues require us to weigh up different points of view, while keeping an open mind.

reputable having a good reputation

The above example demonstrates how one economist might interpret and analyse data. However, Andy forgot one essential step of data analysis: **verification**. This process requires an economist to verify or "check" the data they have collected. Economists must always verify the data they use to ensure it is reputable or trustworthy. This involves noting where the data originated and studying the methods the original source used to collect it. Once you are satisfied that the information you have collected is trustworthy, you have completed the verification process.

verification the act of checking the something is true or accurate

If Andy wanted to verify the data he collected from the phone company, he could begin by looking at the customer complaints. Andy might start by asking himself a question such as: "How were the complaints recorded by the company?" or "Is there any chance the data could have been tampered with?". Once Andy has considered these questions and confirmed the data collected was legitimate, he has completed his verification.

▶ **Key content video:** Interpreting data in economics and business

▣ **Check your learning 15.3**

Lesson 15.4
Evaluating, concluding and decision making

Evaluating alternatives

In most situations there is more than one way to make the right economic decision, to find the best solution or to solve a problem. An economics and business student carefully considers all circumstances related to an issue and the different options available. They evaluate, or weigh up, the costs and benefits of each alternative, then make a rational decision that they believe will lead to the best outcome.

▶ **Key content video:** Evaluating, concluding and decision making

Developing responses to economics and business issues

Reading about economics and business in your textbook or using online resources is useful for developing your initial understanding of this learning area. However, to expand your knowledge, you will need to learn how to apply it to real business situations.

Source 1 Talking to someone from a local business in your community can be a great way to apply the economic and business theories you have learnt to familiar situations.

Economics and business

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Source 2 A cost–benefit analysis can help Amelia decide whether or not to take on a casual job.

There are a number of ways you can do this:

- talking to someone in business about their experiences to see how the theory you have learnt applies in real life
- observing the world around you; when you next go shopping, think about some of the things you have been studying, such as customer services, competition, marketing techniques and types of businesses
- trying to come up with your own innovative business idea and discussing it with others
- taking part in simulation games or role-playing to improve your skills and put what you have learnt into practice.

Key skill Evaluating, concluding & decision making

Evaluating pros and cons

To make good economic decisions, it is important to consider your options by weighing up the costs and benefits to choose what is best for you. This type of evaluation is called a cost–benefit analysis.

Before looking at the different options, you must first do some work to find out more about the issue or topic. This can be done using the following steps.

- **Step 1** Read through different sources of information or speak to people with related experiences. Find out what experts say about the topic or what people have done in a similar situation.
- **Step 2** Make your own notes as you learn and write down any interesting facts, statistics or other information that will help you to explore the different options.
- **Step 3** Next to each option, write the advantages and disadvantages or costs and benefits.
- **Step 4** Get rid of the options where there are more disadvantages than advantages or where the benefits are small compared to the disadvantages.
- **Step 5** Concentrate on the strongest options and either decide which one is best or do further research before choosing the best option for you.

Practise the skill

Read the following case study and answer the questions that follow to decide what Amelia should do.

Amelia is a 17-year-old student in her final year of high school. She has been offered a casual position working on Saturdays at her local bookshop. She is weighing up her options to see whether she has time to take the job or if it will have too much of an impact on her studies. Amelia has considered the benefits (the pros), as well as the costs (the cons) below, to help her make the best choice.

- **Pros**
  - She would like a job so she can earn income to save up for an iPad.
  - She loves books and has always wanted to work in a bookshop, and the experience may help her future employment opportunities.
  - A break from studying once a week would be good for her mental health.
- **Cons**
  - Working hard on her schoolwork and succeeding in her final year of school is Amelia's top priority so she can get into the course she wants at university.
  - A casual job will mean Amelia has less time to study and will put more pressure on her. A job would also mean less time to see her friends.

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15.4

1 What other information does Amelia need to know before she can evaluate the pros and cons? (For example, she needs to know the price of the iPad she is saving for.)

2 Brainstorm one more pro or con for Amelia's list.

3 **Examine** the pros and cons to decide whether Amelia should take the job. Using specific examples from the case study and your cost–benefit analysis, write a short paragraph explaining your decision.

Check your learning 15.4

Lesson 15.5
Communicating

Using economics and business terminology

In every subject, there is a common language that is used. Source 1 lists and defines some commonly used terms in economics and business. Additional terms can also be found in the Glossary (page 592) and are defined throughout the modules. Make sure you use the appropriate terms when you discuss any conclusions you have come to (whether you are discussing these in writing, or in a speech or debate).

Communicating in economics and business

The ability to communicate your findings is an important skill in economics and business. You can communicate your findings in many ways, including through multimedia presentations (using software such as PowerPoint or Prezi), posters, reports or essays. Whichever format you decide to use, it is a good idea to include:

- an introduction – state what your research or inquiry question was, why you asked that question and why it is important.
- an explanation of what research you did – why did you use the particular sources you chose? Discuss the facts and the arguments for and against a certain issue.
- an explanation of your results – you can present your results as graphs, tables or photographs for your audience.
- a conclusion – what were your findings? Explain how you came to that conclusion.

For more information on communicating, see 16B Skills in context Choosing chocolate (page 505).

Source 1 Some useful economics and business terms

Term	Definition
business	organisation involved in commercial, industrial or professional operations
consumers	people who buy things to use
cost–benefit analysis	estimating what will need to be paid (costs) and possible profits (benefits) derived from a business proposal
economics	the study of how people and society choose to use limited resources to satisfy their needs and wants
interest	the amount of money a person has to pay the lender in addition to the original amount borrowed
investing	putting money into shares, property or other financial schemes in the hope of making a profit
market	where buyers and sellers interact to exchange money for goods and services
opportunity cost	what we miss out on when making a choice
producers	people or businesses who make and sell goods and services for a profit

Key content video: Communicating

Check your learning 15.5

Economics and business

Module
16

Making choices

Sub-strand: Economic literacy

Overview

Economics is all about choices. People are faced with choices every day. Should I walk to school or take the bus? What should I eat for lunch? Similarly, businesses also need to make choices, such as what goods or services they will provide. Decisions made by businesses are influenced by markets, where buyers and sellers interact to trade things of value. As consumers, we make choices about what to spend our money on. How we choose to spend our money influences what goods and services are available.

When investigating economic choices, consumers, businesses or governments need to consider the potential consequences. Whatever decisions they make, they will miss out on the alternatives they do not choose. As an economist, you will explore how to choose alternatives that bring the greatest benefits as well as understanding the consequences of your actions.

Source 1 Shopping in a supermarket is an example of the economic choices made by consumers to purchase products that will benefit them.

Lessons in this module

16A How do individuals and businesses make economic choices?

Lesson 16.1 Making choices
Lesson 16.2 Opportunity cost
16A Skills in context Costs and benefits

16B How do markets influence the production of goods and services?

Lesson 16.3 Markets
Lesson 16.4 Supply and demand
Lesson 16.5 Allocation of resources
16B Skills in context Choosing chocolate
Lesson 16.6 Review: Making choices

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Lesson 16.1
Making choices

need a thing that we physically cannot survive without, including food, water and shelter

want a thing that we desire but can survive without

Key content video: Making choices

Introduction

Making economic choices can be difficult for consumers. This is because we have a wide range of **needs** and **wants**. Generally speaking, a rational person aims to make choices that will fulfil their basic needs for survival, such as food, water and shelter. They also consider what will bring them the most satisfaction, such as owning a new smartwatch. The desires that are not necessary for survival are called wants. While this may seem simple, distinguishing between the two can be a very important part of making economic decisions.

Source 1 While many people feel that they need a smartwatch, in economic terms a smartwatch is considered a want.

Distinguishing needs from wants

While you may feel like you need a smartwatch, it is not something that is necessary for your survival. In our society, there are many pressures that make people feel that items they want are actually items they need.

This kind of pressure can come from businesses. The goal of a business is to make a **profit** for its owners. Businesses profit by producing goods or services for consumers to buy. They do this through finding clever ways to persuade you that you *need* their products. They develop flashy advertisements to display on billboards, television and radio. They also pay celebrities to promote their products in movies and magazines. Even without realising it, the average Australian sees thousands of advertisements a day, all of which are trying to influence them to buy a product.

profit the amount of money a business earns after taking away its expenses

Sometimes we feel pressure from our peers to buy a product. If everybody else has the latest smartphone and we do not, we might feel like a social outcast. Without these pressures, we would be less likely to buy the product. This would allow us to consider spending our money on something else that may bring us more satisfaction. For example, we could have saved our money or even donated it to those in need. Whatever you decide to do with your money, make sure it is a rational decision or one that is likely to give you the greatest satisfaction long-term.

Source 2 Businesses often pay celebrities to promote their products. Tennis legend and Ngaragu woman Ash Barty has promoted Fila sportswear, Jaguar cars and Vegemite.

Relative scarcity

Another problem caused by our wants is known as **relative scarcity**. Relative scarcity happens because our wants are unlimited, but the **resources** required to fulfil them are limited. This causes damage to the natural environment, which is essential to our survival.

Our wants are unlimited; as soon as one want is satisfied, another can appear just as quickly. For example, a person who already has a house, food, water, basic clothing and has money left over will likely buy an item to make their life easier, such as a car. That person may later decide to buy a bag, designer jeans, a new car, a new smartphone, and the list goes on. People's wants can never be completely satisfied because as soon as we buy one of these items, we desire another.

relative scarcity the problem that arises because our wants are unlimited, but the natural resources we use to fulfil them are limited

resource a natural or manufactured material that can be used to produce goods and services

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Case study Relative scarcity in ancient Australia

An example of a population managing relative scarcity and making economic choices to address their needs is the Gunditjmara people of south-west Victoria, who in ancient Australia, managed their resources to meet their need for food.

Around 30,000 years ago when the mountain of Budj Bim (Mount Eccles) erupted, it created lava flows, which then made ditches in the land. Over thousands of years the Gunditjmara people used these ditches to create riverbeds, diverting the waters from existing streams and lakes on Country. They did this by piling stones and rocks so water would flow to these old lava flow ditches. These human-made riverbeds would flow into little ponds.

The native eels from surrounding lakes and streams would make their way into these human-made riverbeds and end up in the ponds. The Gunditjmara people would then farm, eat and trade the eels.

In doing so, the people were making economic choices about how to use available resources to meet their need for food.

Source 3 Budj Bim (Mount Eccles), an important site for the Gunditjmara people.

Economics and business

16.1
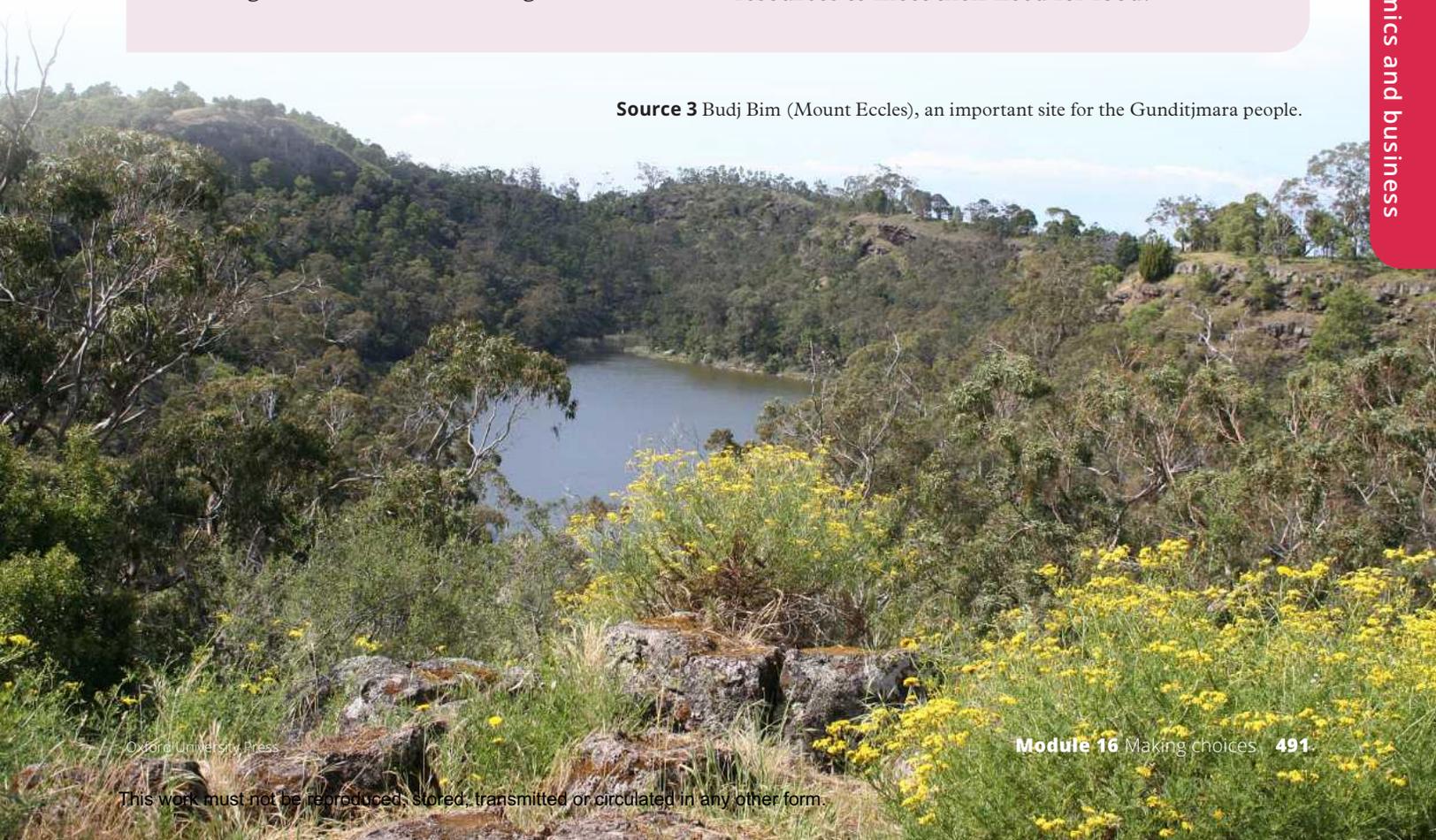
Factors of production

factors of production economic resources that are divided into four categories: land, labour, capital and enterprise

Resources are limited; these resources are also known as **factors of production**. These are items required for the production of goods and services and include:

- land – natural resources that businesses use such as water, land or animal populations, such as fish
- labour – the **employees** and their skills needed to produce and sell goods and services

employees people who work for a business

- capital – money, equipment, buildings or any other items businesses need to produce goods or services
- enterprise – a business' ability to put land, labour and capital together to create goods and services.

Watch it! Making choices

Source 4 Our unlimited wants use up the world's limited natural resources and often damage the environment through pollution and waste.

Check your learning 16.1

Check your learning 16.1

Review and understand

1 **Describe** the difference between a need and a want.

Apply and analyse

2 **Explain** the problem of relative scarcity.
3 **Classify** each of the following items as a need or a want:
   a car
   b hairdryer
   c clean drinking water
   d pens and pencils
   e designer jeans
   f computer
   g house.

Evaluate and create

4 Factors of production are key to the production of goods and services. **Create** a table to list two examples of each of the four factors of production (land, labour, capital and enterprise) that might be needed in the production of a smartwatch.

	Example 1	Example 2
Land		
Labour		
Capital		
Enterprise		

Lesson 16.2
Opportunity cost

Costs of factors of production

When setting prices for a good or service, businesses must think about how much these things will cost to produce. The resources needed for the production of goods and services are known as factors of production and include land, labour, capital and enterprise.

For some businesses, the cost of producing goods and services can be very expensive. For example, businesses that manufacture cars can have very high production costs. They must purchase and maintain expensive equipment and machinery to assemble materials or parts of the car. The materials required to make a car can also be expensive for a car manufacturer to produce or purchase from other businesses. These resources are combined or put together in a factory, which costs money to buy or rent. The cars are then shipped or transported to the place that will sell them, which also requires resources to complete. The cost of production is one of the main reasons why we cannot buy a car for $20 and why items that are expensive to produce are also expensive to buy.

A business also needs to make choices between the different products it can produce. The item a business decides not to produce is known as the **opportunity cost**.

Opportunity cost

When setting prices, businesses must make many decisions. A business tries to create products or provide services that will earn the greatest profit. For example, a clothing business has to decide whether to produce shirts or pants. It will work out the costs of producing both items, as well as the selling price of each. The profit is calculated by taking away the cost from the selling price.

Even though the pants sell for a higher price, they cost more to produce. When a business has more than one option available, the opportunity cost is what it misses out on by not taking the next best option. The clothing business will choose to produce shirts, meaning its opportunity cost will be the lost production of pants. Businesses must analyse the costs and benefits of each option in this way when making important decisions.

Learning intentions and success criteria

Key content video: Opportunity cost

opportunity cost what we miss out on when making a choice

Economics and business

First choice: pear
Second choice: banana — opportunity cost
Third choice: apple
Fourth choice: mango
Fifth choice: kiwi
Sixth choice: orange
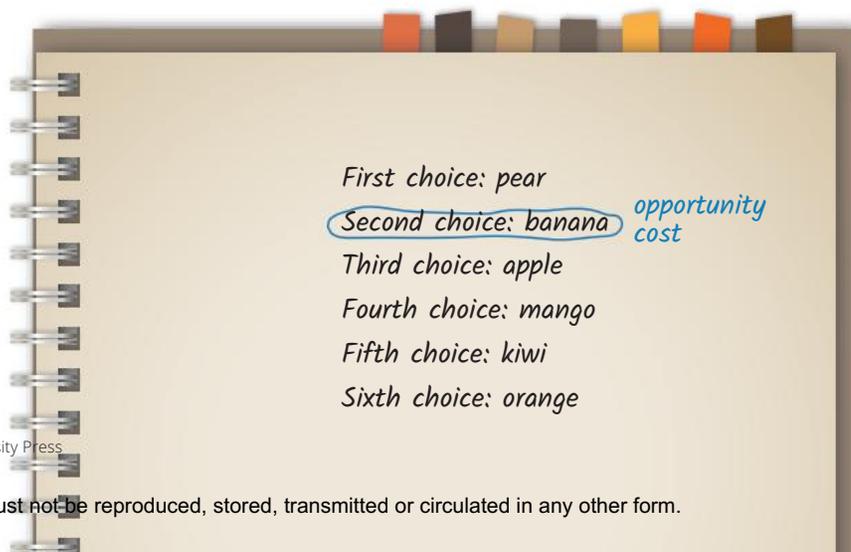
Source 1 The opportunity cost of selecting your first choice (a pear) is your second choice (a banana).

16.2

Understanding opportunity cost helps us put things into perspective. It makes us carefully consider what we miss out on as well as what we gain.

Source 2 Calculating profit to identify opportunity cost for a business (Profit = Selling price – Cost to produce).

	Selling price	Cost to produce	Profit
Shirts	20	10	10
Pants	30	25	5

Key skill Communicating

Using a model

Models are often used in economics to illustrate the meaning of a concept. The Production Possibilities Frontier (PPF) model can be used to analyse the idea of opportunity cost and relative scarcity. This arises when a business needs to make a decision about which products to sell or how much to produce given its available resources and level of technology.

Case study

Jacinta is a baker who needs to decide how much to produce given the amount of flour and machinery she has. The table in Source 4 shows how many muffins and cupcakes Jacinta is able to produce per hour at each of the four production points: A, B, C and D. Each point refers to how many muffins and cupcakes Jacinta is able to produce with a certain amount of flour and machinery per hour.

For example, at Point A, she could produce 150 muffins and zero cupcakes. However, if she would like to produce some cupcakes, she could produce at Point B where she would need to reduce her production of muffins from 150 to 100 to increase her production of cupcakes from zero to 40. The reason Jacinta would have to give up producing some muffins to produce more cupcakes is because she has a fixed amount of flour and machinery. The opportunity cost of Jacinta moving from Point A to B is 50 muffins.

Jacinta's resources are relatively scarce, which is why she needs to decide exactly how many of each item she would like to produce.

Practise the skill

1 Copy Source 5 onto graph paper.
2 Plot each of the production points. Point A has been done as an example and labelled "A". Remember to label the three other points: B, C and D.
3 Once you have four points, draw a line to connect them. You have just drawn your first economics model!
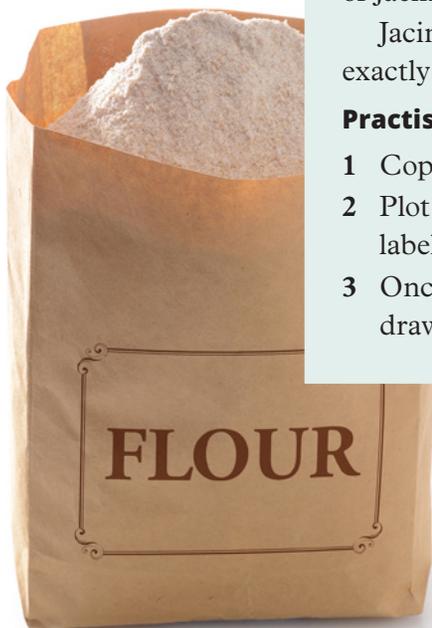
Source 3 Businesses make decisions about what to produce based on what is most profitable.

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16.2

4 Look at Source 4.

a What is the opportunity cost of making more muffins?

b Calculate the opportunity cost of increasing the production of cupcakes from Point B to Point C.

Source 4 The number of muffins and cupcakes Jacinta can produce per hour.

Point	Muffins	Cupcakes
Point A	150	0
Point B	100	40
Point C	50	80
Point D	0	120
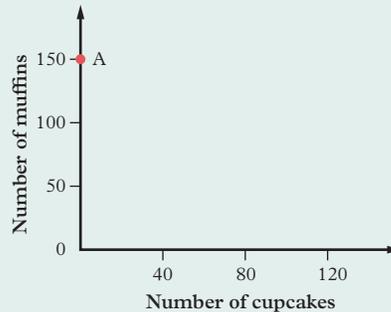
Source 5 Base graph of Jacinta's PPF

Quiz me! Opportunity cost

Check your learning 16.2

Check your learning 16.2

Review and understand

1 **Describe** two factors that influence a business's decision to set a price.

Apply and analyse

2 In your own words, **explain** "opportunity cost".

3 The manager of a clothing factory has received a phone call from their supplier. The supplier says that the material they would normally sell to the clothing factory for shirts has run out. As a substitute, the supplier offers material for dresses. The clothing factory must choose whether to produce dresses or pants. Using the table below, calculate the profit. **Determine** (decide) which product is the opportunity cost.

	Selling price	Cost to produce	Profit
Dresses	25	25	
Pants	30	25	5

Economics and business

16A Skills in context
Costs and benefits

Introduction

Every day we are faced with countless choices. While some of these choices can be quite easy to make, others require a lot more thought. In situations where the answer is not so obvious, we might be tempted to go with our instincts or even flip a coin, but as economists we know better. Economists analyse the costs and benefits that each option has to offer before deciding what to do. One way of doing this is by writing a list of pros and cons.

Key skill Evaluating, concluding and decision making

Making a list of pros and cons

The purpose of a pros and cons list is to help us evaluate the choices and come to a rational decision. The pros represent the benefits of the choice we are considering, while the cons represent the negatives of that same choice. You can refer to Source 2 to see what a finished pros and cons list might look like and the steps below to create your own list.

Source 1 A dilemma is a situation where a difficult decision has to be made.

- **Step 1** Come up with a choice that you will consider the pros and cons for and write it as the main heading of your list.
- **Step 2** Rule up a T-chart with the heading "pros" on the left, and "cons" on the right.
- **Step 3** Carefully consider all the benefits of choosing the option you are considering and list them under the "pros" section of the T-chart.
- **Step 4** Carefully consider all the negatives of choosing the option you are considering and list them under the "cons" section of the T-chart. Be sure to include here all the things that you miss out on from the next best option (the opportunity cost).
- **Step 5** Some pros and cons are more important than others so we need to give them weighting. Although this can be tricky, find the least important factor out of all the pros and cons you have listed and write the number 1 next to it.
- **Step 6** Compared to the least important factor, how much more important are all the other factors? Write a number that shows how much more important they are to you next to each pro and con.
- **Step 7** Add up the numbers in each column to show a total for pros and a total for cons. If the pros outweigh the cons then the choice is likely to be a good one. If the cons add up to a higher number than the pros, then the other option seems to be more appealing.

Source 2 Pros and cons of using the internet

Pros of using the internet	Cons of using the internet
1. It's convenient and accessible	1. Easier to get scammed online than in real life
2. Easy to communicate	2. Exposed to cybercrime/cyberbullying
3. Quick, easy access to products and services	3. Isolation from real-life connections
4. It's entertaining	4. Too much screen time
5. Global reach	5. Lack of privacy
6. Wider social circles	6. Dependent on it for social interaction
7. Access to education and career opportunities	7. Hard to tell who or what is real or fake

Practise the skill

1   Read the following scenario:

You get home from school and after having a quick snack, you open your books to start studying for an economics test you have the next day. Five minutes into your study, you get a text message. All your friends from school are going to the park to play soccer. You absolutely love soccer and hate studying, but you know your parents will be disappointed if you do poorly on the test. They always say, "If you want to go to university, you have to get better results in school!".

Create a list of the pros and cons of playing soccer versus studying to help you decide what to do.

Extend your understanding

1   **Compare** your pros and cons list to that of the person next to you; discuss why your answers might be different.

2   **Create** a pros and cons list for another tough decision you had to make or will have to make in the future.

Source 3 Making a quick pros and cons list can save time we would otherwise spend indecisively thinking about both options.
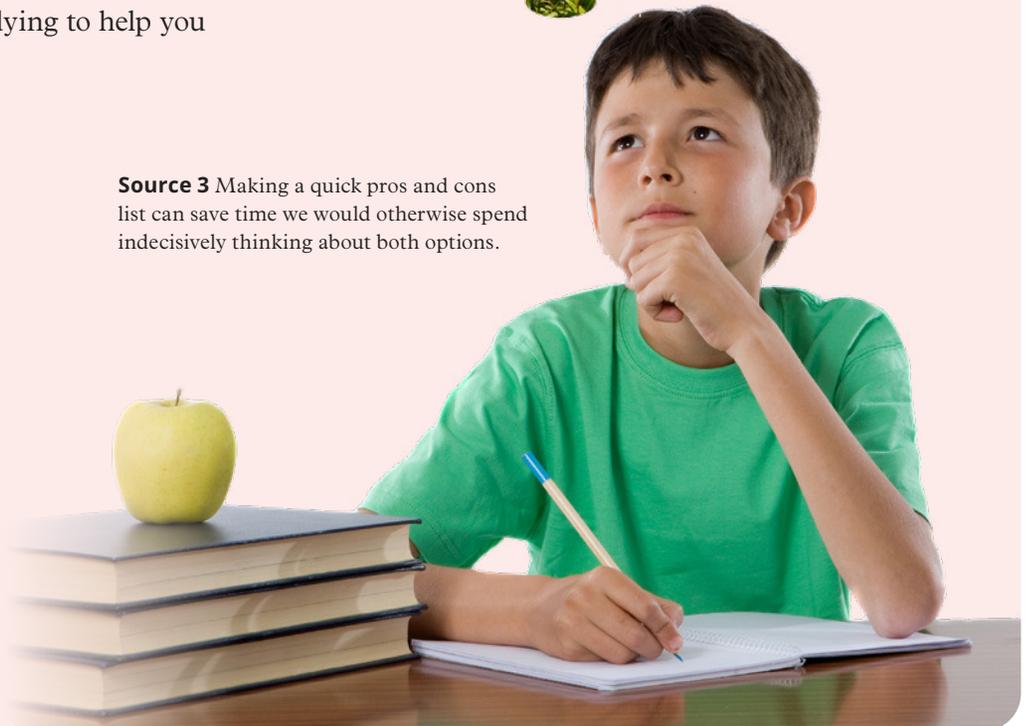
Lesson 16.3
Markets

goods and services goods are physical things (e.g. food and clothing), while services are things people do for us (e.g. cutting our hair)

profit the amount of money a business earns after taking away its expenses

employers businesses that employ workers to produce goods and services

wage the amount of money that a worker is paid based on the work they do

employees people who work for a business

minimum wage the lowest amount of money that a worker can be paid; it is usually an amount for each hour worked

leased when a person(s) has a contract that allows them to use a property for a period of time, usually in exchange for rent (money), it is leased

tenant a person who pays rent in exchange for living in a house owned by someone else

interest the cost of borrowing money from a bank; a person has to pay the bank interest on top of the original amount borrowed from the bank

Introduction

When we need or want **goods and services**, we generally buy them. This is what makes us consumers, or buyers. For this to be possible, producers, or sellers, have to make and sell these things, which they do for a **profit**. A market is where buyers and sellers interact with each other to exchange things of value. Usually, consumers pay money to producers in return for goods such as food or clothing and services such as a visit to the dentist or a Netflix subscription. An economic market exists for anything that can be bought and sold.

The labour market

The labour market is where workers sell their skills, knowledge and effort to **employers**. In return for their labour, the employer pays the workers a **wage**. This is how most people in our society earn an income. In Australia, wages for most jobs are higher than in other parts of the world. This is one of the reasons why so many people consider Australia to be the "lucky country".

There are laws that aim to stop employers treating their workers unfairly. There are also laws that require employers to maintain safe working environments for their **employees**. One of the government's goals is to improve the lives of ordinary Australians by creating jobs that provide them with an adequate income. Labour prices, such as the **minimum wage**, differ in countries around the world.

The housing market

The housing market is where houses and apartments are bought and sold. Houses and apartments satisfy people's basic need for shelter, so most Australians want the security of owning their own home. For those who can afford it, it is possible to own multiple houses or apartments, which can also be a way of making money. This is because houses or apartments can be bought and then **leased** out to a **tenant** in exchange for rent. In this way, the owner of the property, also known as the landlord/landlady, can earn a profit. However, as more people invest in houses or apartments, prices increase, making it more difficult for many people to afford their own homes.

Source 1 Most people pay a real estate agent to help them sell their house.

For most people today, the only way to buy a home is to take out a huge loan (a mortgage) from a bank and to slowly repay the loan over a long period of time (for example, 30 years). Banks make a profit by charging **interest** on the money they lend people.

Key skill Interpreting & analysing data and information

Analysing house prices

The key skill of interpreting and analysing data and information allows you to identify and explain relationships and trends in the topics you are studying.

House and apartment prices vary across Australia. Have you ever wondered how much your home cost, or how much a home costs in an area you would like to live in when you are older? House and apartment prices depend on various factors such as accessibility to transport networks, proximity to recreational areas such as a beach or park, and the distance to schools and hospitals.

Information about house and apartment prices can be easily found online. Real estate websites list the prices of houses and apartments for sale or for rent. You can see the prices of houses or apartments that have sold in a particular area, and also get an idea of the value of a property.

Practise the skill

Imagine you are an adult and have been working for several years. You feel ready to buy your first home.

- **Step 1** Identify the town or area where you would like to live.
- **Step 2** Visit a real estate website and search for a house or apartment you would like to buy in that town or area.
- **Step 3** On the real estate website, look for information about the prices of similar houses or apartments that have sold in the past few years.
- **Step 4** Analyse the data you have found. How have house or apartment prices varied in that town or area over the last few years, or in the areas directly next to it? Why is this the case?
- **Step 5** As a class, discuss the prices of your chosen homes. Identify whether these vary greatly.

Quiz me! Markets

Check your learning 16.3

Check your learning 16.3

Review and understand

1 **Name** the two groups of people that interact in a market.
2 **Explain** what is exchanged on the labour market.
3 **Describe** how a landlord earns income from houses.

Apply and analyse

4 **Propose** (put forward) how you think not having a job would affect the way a person lives.
5 Look at the home you wanted to buy in the Key skill activity in this lesson. How much was the home? Imagine you took out a 30-year mortgage and bought the home. Use the Commonwealth Bank's online home loan repayment calculator to calculate how much interest you would pay.

Source 2 Houses and apartments near cities are often more expensive than houses and apartments further away.
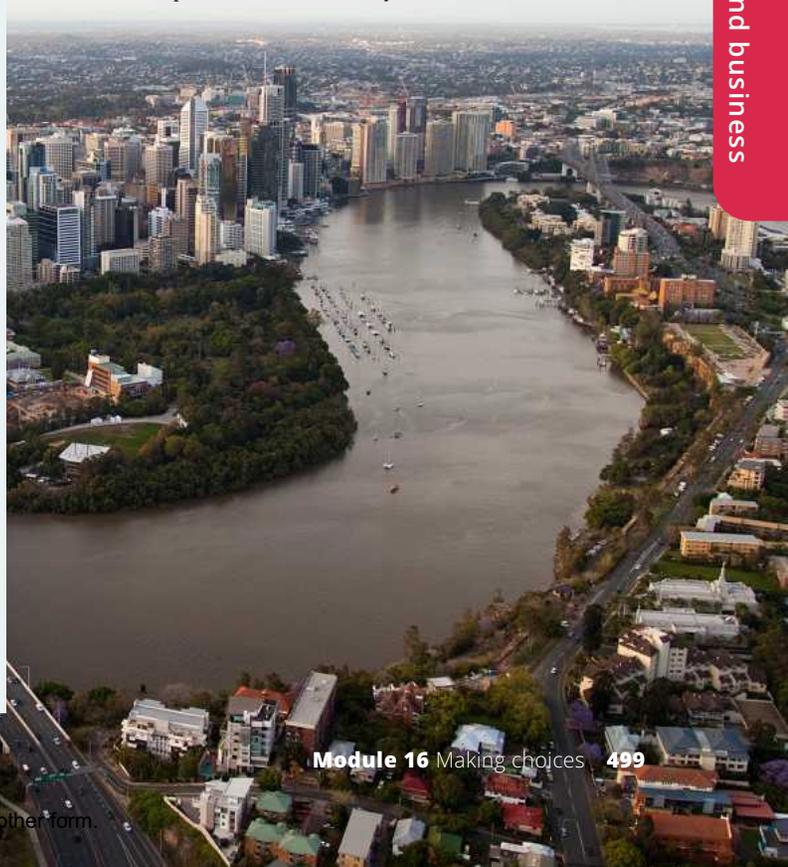
Economics and business

Lesson 16.4
Supply and demand

Introduction

Buyers and sellers in the marketplace are heavily influenced by price. Prices can be influenced by many factors, such as the availability of a product, the popularity of a product, and the state of the economy. These are examples of **market forces**, which are changes in supply and demand that affect the prices people are willing to pay or accept for goods and services.

Price mechanisms

The way price can affect the supply and demand of goods and services is known as the **price mechanism**. Price mechanisms affect the way consumers and producers respond to and influence each other in a market.

Demand

Demand refers to the amount of a particular good or service consumers will buy at a particular price. Consumers want to pay as little as possible for goods or services. This way, they will have more money left over to buy other goods and services. If prices go up, consumers are less likely to buy. When prices are reduced, consumers are more likely to purchase a good or service. This is known as the **law of demand**, where a larger quantity is demanded when prices drop.

law of demand when prices rise, the quantity demanded decreases and when prices fall, the quantity demanded increases

Imagine the price of blueberry muffins at the school cafeteria went down to 50 cents. Students would flock to the cafeteria to buy the cheap muffins before they sold out. However, if the price of those same muffins went up to $5, very few muffins would be sold.

Source 1 This table shows how many blueberry muffins would be purchased for particular selling prices.

Price of a blueberry muffin ($)	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Quantity of muffins demanded	190	170	150	130	110	90	70	50	30	10

The law of demand states that as the price of blueberry muffins increases the quantity of muffins demanded will decrease. Similarly, as the price of muffins decreases, the quantity of muffins demanded will increase.

Supply

law of supply the higher the price that a good or service can be sold, the higher the quantity that producers are willing to supply

While consumers are more willing to buy goods and services if they are cheaper, producers are more willing to supply goods and services if they can sell them for a higher price. This is because selling goods and services for a higher price earns the producer greater profits. The **law of supply** states that the higher the price of a product, the higher the quantity of the product producers will want to make and sell.

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16.4

Source 2 shows the prices of blueberry muffins and how many muffins a baker may be willing to sell at each price.

For example, bakers produce the goods they believe will sell for a high enough price to earn a profit. There is no point in baking blueberry muffins if no one will buy them at a price that covers the bakers' costs (such as the price of flour) and allows the bakers to earn a profit.

Source 2 This table demonstrates how many blueberry muffins a baker is willing to make if they can sell them at each given price.

Price of a blueberry muffin ($)	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Quantity of muffins supplied	10	20	40	60	75	90	120	140	160	200

Source 3 The demand for blueberry muffins. This graph shows the values in Source 1, with the price of muffins on the vertical axis and the quantity of muffins on the horizontal axis. Each price and quantity point has been added to the graph, then the points have been connected to form the demand curve (labelled "D"). By graphing the values, we can see how the demand for muffins increases as the price decreases. (Note that in economics, the connection of points is called a "curve", but it may in fact be a straight line.)
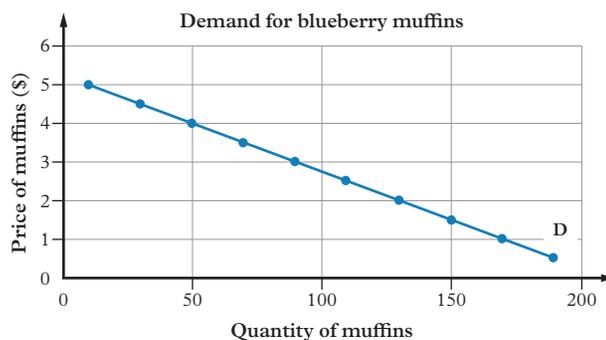
Source 4 The supply of blueberry muffins. This graph shows the values in Source 2, with the price of muffins on the vertical axis and the quantity of muffins on the horizontal axis. Each price and quantity point has been added to the graph, then the points have been connected to form the supply curve. The curve is labelled with an "S". By graphing the values, we can see how a baker might be willing to increase the quantity of muffins they supply as the price increases.
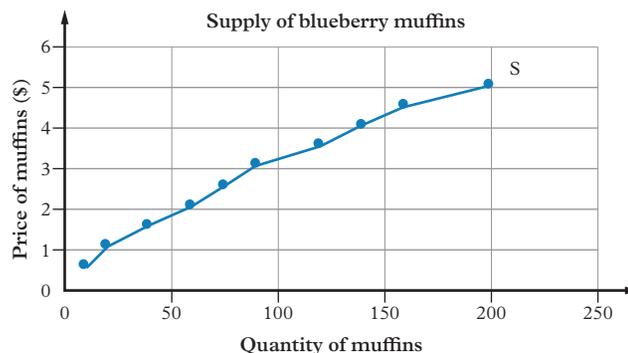
Source 5 The demand and supply of blueberry muffins. We can graph both the demand and supply curves in one diagram, giving us the full picture of the blueberry muffin market. The orange mark is the equilibrium point, where the quantity of muffins demanded is equal to the quantity supplied.

Graph it! Supply and demand

Economics and business

16.4
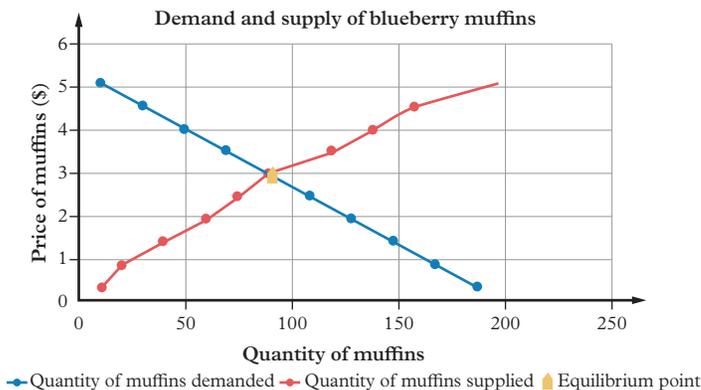
Check your learning 16.4

Review and understand

1 In your own words, **define** "market forces".
2 Why do consumers like to buy goods and services when they are on sale?

Apply and analyse

3 **Explain** why producers are more willing to make goods and services that sell at a higher price.

4 A chef is at a market to buy one tonne of strawberries. The chef notices there are two strawberry farmers selling their fruit. The first strawberry farmer's fruit looks very ripe and ready to eat, but he has priced his strawberries at $7 per kilogram. The second strawberry farmer has priced her fruit at $5 per kilogram but the strawberries are not as ripe. **Determine** (decide) who the chef should buy strawberries from and why.

Lesson 16.5
Allocation of resources

Introduction

Learning intentions and success criteria

resource a natural or manufactured material that can be used to produce goods and services

factors of production economic resources that are divided into four categories: land, labour, capital and enterprise

Resource allocation refers to how we divide **resources** and how these resources are then distributed to consumers. In economics, resources (also referred to as **factors of production**) are all the things we need to create the finished product. They include:

- land – natural resources that a business uses, such as geographical locations, minerals we can mine, forests or animal populations such as fish.
- labour – the employees that a business needs to produce, develop and sell goods or services.
- capital – money, machinery and buildings businesses use to produce goods and services.
- enterprise – a business' ability to combine land, labour and capital to make a profit.

The price of resources can influence what a business is able to produce, how they are able to produce it and how much they can sell it for. If the price of resources goes up, so too will the price of the final product. This can impact who has access to goods or services.

What to produce?

The goal of businesses is to make a profit. They aim to do this by producing goods and services to sell to buyers. They can decide what to produce based on the availability of resources to both them and their potential consumers. Some businesses might seek to make a profit by distributing a resource that is in high demand, but low in supply. This is sometimes referred to as finding a "gap in the market".

How to produce?

When producing goods or services, businesses will try to keep their costs as low as possible so they can make more profit. This means they need to manage their resources carefully. For example, consumer demand might be high for a pill that cures all food allergies. If the resources involved in making the pill are expensive, the business would have to sell the pills at a price very few could afford.

It is therefore important for businesses to keep their costs low so they can sell their goods and services at prices people are willing to pay. Businesses might reduce their costs by:

- increasing production so that more goods or services are produced and sold using the same resources, which is often known as using an "economy of scale"
- using cheaper materials, although this might affect the quality of the product
- paying lower wages to employees or producing goods overseas where the labour market is cheaper
- using machinery to replace human jobs.

Different businesses save money in different ways. Some decide to use high quality materials and Australian workers and others sell their products at higher prices.

Source 1 Labour is a resource, or factor of production.

Case study Native food innovation

Australia's native plants have been used in cooking by Aboriginal and Torres Strait Islander peoples for thousands of years. However, they have been largely overlooked by non-Indigenous Australians since European colonisation. The loss of traditional land and the introduction of foreign species has significantly reduced the availability of native foods. It is only recently that native foods have started appearing on shelves and menus.

Source 2 Pundi Produce grows and sells a variety of native foods, including lemon myrtle.

◀ The revival of Australia's native food culture has been led by Aboriginal and Torres Strait Islander entrepreneurs. They recognised a gap in the market for unique, Australian-made food products that weren't widely available, but could be easily and sustainably produced using traditional knowledge and practices.

South Australian farmer and Yuin man Dominic Smith saw the potential for growing native foods in 2014 when he started Pundi Produce. Pundi Produce is a farming business that grows and sells native fruit, herbs and vegetables into domestic and international markets. Located in the Riverland region, Pundi Produce uses sustainable farming methods to grow river mint, lemon myrtle, wattle seed, bush tomatoes and more.

As well as satisfying the increasing demand for native Australian foods, Smith sees Pundi Produce as a way of connecting people back to the land and Aboriginal and Torres Strait Islander cultures through food.

Who to produce for?

An important part of resource allocation for businesses is knowing who they want to sell to. Since price is such an important part of whether or not people can access goods or services, businesses must consider who their buyers are. For example, larger retailers, such as Kmart, mass-produce their goods cheaply so as many people as possible have access to and can afford to buy their products. On the other hand, a single piece of clothing from an exclusive designer brand would cost a lot of money to make and would therefore cost a lot of money to buy.

Quiz me! Allocation of resources

Check your learning 16.5

Check your learning 16.5

Review and understand

1 In your own words, **define** resource allocation.
2 **Name** the four factors of production.
3 Give two suggestions for how a business might reduce its production costs.

Apply and analyse

4 Read the case study Case study Native food innovation and **consider** the following: what is the business producing? How are they producing it? Who are they producing for? Remember, when you consider something, you should think about it carefully before making a decision.

Evaluate and create

5 In groups, use the idea of a "gap in the market" to identify a market that you think would benefit from a new business or supply of goods or services. **Develop** your idea and present a summary to the class of what you would produce, how you would produce it and who you would produce it for.

16B Skills in context
Choosing chocolate

Introduction

Chocolate is unhealthy and delicious; many people cannot get enough of it. The damage sugary products such as chocolate do to our health is causing many people to look at ways to kick their chocolate-eating habit.

Even though we know that chocolate is unhealthy, there is still a high demand for chocolate and chocolate-flavoured products in Australia. In fact, the confectionary industry was expected to receive approximately $16 billion in 2021 from selling chocolate and other sugary products to Australian consumers.

The government taxes other unhealthy products, including alcohol and cigarettes, which has encouraged some people to suggest the government should tax chocolate and sugary products as well. These people believe that if sugary products were more expensive, people would not buy as many of them.

The relationship between the supply of and demand for chocolate products can be investigated in many ways. This makes it easier

Source 1 While delicious, chocolate is filled with sugar and fat, which can cause many health problems.

for producers to determine how much chocolate they should produce, and how much they can charge for their chocolate goods. We can also assess how a tax on chocolate would affect the demand for chocolate by constructing a demand graph.

Key skill Communicating

Constructing a demand graph

In economics, being able to construct supply and demand graphs is an important skill. These graphs allow us to look at how the supply and demand for goods and services responds to changes in price. This information is especially important for businesses when they decide what to produce, how much to produce, and what to charge.

To draw a demand graph, follow the steps below (note: the steps are very similar for drawing a supply graph):

- **Step 1** Gather data about how much will be demanded at different price levels.

- **Step 2** Create a table of values to show this (see Source 2).
- **Step 3** Draw an L-shaped axis (see Source 3).
- **Step 4** Label the vertical axis as "Price" and fill in the values from your table.
- **Step 5** Label the horizontal axis as "Quantity" and fill in the values from your table.
- **Step 6** Plot the points from your table onto your graph.
- **Step 7** Draw a line connecting your graph (see Source 3).

Source 2 This table of values demonstrates how many slices of chocolate cake a cafe can sell for a given selling price.

Price per slice ($)	Quantity (number of slices sold)
2.00	10
4.00	8
6.00	6
8.00	4
10.00	0

Source 3 By graphing the values from Source 2, we can see how the demand for chocolate cake increases as the price of chocolate cake decreases.

Practise the skill

1 Copy the table below into your notebook. Using Steps 1 and 2, fill out the table showing how many of your favourite chocolate bars you think you would buy in an average week at each price.

Price ($)	Quantity (number of chocolate bars per week)
0.50	
1.00	
2.00	
3.00	
4.00	
5.00	
6.00	
7.00	
8.00	
9.00	
10.00	

2 Using the table provided, follow Steps 3 to 7 to draw a demand graph (see Source 3).

3 Looking at your graph, do you believe a tax would be effective in making people eat less sugar?

4 **Explain** what you think would happen if a tax was not applied to chocolate.

Extend your understanding

1 Research the effects of sugar on health. **Summarise** your findings.

2 **State** the pros and cons of removing sugar from your diet.

3 Look at the results of your pros and cons list. Should you cut sugar from your diet? **Justify** (give reasons for) your answer.

4 When people become addicted to sugary products, such as chocolate, nutritionists often suggest they replace these products with natural sugar. **Investigate** foods containing natural sugar.

Source 4 How do you think higher prices would affect the demand for chocolate cake?

Review: Making choices

Review activity

Analyse the data in Source 1, then answer the following questions. You may also need to refer to the information in Lesson 16.4 Supply and demand (page 500).

The market for ice-cream

Producers and consumers are key components of a market. Price is often determined by both these groups of people.

Source 1 shows the quantity of demand and supply of ice-cream.

Source 1 The demand and supply for ice-cream

Price ($)	Quantity demanded	Quantity supplied
2	120	20
4	90	40
6	60	60
8	30	80

1 In your own words, **define** "producers". (1 mark)

2 In your own words, **define** "consumers". (1 mark)

3 **Explain** what the equilibrium point is in relation to the laws of demand and supply. (3 marks)

4 **Identify** the equilibrium price and quantity of ice-cream. (2 marks)

5 **List** the four factors of production. (4 marks)

6 Give an example of each factor of production that would be needed to produce ice cream. (4 marks)

7 Use the information in Source 1 to **create** a demand and supply model on some graph paper. Remember to give your model a title and label the axes. (5 marks)

(Total: 20 marks)

Module checklist: Making choices

Module review quiz: Making choices

Module
17

The world of business

Sub-strand: Business and entrepreneurship

Overview

Every day we interact with businesses, whether it be through using items we have previously purchased or unintentionally encountering advertisements while scrolling on social media. Businesses can vary in size from small local businesses such as cafes to massive global corporations such as McDonald's. The world's most powerful businesses can even earn more money than some small countries!

Businesses are responsible for the majority of goods and services produced around the world. The day-to-day operations of a business will usually involve many different skills. Ultimately, the main goal of a business is to earn money by selling goods and services that consumers want.

Source 1 Almost everything we use in daily life is purchased from a business.

Lessons in this module

17A What makes a successful business?

Lesson 17.1
Types of business

Introduction

There are many different business structures to choose from when starting or growing a business, each with unique features and rules. The business structures explored in this lesson include:

- proprietorships
- partnerships
- corporations or companies
- cooperatives
- franchises
- non-for-profit organisations.

▶ **Key content video:** Types of business

Proprietorships

Proprietors, also known as sole traders, are individuals who run their own businesses. While they can employ other people to work for them, sole traders are completely responsible for the success or failure of their business. This means the owner might choose to sell their personal assets, such as their car or home, to pay off the debts accumulated by their business if it fails. Proprietorships are the most common legal business structure in Australia and are favoured by most small business owners since they are cheap and easy to set up.

Source 1 Proprietorships are cheap and easy to set up, but do not provide the owner with the legal protection that companies do.

Partnerships

Partnerships are formed when two or more people agree to run a business together. Partnerships help owners share the responsibility of running a business while using the skills, effort and finances of the different partners. Partnerships are cheaper to set up and run than companies, but partners can be held accountable for the failures of their business and any bad decisions made by other partners on behalf of the business.

Corporations (companies)

Corporations, also known as companies, are businesses that are considered separate legal entities to their owners. Companies are more expensive and difficult to set up and maintain than proprietorships or partnerships, but they protect the owner(s) by providing them with limited liability. This means that if the company fails, the owner

will likely not be forced to sell their personal assets to pay the debts of the company. The owners of a company are called shareholders since they own a share of the company and are entitled to a portion of the company's **profits**.

profit the amount of money a business earns after taking away its expenses

Cooperatives

A cooperative is a business made up of at least five members who contribute to the running of the business, all of whom have equal voting rights, regardless of their position in the business. Although not very common, cooperatives are becoming increasingly popular and successful as they make each member feel valued as equals.

Franchises

A franchise agreement allows a person (franchisee) to use the name, products and services of an existing business (franchisor), in return for franchise fees and a portion of the profits. Franchises are popular as they allow the franchisee to use a proven business model that is less likely to fail. The franchisee must follow the guidelines set by the franchisor as to how to run certain aspects of the business.

Source 2 Most fast-food chains, such as Subway, McDonald's and Pizza Hut, operate under franchise agreements.

Not-for-profit organisations

A not-for-profit organisation is a business that does not operate for a profit. Most funds received by a not-for-profit organisation go towards its ongoing running costs, like paying employees or providing a particular service to the community. Any additional money is used to support the organisation's aims, rather than going to shareholders. For example, Cancer Council Australia uses its funds to research cancer treatment, promote prevention, and provide support to anyone affected by cancer.

Quiz me! Types of business

Economics and business

Check your learning 17.1

📋 **Check your learning 17.1**

Review and understand

1 **Name** the most common legal business structure in Australia.
2 **Define** what is meant by limited liability.

Apply and analyse

3 **Explain** how a franchise agreement works.
4 Using a table, **compare** the advantages and disadvantages of each type of business.

Evaluate and create

5 **Conduct** an interview with a local business owner asking them why they chose the type of business that they did. Add your findings to the table you created in question 4.

Lesson 17.2
Goals of a business

Learning intentions and success criteria

Introduction

While the main goal or objective of most businesses is to make a profit, there are many other goals that a business may wish to achieve. These might include growing the business over time or improving an area of the business's operations. A good business will set goals, so everyone knows what they are working towards and can focus on achieving this.

▶ **Key content video:** Goals of a business

SMART goals

It is very important for a business or entrepreneur to set the right goals. A goal-setting technique commonly used by both individuals and businesses is the SMART goal principle (see Source 1).

Source 1 Businesses and individuals can use the SMART goal principle to help them set the right goals.

Initial	Description
S	**Specific:** the goal is clear and easy to understand. It states exactly what will be achieved and when.
M	**Measurable:** the goal is measurable in dollars, time, quantity, etc.
A	**Achievable:** the goal is challenging, but it can be reached.
R	**Relevant:** the goal is something that the individual or business should be aiming to achieve.
T	**Time-bound:** there is a realistic time frame within which the goal should be achieved.
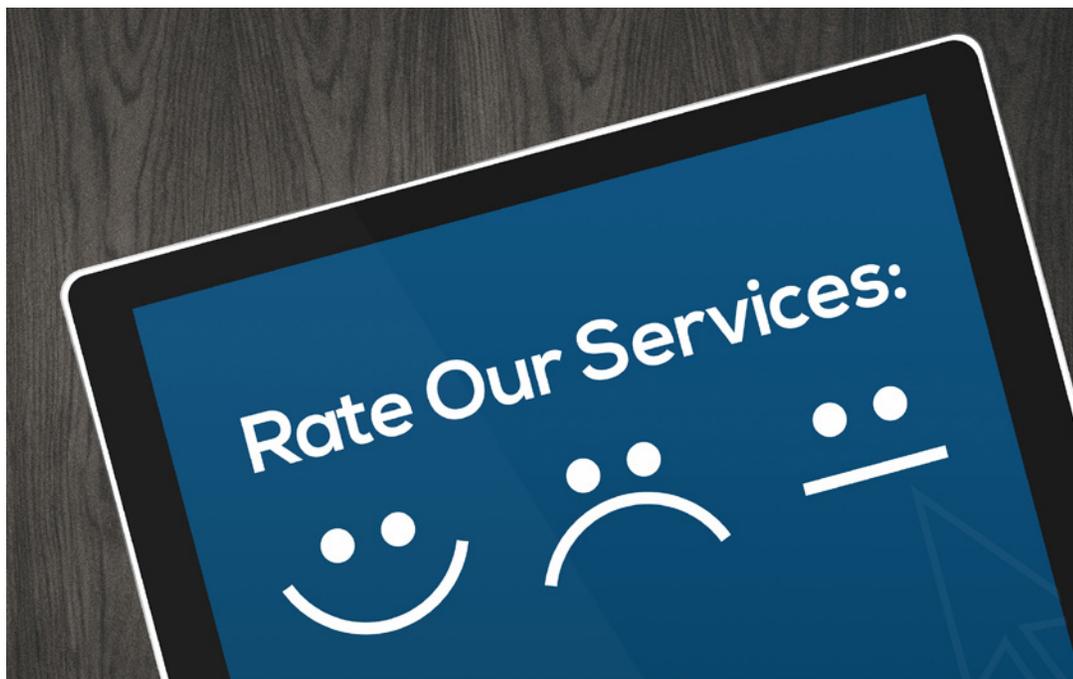
Source 2 A business might set a goal of improving customer satisfaction.

Financial versus non-financial goals

Financial goals are directly related to money. A business will often set financial goals around increasing its sales and profit or reducing its costs. For example, a small business might set a goal to increase its sales by 10 per cent from one year to the next.

Non-financial goals are those not directly related to money. Although many of these goals will eventually help the business to earn money, they are not based on or measured by dollar amounts. Businesses might set non-financial goals around improving customer satisfaction, training employees or reducing their environmental impact. For example, a small business might want to increase its level of customer satisfaction by 5 per cent over the next six months. It could measure this by asking customers to complete a survey about their experience with the business.

Once a business has set its goals, it can develop a **strategy** for how best to achieve them. For example, it might plan to achieve its goal of improving customer satisfaction by training its employees to deal with customer complaints in a friendly manner.

A shared vision

Entrepreneurs may have more creative goals than to just make a profit. For example, they might want to develop a new **product**, improve an existing service using new technology, or improve the lives of other people. An entrepreneur is not only able to create and commit to a vision for the business themselves, but they also have the ability to get people to help them make that vision a reality. Sometimes the vision itself is so powerful people will simply accept it; but other times the entrepreneur will need to persuade other people to see the benefits of their ideas.

Quiz me! Goals of a business

strategy a plan for achieving goals

entrepreneur a person who starts a business or independent organisation, takes risks and uses initiative to achieve success

product an item (either a good or service) that is offered for sale

I used to think, now I think

Reflect on your learning about the kinds of goals that businesses set, and complete the following sentences.
· I used to think …
· Now I think …
What has changed in your understanding?

Economics and business

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17.2

Source 3 Kamilaroi man Dean Foley is the founder and CEO of Barayamal, an entrepreneurship organisation that supports the growth of Aboriginal and Torres Strait Islander businesses and entrepreneurs. Barayamal helps Aboriginal and Torres Strait Islander businesses realise their goals by providing entrepreneurial advice and supporting tech-based solutions.

Check your learning 17.2

Check your learning 17.2

Review and understand

1 **Identify** the main objective of most businesses.

Apply and analyse

2 **Compare** financial and non-financial goals. Remember, when you compare two things, you must talk about how they are different.

3 Refer to Source 1 and **consider** whether the following goals are SMART. **Explain** why or why not in each case. Remember, when you consider something, you should think about it carefully before making a decision.

   a The business will be better than its competitors in the next financial year.

   b The business will increase its level of sales by 10 per cent over the next six months.

   c The business will offer three new products.

Evaluate and create

4 **Create** a SMART goal that you wish to achieve. You may wish to focus on improving your marks at school during the year or learning to play a certain number of songs on an instrument by the end of the term. Make sure you reflect on whether or not you have achieved your goal when the time you set for it has ended.

Lesson 17.3
Entrepreneurship and innovation

Learning intentions and success criteria

Introduction

"Entrepreneurship" refers to taking risks and using initiative to set up a business in order to achieve success. Entrepreneurs see an opportunity or have an idea for a new business that will earn them an income and possibly satisfy other personal goals.

Not all businesses are successful. Entrepreneurs risk losing the time, effort and money that they have invested in the business idea if it does not work out.

Successful entrepreneurs often have these characteristics:

- willingness to take calculated risks
- resilience, or the ability to bounce back from failures
- a strong work ethic
- passion for their business
- an understanding of finances.

▶ **Key content video:** Entrepreneurship and innovation

Case study Successful entrepreneurs

When Melbourne woman Kate Morris (see Source 1) was at university, she worked at a cosmetics counter. There, she discovered that many women found shopping in department stores to be intimidating. In 1999, when she was 21, wanting to create a more user-friendly beauty shopping experience, she founded the online cosmetics store Adore Beauty from a garage. She started her business selling two cosmetic brands, and now she sells more than 200 brands.

Another successful entrepreneur is Gunditjmara and Yuin woman Niyoka Bundle. Niyoka realised there was a gap in the market for Indigenous cuisine and founded the company "Pawa", which means "to cook" in the Gunditjmara language. Pawa caters for business events and functions, providing Indigenous fusion food. She has catered events for organisations and companies such as Apple, the University of Melbourne, RMIT University and ANZ Bank.

Source 1 Kate Morris, founder and CEO of Adore Beauty

Source 2 Niyoka Bundle, founder and CEO of Pawa

Think, pair, share

- Think about a famous global business. How do you think it became famous?
- Discuss your ideas with a partner.
- Share your thoughts with the class.

Innovation

Innovation is the act of creating or starting something new and different. Innovators can improve on an existing idea or create something completely new from scratch. Quite often, an innovative idea will present an opportunity for an entrepreneur to start a business.

Businesses that are innovative will be successful, as they are constantly finding new ways to stay ahead of their competition. This is known as having a **competitive advantage**, and is incredibly important for today's businesses, which can face competition from all over the world.

Innovation not only creates business opportunities but can also benefit society. It is responsible for nearly every item you use.

Successful innovators often have these characteristics:
- They question everything and consider new possibilities.
- They observe their surroundings and look for ways to improve things.
- They make connections with different types of people and are open to different ways of thinking.
- They experiment with new ideas.
- They find connections between the different things they investigate.

competitive advantage when a business is able to outperform other businesses, e.g. by producing better or cheaper products

Special circumstances, such as the COVID-19 pandemic, often inspire businesses to innovate. In an effort to stop the spread of the virus, governments in many parts of the world imposed "lockdown" restrictions, which meant people were unable to leave their homes except for essential reasons. A great number of consumers turned to online markets. Large businesses such as Amazon that already offered online shopping saw a huge increase in customer orders, and their profits soared. Many other businesses that had only operated from a physical shop changed their business models and started offering online shopping.

Quiz me! Entrepreneurship and innovation

Source 3 Apple is an example of an innovative business. It consistently brings out new products, including the Apple Watch, MacBook and iPhone.

Check your learning 17.3

Check your learning 17.3

Review and understand

1 **Identify** three common characteristics of an entrepreneur.
2 **Identify** three common characteristics of an innovator.

Apply and analyse

3 **Explain** why you think each of the five entrepreneurial characteristics would be important for anyone who is starting their own business.
4 **Explain** how the COVID-19 pandemic created business opportunities.

5 **Distinguish** between an entrepreneur and an innovator. Remember, when you distinguish between two things, you should talk about how they are different.

Evaluate and create

6 **Create** a visual display to show what an entrepreneur is. Include the characteristics of a successful entrepreneur.
7 **Investigate** a famous innovator. Write a short biography and list the key characteristics that you think would have helped them to become a successful innovator.

17A Skills in context
Social entrepreneurs: Thankyou

Introduction

Not all entrepreneurs are solely interested in making money for themselves. Social entrepreneurs, such as the founders of the Thankyou, aim to make the world a better place through their business endeavours.

Thankyou was started in 2008 by Australian university students Daniel Flynn, Justine Flynn and Jarryd Burns. They saw an opportunity to help the 900 million people who did not have access to safe drinking water by starting their own not-for-profit bottled water business, Thankyou Water. Although it took three years before the product saw some success, it eventually became popular with consumers who wanted to know their money was going to a good cause.

Thankyou has given millions of dollars, funding 31 partners delivering programs in livelihoods, economic development, health, food, household assets, and water and sanitation for communities in extreme poverty. Thankyou is an example of what people can achieve when they use entrepreneurship to make a difference.

Source 1 Thankyou has empowered 31 impact partners working towards a world without extreme poverty.

Source 2 Thankyou was founded to help provide people around the world with safe drinking water.

thankyou.™

Source 4 Thankyou is a social enterprise creating products to help end extreme poverty.

🔗 **Weblink:** The Thankyou Group

Source 3 Co-founders of Thankyou – Jarryd Burns, Daniel Flynn and Justine Flynn see their business as a way to help people.

Key skill Investigating

Interviewing an entrepreneur

Interviews can be a great way to learn how and why entrepreneurs do what they do, firsthand. To interview someone effectively, you will need to develop questions and collect answers. Follow these steps to prepare and conduct an interview:

- **Step 1** Respectfully approach an entrepreneur and politely request to interview them at a time that suits them.
- **Step 2** Prepare a list of questions to ask. Entrepreneurs are often busy running their business; therefore, it would be a good idea to ask a maximum of 10 questions. Your questions could focus on the following areas:
  - the business and how it runs
  - the reasons they became an entrepreneur
  - what it takes to be an entrepreneur
  - the challenges and successes they have experienced as an entrepreneur.
- **Step 3** Prepare the right equipment. It is better to record the interview with your smartphone or camera than it is to try to write down the responses to your questions as you go. However, you must remember to ask permission before you record someone.
- **Step 4** Conduct the interview. Make sure you are well presented, polite and arrive on time. When you complete the interview, be sure to

ask the entrepreneur if they have any questions for you, and thank them for their time.
- **Step 5** Write up the interview responses and any other notes you made from the interview.
- **Step 6** Send a written thank you note to the entrepreneur.

For more information on investigating, see Lesson 15.2 Investigating (page 483).

Practise the skill

1 Follow the steps above to **conduct** your own interview with an entrepreneur or a small business owner. Make sure you are supervised by an adult when you conduct the interview. If this is not possible, you can conduct the interview through a video or phone call.

2 Prepare a 200-word report that **summarises** what you learnt from the interview and how it helped you to better understand the world of business.

Extend your understanding

1 **Investigate** Thankyou and write a brief report on how this social enterprise is helping those in need.

Review: The world of business

Review activity

Read the information and answer the following questions.

Finding a niche

Sometimes the idea for a business arises because somebody sees a specific need that is not being filled. Their business is able to meet this need by focusing on offering a specific good or service.

Code Like A Girl is an Australian business founded by Ally Watson, who loves working with technology. Before creating her business she often felt isolated in the male-dominated industry. She began Code Like A Girl as an event in 2015, to meet other females who code. Since this event, Code Like A Girl has grown into a social enterprise aiming to provide young women with the confidence to enter the world of coding.

Code Like A Girl is based on the belief that technology is a key element of our ever-changing world, which needs more women involved in "building" technology – not just using it. The business offers short online courses for both adult women and girls from the age of eight. For adults, these courses range from learning more about the foundations of web development to programming.

Code Like A Girl also offers internships, where women can do paid work experience with companies such as the Australian Academy of Science, CSIRO, Equifax and PricewaterhouseCoopers.

1 What goods or services does Code Like A Girl offer to potential consumers? (1 mark)
2 Do you think the founder of Code Like A Girl had a financial or non-financial goal when starting her business? **Explain** your response. (3 marks)
3 Do you think Code Like A Girl is a socially responsible business? **Justify** your answer. (6 marks)
4 **Evaluate** whether or not Code Like A Girl is a successful business. Do this by considering its strengths and weaknesses, and giving your overall opinion. (10 marks)

(Total: 20 marks)

Module checklist: The world of business

Module review quiz: The world of business

Source 1 The Code Like A Girl team is made up of passionate people who enjoy coding.

Part 4

Civics and citizenship

Overview

Skills

Module 18 The civics and citizenship toolkit .... page 522

Module

18

The civics and citizenship toolkit

Sub-strand: Skills

Overview

Civics and citizenship is the study of the key features of democracy and of Australia's system of government and legal system. It looks at how Australia's system of government supports a diverse society with shared values that let us live together in harmony.

Civics and citizenship is the study of rights and responsibilities that all citizens have in a country and how governments work. It teaches us to ask questions about important civics issues in order to understand and participate in the world around us. It also teaches us the importance of finding and analysing information and how to develop and communicate our own opinions, while understanding and respecting the perspectives of our fellow citizens.

Source 1 Parliament House in Canberra is the meeting place of the elected Parliament of Australia.

Lessons in this module

Lesson 18.1
Civics and citizenship skills

Introduction

Active citizens are able to question, interpret and evaluate information and argue their point of view. For civics and citizenship students, the classroom is a place where you learn to share your opinions and see things from different perspectives. You should take this approach when examining Australia's multicultural and multi-faith society, as well as the characteristics of Australia's democracy.

Studying civics and citizenship requires you to ask and develop a range of questions about civic issues. To answer these questions, you will develop an understanding of how to locate and select information to help you investigate contemporary civic issues. You will learn how to analyse information and how to evaluate different perspectives. You will explore the meaning of active citizenship and understand how Australian citizens can create change in local, national and global communities. You will learn how to use evidence and civics and citizenship terminology to communicate your explanations and arguments.

Each of the skills you will learn is shown below. It might help you to think of each of these skills as tools in a toolkit.

1 Investigating contemporary civics and citizenship issues
2 Evaluating democratic institutions and systems
3 Participating in civic processes
4 Communicating
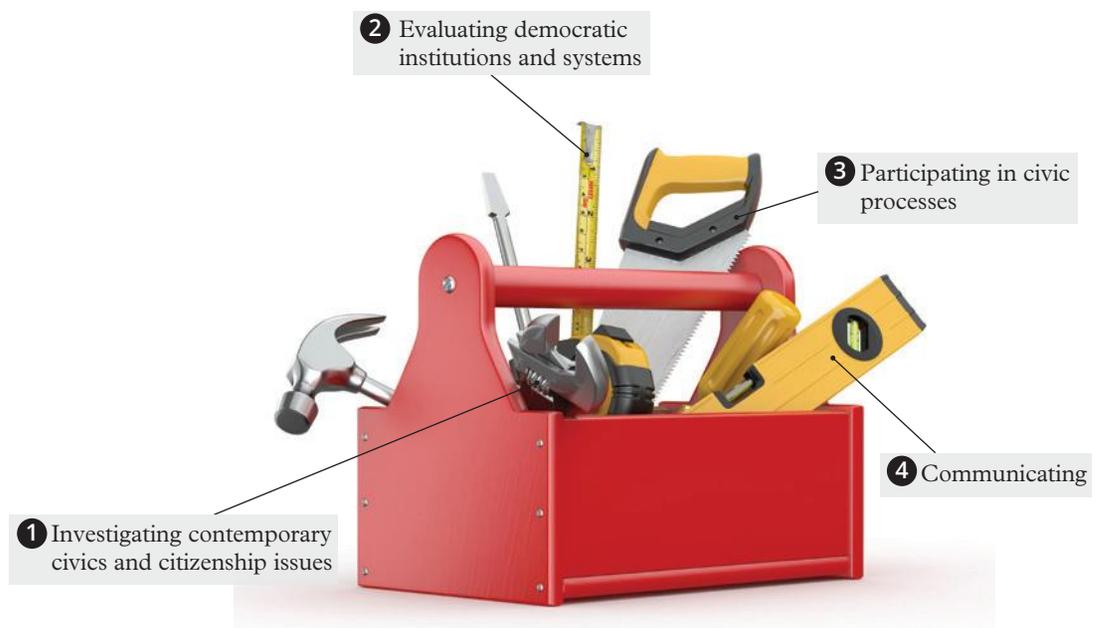
Source 1 Citizens use several different skills. Each of these skills is like a tool in a toolkit.

Lesson 18.2
Investigating contemporary civics and citizenship issues

Developing questions

Civics and citizenship students develop questions to investigate and understand Australia's political and legal systems. By asking key questions, such as "What is the 'rule of law'?", civics and citizenship students are able to investigate important parts of Australia's political and legal system. Civics and citizenship students also use current affairs to develop questions; for example, "What impact has the rise of social media had on civic engagement?".

▶ **Key content video:** Developing questions

Key skill Investigating contemporary civics and citizenship issues

Asking what, who, where, how and why

You can learn to investigate a civics and citizenship issue, such as the COVID-19 lockdowns in Victoria, by starting your questions with the words "what", "who", "where", "how", "why", "what impact" or "what should". When examining a source, whether it is a cartoon, video footage, newspaper article or election slogan, follow these steps:

- **Step 1** Brainstorm a list of questions and then try to answer them. Some questions, such as, "What is happening?", might be easily answered, whereas other questions, such as "Why is it happening?" might need further research.
- **Step 2** Look at the source itself to try to understand the context. The "who" question is important here. "Who is saying this?" can be just as important as "What is being said?" Identifying where the source comes from can quickly alert you to whether the truth of the source's statements should be examined more carefully.
- **Step 3** The "how" question is also important. In this example you might ask, "How did COVID-19 lockdowns effect Victorians' freedoms?", but you also might ask, "How does this source affect me?" Are there any emotions such as fear, persuasion or humour that are being used to influence your judgment?

Practise the skill

1 Where would you look to find reliable answers to the question: "What was the issue with Victorian COVID-19 lockdowns and people's democratic freedoms?"

Civics and citizenship

18.2

◄ **2** **Explain** why it is important to know the author of the source when researching an issue.

3 Why is examining how the source affects you sometimes more important than asking "What is happening?" and other basic questions?

4 Look at Source 1. What tactics have been used to convey the cartoonist's message about the issue of Victoria's extended COVID-19 lockdowns?

Source 1 A political cartoon titled "Almost Got This Thing Flattened", which portrays former Victorian Premier Daniel Andrews with a "COVID-19 Plan Stage 4 Extended". The cartoon, created by Mark Knight, was published on 7 September 2020 in *The Herald Sun* during Melbourne's second lockdown, which lasted for 111 days.

Locating information

Civics and citizenship students gather information from a range of sources. These can take many different forms, from written records in books or online, to live video and audio recordings. Some examples of sources include case transcripts and judgments (the written decisions that judges make), newspaper articles, letters, tweets, blogs or social media posts, cartoons and interviews.

Locating a range of relevant sources is a valuable skill, which usually involves different research methods, such as:

• using online search engines, such as Google
• exploring free online encyclopedias, such as Brittanica
• following social media, such as Facebook and X (formerly Twitter)
• looking at newspaper and magazine articles in print or online
• contacting local members of parliament or asking people with expertise in the subject
• speaking with other class members or family members to gain an insight into their views on a particular issue.

▶ **Key content video:** Locating information

Researching online

Although books and newspapers are valuable sources of information, a lot of research today is conducted online. To ensure that sources gathered online are accurate, reliable and relevant, you should follow a number of guidelines:

- Search engines, such as Google, are useful research tools but much of the material on these sites can be unreliable and inaccurate. When using search engines, be sure to define your search using keywords. Your librarian or teacher is a good person to ask for help with this.

- A reliable way of searching for sources is to use sites linked to government departments, reputable companies, universities and educational institutions. A quick way of telling whether a site is reputable is to look at the domain name in the URL (internet address). Government departments will include .gov in their URL and educational institutions will include .edu.

- Websites such as Wikipedia can be a good starting place to get some information, but always verify it elsewhere too.

- Avoid blogs posted by unknown individuals. If you happen to find relevant information on a blog or social media site, always verify it by using a more reliable source.

- Never cut and paste online information without referencing where it is from. Taking someone else's work, ideas or words and using them as if they were your own is called plagiarism and is against school rules, while copying and pasting anything from a website without the website owner's permission is against the law.

- With anything you read or watch, always consider the purpose of why someone wrote it. Politicians will have very different motivations than journalists, as will bloggers who are making money from their content.

Source 2 Learning to question and interpret information is an important skill for civics and citizenship students.

Source 3 Civics and citizenship students find valuable sources on the internet.

Analysing information

Once you have located information from a range of sources, you can analyse the information and sources you have found. A useful source is one that will add to your understanding of a civics and citizenship question, topic or issue. The source also needs to be relevant and reliable. The following are good questions to ask to determine whether a source is useful:

- Is the information current?
- Is it from a reliable source?
- Is there enough detailed information in the source?
- Does the information support evidence from other sources?
- Is it balanced or does it present one point of view (bias)?
- Is it based on fact or opinion?

▶ **Key content video:** Analysing information

Civics and citizenship

18.2

Separating fact from opinion

When analysing information, it is important to distinguish between facts and opinions. A fact is something that can be proved: when an event took place, what happened and who was involved. An opinion is based on what people believe is likely to be true. A simple way to detect whether a statement is fact or opinion is to look closely at the language used. The use of words such as "might", "could" and "think" all indicate that an opinion is being expressed. For example:

- fact: Melbourne had the world's longest lockdowns during the COVID-19 pandemic with 262 total days
- opinion: I think that the lockdowns were really fun and doing school remotely is something all schools should offer.

Understanding different perspectives

In civics and citizenship it is important to understand different perspectives. Perspective is the position from which people see and understand events going on in the world around them. People will have different points of view about issues depending on their perspective, which can be influenced by their age, gender, social position, life experiences, financial circumstances, education, beliefs and values. The more controversial an issue is, the more likely it is that there will be different points of view. In politics (and therefore in the study of civics and citizenship), people often write or speak about issues from their own perspective, which is why we must carefully evaluate sources when we are drawing conclusions from them.

▶ **Key content video:** Understanding different perspectives

✅ **Check your learning 18.2**

Source 4 People will have different points of view on civic issues, based on their perspective.

Lesson 18.3
Evaluating democratic institutions and systems

Cultural, religious and social influences

Australia's democratic system has been influenced by different cultures, religions and social movements. British traditions, Aboriginal and Torres Strait Islander heritage, and diverse immigrant cultures have all played a role in how the government and legal systems work today.

Australia's laws and political systems are partly influenced by Judeo-Christian values, which emphasise fairness, justice, and equality. Judeo-Christian values are the religious beliefs, writings and traditions that are commonly held by the Jewish and Christian faiths. This comes from the fact that Australia's democratic institutions were initially based on British values. Most notably, these values are reflected in the structure of parliament, which is based on the Westminster system, as well as the main religious holidays, which reflect Christian faith, and the judicial system, which is based on the principle of the separation of powers.

In recent times, these principles have extended to ensure the inclusion of people of diverse cultures and religions. Anti-discrimination laws and the promotion of multicultural values are examples of efforts to support and celebrate diversity within the political and social landscape. For example, in 2021 the Australian Football League (AFL) passed the "Vilification Rule" which protects players, coaches, supporters and spectators from experiencing racially harmful language. To enforce this, there are severe consequences for those who breach the AFL's rules, which can include up to a lifetime ban from football games.

Aboriginal and Torres Strait Islander peoples have also influenced Australia's democratic institutions. Practices like the Acknowledgement of Country and Welcome to Country ceremonies are now included in parliamentary sessions and official events, highlighting the importance of Aboriginal and Torres Strait Islander heritage.

Source 1 The AFL has made clear guidelines and consequences for individuals who breach Australia's values of fairness and inclusion.

Civics and citizenship

Democratic values in Australia's legal system

Democracy values empowering individuals to be a part of the political process, and one way this is upheld is through Australia's legal system. The legal system upholds two fundamental values: the rule of law and the presumption of innocence with access to a fair trial.

The rule of law means that everyone in society is equal, and all laws are applied with fairness and consistency. This includes everyday citizens, members of parliament, officials, and even the police. Additionally, the court system (judiciary) is independent of the parliament (legislature) which make the laws, and those who approve the laws (executive) branches of government, meaning that they are not influenced to be unfair in their application of the law.

The presumption of innocence is equally important, as it means that the responsibility is on the prosecution to prove that a person has committed a crime. The prosecution is the legal representation of the state, which is seeking to convince a judge to enforce the law in court. The presumption of innocence means that the law is more fairly applied, and that individuals have opportunities to defend themselves, sometimes with the assistance of a lawyer.

In Victoria, the Koori Court is another example of democratic values in our society. The Koori Court is part of the Magistrates' Courts. It is a service that supports Aboriginal and Torres Strait Islander peoples during sentencing. Sentencing takes place after a person has been found guilty of a crime, where they have a final appearance in court to find out the official consequence they are to receive. In the Koori Court, a person who has been found guilty sits around a table with the judge, Aboriginal Elders or Respected Persons from the community, their lawyer, family and others who help in the court. The goal is to have an open conversation instead of using complicated legal language. The Elders give cultural advice to help the judge make a fair decision that respects their culture and helps the individual to avoid making the same mistakes again.

Political actors and power in democratic institutions

Political actors are individuals or groups who have some political influence or power. There are many political actors in Victoria, outside of the Victorian Parliament, the Premier, the courts and the Governor.

Interest groups and lobbyists also try to influence democracy. A lobbyist is someone who tries to influence government leaders to make decisions that help a specific group, company or cause. They might meet with politicians, provide information or organise events to show why their idea is important. Lobbyists work to change or create rules and laws to benefit the people or groups they represent. Being a part of a lobbying group is one way that individuals can participate in the democratic process.

Another way is to be a member of a political party. Political parties are central actors in Victoria's democratic system. Major parties, like the Australian Labor Party (ALP), Liberal Party and Australian Greens, influence policy decisions for power through elections. There are also smaller political parties in Victoria, such as the Animal Justice Party, that represent people's concerns or views on certain key issues, outside of the major Australian political parties.

One thing that makes Australian democracy significant is that power is shared across many bodies, and no one person, party or institution holds it all. This creates and maintains a fair, just and more equal society for all.

Check your learning 18.3

Source 2 Australia's democratic values promote greater inclusion of Aboriginal and Torres Strait Islander peoples.

Lesson 18.4
Participating in civic processes

Introduction

Being an active and informed citizen means participating in your community. Many Australian citizens go beyond the legal responsibilities they have as citizens to help make the world a better place by contributing to their community on a local, regional, national or global level. They do this because they care about the community they live in and believe they have a social responsibility to make it a better place. For example:

- citizens in a local community – citizens may give their time or resources to help others in their local communities.
- citizens in the regional or national community – citizens may work at a national level to provide a better future for all Australians.
- citizens in the global community – citizens may act on the global level to help make the world a better place to live in.

Key content video: Methods for civic participation

Civics and citizenship

Methods for civic participation

Participation is an important part of living in a democracy. In Australia, we participate in society in a number of ways, such as by voting in an election or referendum, serving on a jury or paying taxes. One of the most important ways we participate in a democracy is by voting in an election. By voting according to the issues that are important to us, we have the power to influence the way our country is run. Other ways of participating in a democracy might include:

- volunteering
- protesting or demonstrating about important social issues
- signing petitions
- contacting your local member of parliament (by calling or writing emails)
- campaigning for a person or party who is trying to get elected.

Participation is important as it allows citizens to have a say in how our democratic society is run.

Key content video:
Active citizenship

Check your learning 18.4

Source 1 One way to participate in democratic society is to vote.

Lesson 18.5
Communicating

Using civics and citizenship terminology

In every subject, there is a common language that is used. Source 1 lists and defines some commonly used terms in civics and citizenship. Additional terms can also be found in the Glossary (page 592) and are defined throughout the modules. If you come across a term that you are unsure of, you should use a dictionary, go online or ask your teacher to help you understand what it means. It is a good idea to keep a glossary of subject-specific terms, as well as any other new words that you come across, in your workbook.

Source 1 Some useful civics and citizenship terms

Term	Definition
citizen	a person who legally lives in a geographical area such as a town or country
citizenship	a person's status as a citizen, which includes the rights and responsibilities that citizens have
civics	the study of the rights and responsibilities of citizens and how government works
government	the group of the elected members of parliament that make laws or decisions for a nation or state
multiculturalism	the way in which people of many different cultures, races and religions live peacefully with one another as equals
parliament	the organisation that makes the laws in a country, often with a lower house to draft laws and an upper house to review the proposed laws. In Australia, the monarch's representative (the Governor-General) is also part of parliament and officially approves the laws
parliamentary democracy	a system of government in which people elect (vote for) representatives to parliament to make laws that reflect the majority of voters' views
rule of law	the idea that everyone is equal before the law, regardless of their power or status in society
secular	when the church and state are separated so that religious institutions are not directly involved in how the government is run
separation of powers	the principle in which the government's power is divided into three distinct branches: the legislature (makes the laws), the executive (enforces the laws) and the judiciary (interprets the laws). This system is designed to prevent any one branch from having too much power and to ensure checks and balances between them

▶ **Key content video:** Using civics and citizenship terminology

Communicating in civics and citizenship

The ability to communicate your findings is an important skill in civics and citizenship. You can communicate your findings in many ways, including through multimedia presentations (using software such as PowerPoint or Prezi), posters, reports or essays. Whichever format you decide to use, it is a good idea to include:

- an introduction – state what your research or inquiry question was, why you asked that question and why it is important. This is also a good place to define any key terms.
- an explanation of what research you did – why did you use the sources you chose? Discuss the facts and the arguments for and against a certain issue.
- an explanation of your results – you can present your results as graphs, tables, photographs, or in writing for your audience.
- a conclusion – what were your findings? Explain how you came to that conclusion.

▶ **Key content video:** Communicating in civics and citizenship

▣ **Check your learning 18.5**

Module

19

Australia's political and legal system

Sub-strand: Government and democracy | Laws and citizens

Overview

In 1901, the six Australian colonies voted to unite as one nation formally known as the Commonwealth of Australia. In order to become an independent nation, Australia created and developed its own political and legal system. The foundation of this system was the Australian Constitution, a written document that sets out the rules to govern our nation, establishing our democratic government.

The Australian Constitution also outlined the power of the government to make laws. Laws are official legal rules that guide our society so that we can live peacefully together. In Australia, the authorities that make and enforce our laws (such as the parliaments and the courts) are known as the legal system.

Source 1 Situated in Canberra, Parliament House is where important decisions are debated and made by our democratically elected politicians.

Lessons in this module

Lesson 19.1
Australia's system of government

representative democracy a political system based on citizens voting to elect representatives

election the process whereby the people are able to choose their representatives and members of parliament

parliament an organisation that makes the laws in a country, often with a lower house to draft laws and an upper house to review the proposed laws

federal parliamentary system a political system where the responsibility to make or change laws is shared by one national (or federal) parliament and several state parliaments

federal relating to the central government

Introduction

Throughout the world, there are different types of systems of government. In Australia, our system is known as a **representative democracy**. This means that the people vote at **elections** for representatives to become members of **parliament**. Once in parliament, these members make decisions and laws on behalf of the Australian people.

▶ **Key content video:** Australia's system of government

Australia's federal parliamentary system

Australia's system of government is based on a federal parliamentary system. In a **federal parliamentary system**, the nation is divided into states and each state has its own parliament. In addition, there is one central (or **federal**) parliament.

In Australia, we have parliaments for each of the six Australian states and two territories. These parliaments only make laws that apply within the boundaries of their states or territories. This includes laws on education, public transport and health. The state and territory parliaments are elected by the residents of that state or territory. Within each state and territory there also are local governments. These local governments (also called local councils) have been given the power by the state and territory parliaments to make local laws. Local councils are elected by the residents in each local area.

We also have one Commonwealth Parliament (often referred to as the federal parliament). Our Commonwealth Parliament makes laws that apply to the whole of Australia. This includes laws on defence, immigration and trade.

Source 1 Australia's flag was chosen from entries in a competition held after Federation. The Commonwealth Star (beneath the Union Jack in the upper left corner) symbolises the unity of states and territories.

Why Australia became a federation

By the time the First Fleet arrived in Australia in 1788, Australia's Aboriginal and Torres Strait Islander peoples had lived on the continent for at least 65,000 years, with their own established systems and practices that had developed over time to live peacefully and respectfully with one another and nature. However, the British **colonists** did not recognise Aboriginal and Torres Strait Islander peoples' customs or beliefs and put in place their own laws and legal system. From 1788 onwards, the British began to develop a system of government where each of the **colonies** (now called states) had its own parliament. Together with the British Parliament, each colonial parliament had the power to make laws for its colony.

Source 2 Division of laws made by the Commonwealth and colonial parliaments. Upon federation, the colonial parliaments became known as state parliaments

The Commonwealth Parliament was given the power to make laws on:	The colonial parliaments (now called state parliaments) kept the power to make laws on:
defence	roads
currency	public transport
postal services	education
trade	water
immigration	law enforcement

However, as Australia began to grow through the 1800s, problems began to occur between the colonies. This was because each colony made different laws about things that were common in all colonies. For example:

- Each colony had a different railway system, different postage stamps and different taxes. This made trade and travel between colonies difficult.
- Each colony had its own independent army. There were concerns that there was no defence force capable of protecting the entire country.

These problems made it obvious that a central parliament was needed to make laws that could apply to the entire country.

In the 1880s, the colonies began formal discussions about which laws should be made by a central parliament and which laws should be made by the individual colonies. In the 1890s, each colony sent a group of representatives to attend meetings called constitutional conventions. In these meetings it was decided that a new Commonwealth Parliament would be created. This parliament would be given the power to make laws on matters that affected the whole country, such as defence and currency. The colonial parliaments would keep the power to make laws on matters such as education and law enforcement.

On 1 January 1901 (known as Federation Day) the British Parliament passed a law called the *Commonwealth of Australia Constitution Act 1900* to:

- unite the six separate British colonies and form one Australian nation with a new federal system of government
- create the Commonwealth Parliament of Australia, and outline its structure and law-making powers.

This law is more commonly known as the **Australian Constitution**.

colonists those who take control of a country or territory for financial, political or military gain

colony a country or area under the full or partial control of another country, and occupied by colonisers from that country

Australian Constitution a document that describes the rules or laws that govern Australia; the Constitution defines the structure of government in Australia, and also the rights of citizens

Civics and citizenship

19.1

Influences on Australia's system of government

Australia's system of government was influenced by the British and United States systems of government. The Australian parliamentary system was based on the British system, known as the Westminster system. The ideas of **responsible government** and the **separation of powers** come from the British system. The US system of government also had an influence on Australia. Like the US, Australia's system of government is modelled on states that are independently governed, working together under a central, or federal, government.

responsible government the requirement that the government must be accountable to the people for its actions and decisions, and that members of the government must carry out their duties in an honest manner or resign

separation of power the principle in which the government's power is divided into three distinct branches: the legislative, the executive and the judicial

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Case study The Westminster system

When Australia federated in 1901, it adopted many features of the Westminster system of government from the United Kingdom. The Westminster system includes:

- an upper and a lower house of parliament that have been elected democratically by the people
- a head of state or sovereign (such as the King or Governor-General) whose job is mainly ceremonial
- a head of government (such as a prime minister) who leads the majority of representatives in the lower house
- a cabinet made up of members of parliament (MPs)
- an independent civil service (known in Australia as the public service) that serves the government in power (for example, the Department of Health)
- an independent judiciary (made up of the courts), which upholds the rule of law.

In Australia, both the federal and state governments are modelled on the Westminster system.

Source 3 The Palace of Westminster in London is where the two houses of the parliament of the United Kingdom sit. The Westminster system is named after the area of London where the British parliament is located.

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19.1

Key concepts of Australia's system of government

Australia's system of government is based on key concepts which include:

- representation
- accountability
- separation of powers.

Representation

Representation means that the people of Australia vote for people to make laws on their behalf in parliament. Our Commonwealth, state and territory parliaments consist of members who are elected by the people to make laws on their behalf. In our representative democracy elections are held regularly. This is important because if the elected representatives do not make laws that reflect the views and values of the majority of the people, they may not be re-elected.

Accountability

Accountability means that the government must be accountable (answerable) to the people. Being accountable to the people means that governments must be able to justify their actions and decisions to the voters. The idea that governments must demonstrate accountability is also known as the principle of responsible government. This means that governments must be accountable and that members of the government must carry out their duties in an honest manner, or resign.

Separation of powers

In Australia, the separation of powers at federal level is established by the Australian Constitution. The separation of powers prevents our government from abusing its powers, by ensuring that no single group holds more than one of the three main powers of government. The three main powers of government are:

- legislative power: the power to make the law (held by parliament)
- executive power: the power to administer the law (held by the government)
- judicial power: the power to apply the law (held by the courts).

However, in practice, Australia does not have complete separation of powers. This is because the executive power and the legislative power are combined in some groups. For example, the Prime Minister and key ministers hold legislative power as part of parliament, and also hold executive power as part of the government. This is sometimes referred to as a partial separation of powers.

Source 4 Prime Minister Anthony Albanese (centre) and some of his cabinet ministers. In Australia, the government must represent the people of Australia and also be accountable to the people of Australia.

Quiz me! Australia's system of government

Civics and citizenship

19.1

Check your learning 19.1

Review and understand

1 **Identify** one area in which colonial parliaments (which upon Federation became state parliaments) kept the power to make law.

2 What is the Australian Constitution?

Apply and analyse

3 **Explain** the Westminster system in your own words.

4 **Explain** what is meant by the term "representative democracy" and summarise why holding regular elections is important in this type of political system.

5 Think about the separation of power and **explain** why judges may not be elected as members of parliament and serve in the government.

6 **Analyse** two reasons in support of the Australian Commonwealth Parliament being established in 1901.

Evaluate and create

7 Create a diagram which outlines the structure of Australia's federal parliamentary system and how it works.

Lesson 19.2
Australia's Constitution and branches of government

Introduction

Learning intentions and success criteria

government the elected members of parliament who make decisions for a nation or state

commonwealth the federated states and territories of Australia

law a formal rule that governs the way people behave

The Australian Constitution came into effect on 1 January 1901. At this point, the six British colonies of Australia federated (united) to form one nation and became Australia's states. The Constitution established the democratic **government** of the **Commonwealth** of Australia and outlined its powers to make **laws**. The Australian Constitution is divided into eight chapters and more than 100 sections.

▶ **Key content video:** Australia's Constitution and branches of government

The branches of government

The first three chapters of the Australian Constitution define the separate powers of the three main branches of government:

- legislature (which has the power to make the law)
- executive (which has the power to administer the law)
- judiciary (which has the power to apply the law).

The Australian Constitution

Legislature
(power to make the law)

Executive
(power to administer the law)

Judiciary
(power to apply the law)

House of Representatives (lower house)

Senate (upper house)

Governor-general (the King's representative)

Prime minister and senior ministers

Government departments

High Court

Other federal courts
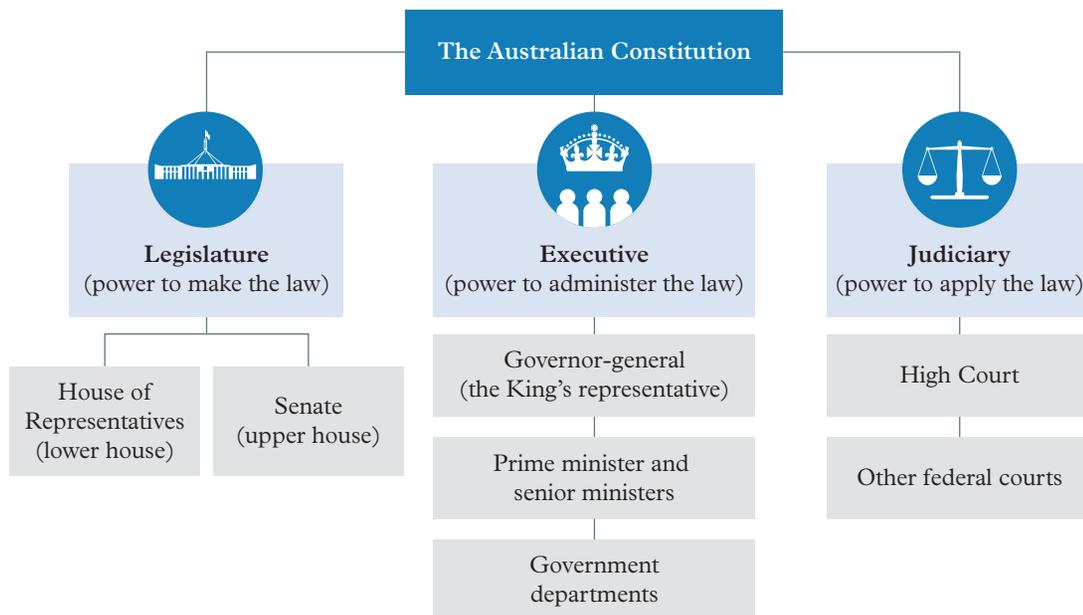
Source 1 The Australian Constitution defines the separate powers of the three main branches of government.

Legislature

The legislature is responsible for creating the law. At the federal level, the legislature is made up of two houses of parliament. These are the House of Representatives (the lower house) and the Senate (the upper house). For a new law to be created, it must be debated, then must pass with a majority of votes through both the House of Representatives and the Senate.

House of Representatives (the lower house)

The House of Representatives is made up of 150 members of parliament (MPs), each representing one of Australia's federal **electorates**. Most of the members elected to parliament will belong to a political party. Members of a political party have similar ideas about how to best govern the country. The role of MPs is to:

• represent the views of Australian citizens
• make and scrutinise laws based on these views.

Most proposed laws (called **bills**) are introduced into parliament in the House of Representatives.

To win an election, a party (or group of parties, known as a **coalition**) must win an absolute majority of seats in the House of Representatives. That means at least 76 of the 150 seats in the House of Representatives must be won by the same party (or coalition) to form government. The leader of the winning party (or coalition) becomes the **prime minister**. The party (or coalition) that has won the election and formed government has permission to act and make law on behalf of the Australian people.

The leader of the party (or coalition) that has the second-largest number of seats but has not gained a majority in the House of Representatives is the leader of the **Opposition**. The role of the Opposition is to hold the government accountable for its actions.

electorate a geographical area represented by members of parliament that has approximately the same number of votes

bill a proposed law that has not been passed by both houses of parliament

coalition two or more political parties that join together in an attempt to win an election and form government

prime minister the leader of the party that forms the government due to their party having a majority in the House of Representatives

Opposition the second-largest political party, or coalition of parties, after the government party in the lower house of parliament, which works to scrutinise and oppose government policies

Civics and citizenship

19.2

Source 2 The House of Representatives in Parliament House, Canberra. The House of Representatives is also known as the lower house or the People's House. The seats are green to follow British tradition of green being the colour of the lower house; however, Canberra's grey-green tones reflect native eucalyptus leaves.

Senate (the upper house)

The Senate is made up of 76 senators who represent the states and territories equally. The Senate shares the role of making laws with the House of Representatives and reviews laws before they are made. The Senate can approve bills proposed by the lower house (with or without changes). It can also reject them. All bills that are put forward by the House of Representatives are reviewed by the Senate. In this way, the Senate checks and scrutinises what the government is doing, and holds it accountable for its actions, agendas and decisions.

The Senate was originally set up to protect the interests of the states. When the Australian Constitution was written, it was decided that each state should be equally represented regardless of its population size, so that the less populated states would still have a say in the parliament. Each state is represented by 12 senators. The Australian Capital Territory and the Northern Territory are represented by two senators each.

Source 3 The Senate in Parliament House, Canberra. The Senate is also known as the upper house. The Senate is red to reflect the House of Lords from British Parliament.

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19.2

Executive

The Executive is responsible for approving laws and putting them into action. At the federal level, it is made up of the Governor-General (who is the King's representative in Australia), the prime minister, senior ministers and government departments. The prime minister chooses the ministers, who are then appointed by the Governor-General to be part of the executive and implement that law.

For example, the prime minister will select an MP to be the Minister for Defence. This minister will be responsible for all matters relating to the military, naval forces, air forces, and will be in charge of the Department of Defence.

Judiciary

The role of the judiciary is to apply, or make rulings or judgments about, the law. It is made up of the High Court and other federal courts. These courts interpret the laws passed by parliament and apply them to specific cases and disputes.

Parliament vs government

There is a difference between the terms "parliament" and "government". The government is the party (or coalition) that has a majority of seats in the House of Representatives (the lower house). The parliament is all the members who are elected to both houses of parliament, as well as the Governor-General.

Part of the principle of responsible government is that the government must maintain the support of the majority of members in the House of Representatives. This makes sure that the government (the party or coalition with the majority of seats in the House of Representatives) is accountable to the parliament (all the members elected to the House of Representatives and the Senate, and the governor-general). The Governor-General is appointed by the King based on the prime minister's recommendation.

Source 4 The Governor-General is the monarch's representative in the federal parliament. Sam Mostyn became Governor-General in July 2024, shown here meeting King Charles III.

🖥️ **Quiz me!** Australia's Constitution and branches of government

Check your learning 19.2

🖥️ **Check your learning 19.2**

Review and understand
1 **State** the three main branches of government.
2 What is the role of the Governor-General?

Apply and analyse
3 **Explain** the main role of the:
 – House of Representatives
 – Senate
 – Opposition

4 **Describe** the difference between the parliament and the government.
5 Examine Source 2. **Identify** why there would be more people sitting on the government side of House than the Opposition side.

Civics and citizenship

Lesson 19.3
The freedoms of Australian citizens

Learning intentions and success criteria

Introduction

Democratic values are the beliefs and ideals that are held by a democratic society. Such values include respect, equality, fairness and freedom. For example, in Australia (like many democratic nations), freedom is very important. Having certain freedoms (such as those outlined below) is a fundamental part of living in a democracy. Among other things, they allow us to participate and have a say in the way our country is run.

▶ **Key content video:** The freedoms of Australian citizens

Australians' fundamental freedoms

To assist in upholding the values of Australia's representative democracy, citizens are granted a number of freedoms. These include five fundamental freedoms:

- *Freedom of speech* allows people to voice their opinions freely, including criticising the government. This ensures that the representatives of the people are aware of the issues that concern their voters.

Source 1 One aspect of freedom of religion is that Australian citizenship may be granted to people of all faiths, without discrimination. This image shows a citizenship ceremony where people who were not born in Australia are receiving their Australian citizenship.

- *Freedom of association* grants people the right to join groups or organisations without fear of being persecuted for doing so. These groups could include political parties or unions, both of which unite people who are passionate about particular issues they would like the government to address.
- *Freedom of assembly* allows people to meet in groups for social or political purposes. The ability to assemble and protest freely is an important part of a democracy because it allows people to influence political outcomes and directly spread the message about causes important to them.
- *Freedom of religion* means that Australians are free to practise their many different faiths, or to practise no religion at all.
- *Freedom of movement* enables Australian citizens to travel to all the states and territories in Australia, and to leave and re-enter Australia.

The bounds of the law

It is important that citizens in a democracy have certain freedoms; however, these must be exercised responsibly. Our freedoms are limited by "the bounds of the law". This means that we cannot break the law to express our freedoms of speech, association, assembly, religion or movement. For example, we are allowed to assemble and protest in Australia, but if that protest becomes violent or threatens to be violent, it is no longer a legal activity.

Quiz me! The freedoms of Australian citizens

I used to think, now I think

Reflect on your learning about freedom in Australia and complete the following sentences.
- I used to think …
- Now I think …
What has changed in your understanding?

Check your learning 19.3

Check your learning 19.3

Review and understand

1 **State** five fundamental freedoms that underpin Australia's representative democracy.

Apply and analyse

2 **Explain** why it is important to provide people with fundamental freedoms in a democracy.
3 How would you rank these five fundamental freedoms in order of importance? **Compare** your answer with a classmate.
4 **Consider** how the bounds of the law can limit our freedoms.

Evaluate and create

5 **Create** a poster or infographic to promote the idea of democracy in Australia. Include one of the freedoms discussed here as the focus of your message.

Civics and citizenship

Lesson 19.4
Participating in democracy

Learning intentions and success criteria

Introduction

For our representative democracy to function properly, it is important that people make their voices heard. By ignoring politics or issues of national importance, people increase the chances of their representatives making political decisions with outcomes that might go against their interests, values or beliefs.

▶ **Key content video:** Participating in democracy

Voting in elections

Australian citizens have the right to vote for members of parliament to represent their views. As informed citizens, we can participate in democracy by voting for the people who we think will best represent our opinions and beliefs at local, state and federal levels of government. In fact, Australia's **compulsory** voting system means that everyone who is **enrolled** to vote must do so or pay a fine. The intention of compulsory voting is to make sure that our governments have the support of the majority of the people (and not just those who bother to vote).

compulsory when you have to do something; in this instance all Australian citizens over the age of 18 must vote

enrolled when a person is put on a roster or list by their name, location and date of birth

constituents people living in an area who have elected someone to act as a political representative

Contact with elected representatives

In a democracy, it is the role of people elected to parliament or to local council to provide a voice for the citizens who voted them into office. They can only do this by having contact with their **constituents** and finding out about the issues that concern them. For example, in 2020, Tasmanian Senator Jacqui Lambie sought the advice of her constituents on how she should vote on a federal government bill that proposed to increase university fees for certain degrees.

She spoke with students and academics at the University of Tasmania to help her understand how the bill would affect higher education in the state that she represents. As a result of Lambie's consultation with her constituents, she voted against this bill in the Senate.

In a democracy it is the role of constituents to contact their elected representatives (by email or phone, through social media, or by arranging a meeting in person) to ensure that they understand the concerns of the people they represent.

Source 1 Senator Jacqui Lambie is a politician who has consulted with her constituents.

Standing for parliament

Australian citizens can stand for election to parliament. To stand for election for the House of Representatives or the Senate, the person must be:

- at least 18 years old
- an Australian citizen
- eligible to vote (including being of sound mind and not convicted of certain crimes, such as treason).

If elected, a person who has stood for election to parliament is then expected to act as a spokesperson for the people in their electorate (if they have been elected to the House of Representatives) or their state (if they have been elected to the Senate).

Social media campaigns

Social media apps and networking sites (such as X, formerly known as Twitter) provide people with the ability to distribute information to a massive audience, both within Australia and internationally. Using social media to participate in campaigns is another way that Australians can participate in our democracy. A social media campaign is an organised plan of activities which uses social media (such as TikTok) to try and achieve a certain aim. Social media campaigns often focus on social, political or environmental aims.

Politicians often use social media campaigns to spread their messages to more people. Social media campaigns can help political candidates who do not have the support of larger parties to gain the public's attention. Social media also gives voters the opportunity to interact with politicians and ask them questions. A study by Griffith University noted that in the 2022 federal election there was a significant increase in Australian Labor Party members using TikTok to campaign for re-election. The study concluded that this contributed in some part to the Australian Labor Party winning the election. It is important to always think critically when encountering political content on social media platforms, as the perspectives can often be one-sided and not fully representative of all aspects of an issue.

Source 2 Using social media to participate in campaigns is one way that Australians can participate in our democracy.

Petitions

Even if you are not old enough to vote, you can still make your voice heard. One method of participating in Australia's democracy is through the use of petitions. A petition is a collection of signatures that identify people who share a stance (attitude or opinion) on a particular issue. Petitions have been used for centuries by people who want to show the government that many people support a particular cause and it should be brought to their attention.

Websites such as Change.org allow anyone to create a petition and share it through social media to as many people as possible. Petitions can also be created via the Parliament of Australia website. Any citizen or resident of Australia can create an e-petition that will then be submitted to the House of Representatives. For example,

Civics and citizenship

in 2020, former Prime Minister Kevin Rudd created an e-petition to request that the House of Representatives establish a Royal Commission (an independent investigation, with power to call witnesses) into media ownership in Australia. The petition received more than 500,000 signatures although it was ultimately unsuccessful.

Source 3 Labor MP Andrew Leigh shows a printed copy of Kevin Rudd's e-petition on media ownership to the House of Representatives in 2020.

Volunteering

Many volunteer organisations push for change in our democracy (for example, by seeking to make sure lower-income people can access food and clothing). Everyday people in Australia can help effect change by volunteering their services. More than six million Australians volunteer every year. Volunteers receive no payment for contributing to their communities but do it to give back to their communities, or because they believe strongly in a cause.

Direct action

Another way that Australians can participate in our democracy is by raising awareness about issues through direct action, which is also known as "non-violent resistance". This includes protesting (such as marches, sit-ins and demonstrations), the **boycotting** of products and services, and going on strike. These methods of direct action have been used in the past to raise awareness and gain attention for many different causes, and to try to influence the decision-making of the people in power (such as our elected representatives).

boycotting
refusing to buy or use something or take part in an event as a way of protesting

Source 4 Volunteering is one way for Australians to participate in democracy, by engaging with issues which are important to them.

One of the benefits of direct action is that you do not have to be of voting age to make your voice heard.

Case study Direct action

In August 2018, Swedish teen activist Greta Thunberg began missing school on Fridays to go on strike outside Sweden's Parliament to demand more action from her government on climate change. By March 2019, she had inspired a global "Fridays for Future" movement, with students all over the world skipping school to campaign for greater action by their governments to address climate change. In September 2019, Thunberg delivered a speech at the United Nations headquarters as part of the 2019 Climate Action Summit.

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19.4

Inspired by Thunberg, an Australian teenager, Jean Hinchliffe, became one of the lead organisers of School Strike for Climate Australia. In September 2019, an estimated 300,000 Australians attended School Strike for Climate rallies nationwide. These were some of the largest protests in our nation's history.

Source 5 School Strike for Climate organisers Jean Hinchliffe (left) and Daisy Jeffrey at a climate rally in Sydney on 20 September 2019.

Lobby groups

Another way that Australians can participate in our democracy is by raising awareness about issues through **lobbying**. In Australia, there are two main types of lobby groups (sometimes called "interest groups"): insider and outsider lobby groups. Insider lobby groups work to achieve change by working with politicians directly; while outsider lobby groups harness community support to pressure the government on particular issues. School Strike for Climate is an example of an outsider lobby group. The Australian Christian Lobby (ACL) is an example of an insider lobby group.

lobbying making requests to politicians or public groups to try to influence the government to change the law

Quiz me! Participating in democracy

Check your learning 19.4

Check your learning 19.4

Weblink: Australian Electoral Commission – Find my electorate

Review and understand

1 In your own words, **define** a "constituent".
2 **Identify** three types of direct action.
3 **Describe** one benefit of using social media for politicians, and one benefit for voters.

Apply and analyse

4 **Summarise** three ways in which Australians can participate in our democracy.
5 Greta Thunberg uses direct action, or non-violent resistance. What do you think are the advantages of using direct action to advance a political cause?

Evaluate and create

6 Use the Australian Electoral Commission's website to identify your local MP in the House of Representatives (a weblink has been provided on Oxford Digital). Conduct some further research, and then **create** a profile for your local MP that includes:
   a their picture
   b the name of your federal electorate
   c their political party (if they are a member of one)
   d how they can be contacted
   e one issue that they are passionate about.

Civics and citizenship

19A Skills in context
Key features of Australia's democracy

Introduction

Australia's democracy has many factors involved in maintaining its values, structures and protection of our freedoms. These freedoms allow citizens to express opinions, gather in groups, practise their beliefs, and move freely.

Those who participate in the democratic process must be Australian citizens, over the age of eighteen, and enrolled to vote. However, some argue that this process does not reflect all of Australian society, arguing that the voting age should be lowered or increased. Additionally, the absence of constant representation of Aboriginal and Torres Strait Islander peoples' presence in parliament to directly advocate for the concerns of their communities also brings into question the truth of the statement that Australia is a "representative democracy".

Source 1 The centre of the British government is at the Palace of Westminster in London.

Key skill Evaluating democratic institutions and systems

Comparing Australia's parliamentary system to the English system

Australia inherited its parliamentary structure from the Westminster system in England as a part of our cultural heritage. However, this system developed organically in England over hundreds of years to address the shift in values, changes in power, and evolving role of the monarch in the daily aspects of governance.

In some ways, our system is quite different, for instance the structure of our constitution is one singular document, whereas the British constitution has many different documents, amendments and other additions reflecting both its history and how it has evolved over time. Additionally, to earn a seat in the House of Lords, which is the upper house, you are not elected because it is passed down through hereditary (or family) lines.

- **Step 1** Draw a chart showing your understanding of Australia's parliamentary system including the House of Representatives and Senate, role of the Governor-General, Prime Minister.
- **Step 2** Investigate the structure of the Westminster system, paying particular attention to how and why the House of Lords and House of Representatives were formed.
- **Step 3** Create a chart of the Westminster system and annotate your key findings on it. Be sure to include the major political parties.
- **Step 4** Finally, construct a Venn diagram highlighting the key similarities and differences between the two systems. Ensure that you are being detailed in the presentation of your information.

For more information on evaluating democratic institutions and systems, see Lesson 18.3 Evaluating democratic institutions and systems (page 529).

Practise the skill

1 With a partner, **discuss** the strengths of the structure of Australia's parliamentary system in upholding Australia's democratic values.

2 **Compare** your observations about the differences between the two systems with those of your classmates.

3 **Discuss** as a class any key changes you would make to either system to make it more reflective of the democratic values they are intended to uphold.

Extend your understanding

1 **Evaluate** this famous quote; "Democracy is nothing more than mob rule, where 51% of the people may take away the rights of the other 49%." To what extent to you think this is true in Australia's democracy?

2 **Reflect** on both systems of government and what ways they are representative of their citizens. Write two to three recommendations for improvements or ways they could be more representative.

Lesson 19.5
Laws and courts

Introduction

Laws are formal "legal rules" designed to govern the way people behave, so we can all live in a peaceful society. In Australia, our laws are made and enforced by many different authorities, including the parliaments, the courts and the police. These authorities make up the **legal system**. We have a legal system to make sure that laws are obeyed and the rights and responsibilities of all Australian citizens are respected and protected.

▶ **Key content video:** Laws and courts

Origins of Australia's legal system

Australia's legal system was developed from Britain's legal system. In 1788, British colonists in Australia put in place their own laws and legal system (despite Australia's Aboriginal and Torres Strait Islander peoples having their own established system of laws). In particular, Australia inherited the system of common law from Britain. Common law is called this because it applies to everyone in society.

How laws are made in Australia

Australia's laws are made in two ways:

- **Statute law** is made and passed by parliaments.
- **Common law** is created by **judges** and is based on the **precedents** they set when deciding a case.

Learning intentions and success criteria

legal system a set of institutions (for example, courts and the police) and processes that make, implement and enforce the law

statute law law that is made by parliament; also called statute, legislation, Act of Parliament or statutory law

common law law that is created by the courts when a judge makes a ruling about a case; also referred to as a precedent, because it sets a standard for all future judges to refer to when deciding a case

judge an impartial adjudicator whose role is to ensure proper processes are followed in court to ensure justice is upheld

precedent a previous case or example that is used as a guide for decision making when similar circumstances arise

Civics and citizenship

19.5
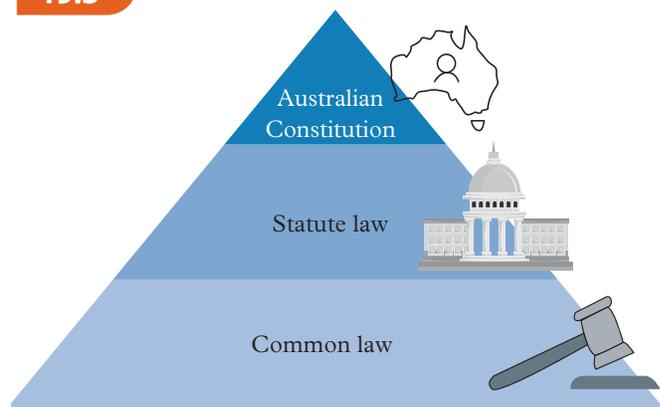
Source 2 The Australian hierarchy of laws

Statute law

Statute law is created by parliaments. A state parliament can only pass laws relating to issues affecting its own state. The federal parliament can pass laws that apply to the entire nation, however only in some areas defined by the Australian Constitution (such as national defence, trade and international relations). Both federal and state parliaments follow similar steps to make statute law, including debating the proposed laws.

Common law

The role of a judge is to interpret and apply statute law. However, sometimes the law does not perfectly align to how a particular case should be dealt with. If this happens, judges can apply statute law in a way they think is fair and best fits the intention of the law. This decision may set a precedent, which means that similar cases in the future should be dealt with the same way.

A judge only has to follow a precedent if it was set by a judge in a superior court in Australia's court hierarchy (see Source 1). This means that all common law created by the High Court (the highest court in Australia) is binding on every court in Australia.

Which is the most powerful type of law?

referendum a national vote where all eligible citizens vote to change the wording of the Constitution

The Australian Constitution is ultimately the most powerful piece of law in Australia. This is because it can only be changed by the agreement of the citizens of Australia through the process of a **referendum**. The second most powerful type of law is statute law, as it can only be created or changed after processing through parliament. Common law is the least powerful type of law in Australia, because it can be changed by parliament (see Source 2).

Source 1 The Australian Court hierarchy of federal, state and territory courts.

Federal courts (all Australian states and territories)							
Superior courts	High Court						
	Federal Court						
	Federal Circuit and Family Court of Australia						
State courts							
Superior courts	QLD	VIC	NSW	SA	WA	TAS	ACT	NT
	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court
Intermediate courts	District Court	County Court	District Court	District Court	District Court			
Lower courts	Magistrates Court	Magistrates Court	Local Court	Magistrates Court	Magistrates Court	Magistrates Court	Magistrates Court	Magistrates Court

Quiz me! Laws and courts

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19.5

Check your learning 19.5

Review and understand

1 In your own words, **define** "precedent".

2 **Identify** which court has the highest level of authority in Australia.

3 **State** which country Australia's legal system developed from.

Apply and analyse

4 **Summarise** why common law is less powerful than statute law and constitutional law.

5 **Analyse** the similarities and differences between laws being made by parliament and by the courts. You may want to do this as a Venn diagram.

Evaluate and create

6 In groups, brainstorm two laws that, as Australian citizens, you must obey. For each law, **propose** (put forward) why the law was probably made and the likely consequences of breaking the law.

Lesson 19.6
Principles of justice

Introduction

One of the main purposes of the Australian legal system is to achieve justice. But what is justice? Sometimes we think that it means "good defeating evil" but in our legal system, justice is more difficult to define. Justice could refer to a fair outcome to a legal dispute, people being treated equally before the law or something else. When defining justice and deciding whether it has been achieved, consider the following three values, known as the principles of justice:

- **fairness**
- **equality**
- **access**.

▶ **Key content video:** Principles of justice

Fairness

Fairness is an important principle of justice. For a legal system to be fair, it must have processes in place to resolve (settle) disputes in an unbiased and consistent way. This includes having processes to ensure people involved in a legal dispute are given the opportunity to be heard and present their side of the story. People should also be able

Learning intentions and success criteria

fairness one of the principles of justice; fairness means having legal processes in place to make sure disputes are resolved in a consistent and unbiased way

equality one of the principles of justice; equality means people should be treated alike and have an equal opportunity to present their case, without advantage or disadvantage

access one of the principles of justice; access means that all people should be able to use the legal system to resolve their disputes and understand their legal rights

Civics and citizenship

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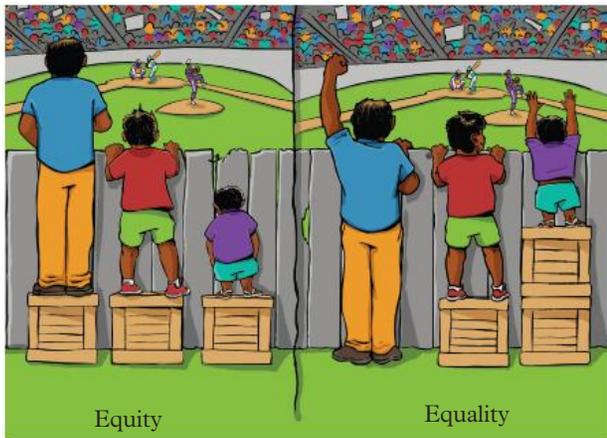
Equity   Equality

Source 2 Fairness versus equality. To achieve equality in the legal system, it is sometimes necessary to provide people with additional support, which is called "equity".

to have their dispute resolved by an independent and impartial (neutral) third party, like a judge, who will not favour one side over the other. Having "open courts" also allows the public and media to watch court trials and check that legal processes are followed, as well as inform the general public.

Equality

Equality is another important principle of justice. For a legal system to achieve equality, people involved in a legal dispute must be treated alike and given an equal opportunity to present their case regardless of their personal characteristics, like their race, religion or sexuality. In other words, people should not be discriminated against or placed at a disadvantage due to their personal differences.

To achieve equality in the legal system, it is necessary to provide some groups of people with additional support, assistance and services. For example, people who have limited English skills (like migrants, refugees and asylum seekers) or a hearing impairment should be provided with an interpreter so they can understand their rights and the legal processes involved in their case.

Access

Access is an important principle of justice. To achieve access to the legal system, people must be able to understand their legal rights and use the legal system to resolve their disputes. This includes people knowing about the different types of legal organisations, courts and tribunals that can offer legal advice and assistance and help resolve disputes.

Quiz me! Principles of justice

Source 1 Lady Justice wears a blindfold to symbolise that the legal system is impartial and without favouritism. Lady Justice holds the scales of justice to represent the idea that the law should treat all people equally.

Check your learning 19.6

Check your learning 19.6

Review and understand
1 **State** the three principles of justice.
2 **Describe** two processes or features of the Australian legal system that help achieve fairness.

Apply and analyse
3 In your own words, **explain** the meanings of equality and access.

4 **Reflect on** how Source 2 illustrates fairness and equality.

Evaluate and create
5 **Investigate** "Lady Justice" (shown in Source 1). Who is Lady Justice? What do the three symbols she is often holding or wearing mean?

Lesson 19.7
Principles of Australia's legal system

Introduction

Several key ideas, or principles, guide Australia's legal system to ensure that justice is served. They focus on our responsibility as individuals to obey the law, as well as our right to fair treatment within the legal system.

▶ **Key content video:** Principles of Australia's legal system

Learning intentions and success criteria

The rule of law

The legal system enforces the laws that are designed to protect our way of life by defining our rights and responsibilities. Everyone must follow these laws. This is known as the **rule of law**. For example, even though he was the Deputy Prime Minister at the time, Barnaby Joyce was fined $200 for breaching New South Wales COVID-19 health orders by not wearing a facemask while at a service station in Armidale (NSW) in 2021.

rule of law the idea that everyone is equal before the law, regardless of their power or status in society

The right to a fair trial

Australia's system of trial is an adversarial system. This means that the trial is a truth-seeking contest between two opposing parties: the prosecution and the defence. A number of characteristics help to ensure that a fair trial takes place:

- A person's race, sex, characteristics or any other factors not related to the **crime** should not affect the outcome of the trial.
- Each party is given an equal chance to present their argument.
- A person's guilt or innocence is determined by an independent and impartial third party – a judge (sometimes with a **jury**) or a **magistrate**.
- Trials are public. You can visit any court and observe what is happening, except under special circumstances. Allowing the public and media to observe trials helps ensure transparency.

crime an act that breaks an existing law, is harmful to an individual or to society as a whole, and is punishable by law

jury a group of people who are required to decide on a "guilty" or "not guilty" verdict for a case

magistrate an official who hears and judges minor cases

Source 1 The right to a fair trial is one of the principles of Australia's legal system. Trials take place in courtrooms around Australia every day.

Civics and citizenship

19.7

The right to legal representation

Most members of the public have limited knowledge of the law and need help from professionals to understand legal processes. That is why every Australian who is accused of having committed a crime has the right to a legal professional to represent them in court. In addition, a person with hearing disabilities or who does not speak English also has the right to access interpreters or translation services.

Source 2 Lawyers, such as barristers, are highly skilled professionals who use their knowledge of the law to advise and represent people.

Presumption of innocence and burden of proof

The idea that someone is innocent until proven guilty is an important part of any legal system. It means that a person who is accused of a crime (such as murder or assault) is not required to prove their innocence. Instead, the prosecutor must prove that the person is guilty of the crime **beyond reasonable doubt**. This means that the **burden of proof** is on the prosecutor, as they are the one required to prove or disprove the facts in court. In **civil law** cases (disputes between people or organisations), it is up to the person making the complaint to prove that they are right.

The presumption of innocence is considered a human right around the world, and is used as a guiding principle in most democracies. Behind this principle is the idea that it is better to let someone guilty walk free than to imprison someone who is innocent.

beyond reasonable doubt the standard of proof in a criminal trial; the judge or jury must be satisfied that there is no "reasonable doubt" before finding an accused guilty

burden of proof the responsibility for proving the case

civil law an area of law that defines the rights and responsibilities of individuals, groups and organisations, and regulates private disputes

Quiz me! Principles of Australia's legal system

Check your learning 19.7

Check your learning 19.7

Review and understand

1 In your own words, **define** "burden of proof".
2 **Identify** three characteristics of a fair trial.

Apply and analyse

3 **Explain** why someone might need legal representation, even if they are allowed to represent themselves in court.
4 **Summarise** why the rule of law is important in a democratic system.
5 **Explain** why the burden of proof is on the prosecution and not the defence.

Lesson 19.8
Participants in Australia's legal system

Introduction

The Australian legal system is designed so that citizens can participate. Australians can engage with our legal system as lawyers or judges, as part of a jury, or even as witnesses.

▶ **Key content video:** Participants in Australia's legal system

Legal practitioners

Any person has the right to a legal practitioner to act on their behalf in court. A legal practitioner is a person who specialises in knowledge of the law and courtroom arguments. Having a legal practitioner act on behalf of a person makes the trial process fairer.

Solicitors

A solicitor is a registered legal practitioner who represents their client. A solicitor typically spends most of their time out of court, communicating with their clients and filling in court documents.

Barristers

A barrister is a legal practitioner who specialises in court trials, hearings and procedures. They spend most of their time in court and are often experts in certain areas of law.

Judges

As part of the judiciary (see Lesson 19.2 Australia's Constitution and branches of government, page 540), judges are extremely important participants in the legal system. They act independently of the executive and legislature to apply laws to different cases. A judge's role can vary depending on the court they are in. Some of the roles they may need to perform include:

- deciding if a person is guilty or at fault based on the facts of the case (in cases that do not have a jury)
- deciding what is an appropriate sentence for a person who is found guilty (in criminal cases) or who is at fault (in civil disputes).

Source 1 In Australia, some cases can be heard by a judge and a jury. At the end of a case, the jury must work together to decide whether the accused is guilty or not guilty.

Juries

Jury duty is the term used to describe a citizen's responsibility to serve as part of a jury. In Australia, juries are usually made up of 12 people, chosen at random from the electoral roll to listen to a court case and decide together whether they believe an

Civics and citizenship

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19.8

accused person is guilty or not. You need to be at least 18 to be part of a jury, but you do not need to be an expert on the law. Citizens who serve as part of a jury just need to listen to the facts of a case and decide whether they believe the accused is guilty or innocent. The principle behind this is that people should be judged by a panel of their peers, who must be convinced beyond reasonable doubt as to whether the accused person is guilty or innocent.

Witnesses

Witnesses play an important role in the legal system. People who have seen or heard an event or dispute may be called upon to present their observations as evidence in a court case. Witnesses are required to swear an oath that they will tell the truth when giving evidence.

Expert witnesses

Expert witnesses are a specific type of witness who can provide important information about a case, even though they might not have seen or heard it take place. Expert witnesses, such as doctors or forensic scientists, are often called to apply their expert knowledge of a topic to a case. The evidence provided by expert witnesses can help a jury to better understand the facts of a case.

Source 2 Witnesses can provide evidence to the court based on what they have seen or heard.

Organisations offering legal aid

Everybody in Australia is entitled to legal representation. However, there is no right to free legal representation. Citizens who are not able to afford legal representation are entitled to access legal aid. Legal aid is a taxpayer-funded service that ensures that legal representation is available for people who cannot afford their own lawyer. This means that citizens will maintain the right to be treated equally by the law and therefore to receive a fair trial. Legal aid is offered by several organisations, including state-based legal aid commissions, community legal centres, and Aboriginal and Torres Strait Islander peoples' legal services.

Think, pair, share
- Think about what the experience of serving on a jury would be like.
- Discuss your ideas with a partner.
- Share your thoughts with the class.

Quiz me! Participants in Australia's legal system

Check your learning 19.8

Check your learning 19.8

Review and understand

1 **State** four ways that Australian citizens may engage with the legal system.

2 What is legal aid?

Apply and analyse

3 **Explain** the role of a jury.

4 **Summarise** the roles of legal practitioners.

Evaluate and create

5 **Create** a Venn diagram to show the similarities and differences between the roles of typical witnesses and expert witnesses in a court case.

19B Skills in context
Why is the Magna Carta important to Australia?

Introduction

The Magna Carta (meaning "great charter") is a document that was created in England over 800 years ago. It sets out the fundamental principles upon which many modern democracies are based, including Australia. One of its main features is the idea of the rule of law: that no one – not even the ruler – is above the law.

The Magna Carta was written in response to the actions of King John, who was the King of England from 1199 until his death in 1216 (this is the same King John who appears in stories about Robin Hood). At that time, England was an absolute monarchy, which meant that the king or queen had absolute control and was not restricted by any laws. The barons (wealthy landowners and nobles) were angry because King John

imposed high taxes on them to support his wars. They threatened a rebellion unless King John agreed to give them some basic rights, which he did in the Magna Carta, in 1215.

This is how the rule of law is outlined in the Magna Carta:

Source 1

> No free man shall be seized or imprisoned, or stripped of his rights or possessions, or outlawed or exiled, or deprived of his standing in any other way, nor will we proceed with force against him, or send others to do so, except by the lawful judgment of his equals or by the law of the land.
>
> Magna Carta
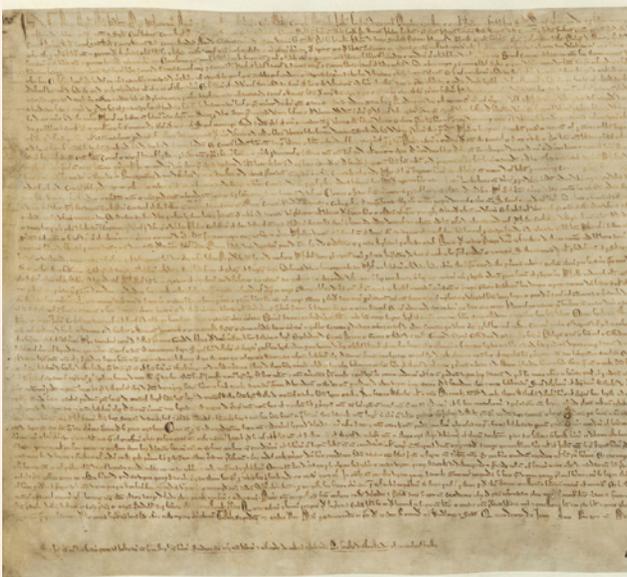
Source 2 An official copy of the Magna Carta, held by the British Library.

Source 3 An engraving of King John signing the Magna Carta in 1215 at Runnymede, England.

Civics and citizenship

Collecting information

When presented with any research question, it is important to break the question down and collect information to be able to answer it. Follow these steps:

- **Step 1** Make sure you understand the question. Use a highlighter to highlight the key words in the question.
- **Step 2** Use an issues matrix (see Source 3) to break down the question, focusing on the "what", "where", "when", "who", "which", "how" or "why".
- **Step 3** Create a document to record your findings. Make sure you summarise what you read in your own words, to ensure the final product is your own work. A note-taking template is available on Oxford Digital to help with this.
- **Step 4** Research your main question(s), taking notes as you go. When using the internet, it is important to be critical of your sources and to ensure that you only use reliable websites. Websites that contain ".gov" or ".edu" in their URLs are linked to the government or educational institutions, and are a good place to start. Avoid websites that do not state the author or the date that they last updated the information on the site.

For more information on investigating contemporary civics and citizenship issues, see Lesson 18.2 Investigating contemporary civics and citizenship issues (page 525).

Practise the skill

1 Apply the steps above to answer the question: "Why is the Magna Carta important to Australia?"
2 **Create** a visual summary of the impact of the Magna Carta on Australia by collecting at least three different images or symbols that represent the link between our lives today and the document signed by King John in 1215. Write a short caption under each image explaining why you chose it.

Extend your understanding

1 Use the weblink provided on Oxford Digital to access the infographic about the impact of the Magna Carta in other parts of the world. Read through the sections relating to the Age of Enlightenment through to the American Revolution (and don't forget to click on the red diamonds for additional information). Organise your understanding of the impact of the Magna Carta using a PMI (Plus, Minus, Interesting) chart. You will find a PMI template on Oxford Digital.

📄 **Template:** Note-taking   🔗 Weblink: The Magna Carta   📄 Template: Plus, Minus, Interesting chart
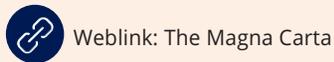
Source 4 An issues matrix

What?	Where?	When?	Who?	Which?	How?	Why?	
							Is …?
							Did …?
							Can …?
							Would …?
							Will …?
							Might …?

Review: Australia's political and legal system

Review activity

Read the information, then answer the following questions.

Freedom of speech in Hong Kong

Not everyone in the world has the right to freedom of speech. In some countries, saying something that insults or contradicts the government is an offence that can be punished severely. There are many countries that censor (suppress) the opinions of their citizens, such as North Korea and China.

Background

Hong Kong was a part of China until the mid-nineteenth century, when it became a British territory. In 1997, it was handed back to China. Since that date, Hong Kong has been classed as a "special administrative region" of China. This means that the Chinese Government has the ability to exercise power over how the region is run.

However, before Hong Kong was returned to China, Britain and China agreed that although China would resume control of Hong Kong, the Chinese Government would allow Hong Kong to retain a high degree of independence. This meant that Hong Kong was allowed to retain its system of government (which is based on British democracy), and the people of Hong Kong were able to keep their democratic freedoms, such as freedom of speech.

However, in recent years, China has asserted increasing control over Hong Kong. This has resulted in hundreds of thousands of people taking part in pro-democracy protests.

Source 1 Police fire tear gas at pro-democracy protesters in Hong Kong in 2019.

2020 developments in Hong Kong

In June 2020, the Chinese Government passed a new national security law that gave the government significant power over how people in Hong Kong exercised their freedom of speech. Under this law, it is a crime to criticise the Chinese Government, and the maximum penalty for breaking this law is life imprisonment. Since June 2020, many people have been arrested under the national security law.

1   What does freedom of speech allow? (1 mark)
2   **Describe** one similarity between Australia and Hong Kong. (2 marks)
3   **Explain** how freedom of speech in Australia is different from freedom of speech in Hong Kong. (3 marks)
4   **Analyse** two reasons why governments might restrict freedom of speech or freedom of assembly. (6 marks)
5   Explain how Hong Kong's system of government differs from Australia's system of government. Do you think Hong Kong is a democracy? **Justify** (give reasons for) your response. (8 marks)

(Total: 20 marks)

⟡ **Module checklist:** Australia's political and legal system

⟡ **Module review quiz:** Australia's political and legal system

Module
20

Australia's diverse society

Sub-strand: Citizenship, diversity and identity

Overview

The continent of Australia had been inhabited by Aboriginal and Torres Strait Islander peoples for tens of thousands of years before the first Europeans arrived. Colonisation by the British changed the continent forever.

Over many generations, people from all over the world have come to settle in Australia and make it their home. These people have made Australia a multicultural nation – adding their different cultures, beliefs and values to create a rich and diverse society. Although Australians come from a range of different backgrounds, many of us share common values. Values are the beliefs and behaviours that we consider important as a nation. Our shared values allow us to live in harmony.

Source 1 Australia is a multicultural nation that is home to people from many different cultural, religious and language backgrounds. Here, Australians gather in Sydney at the Africultures Festival. Each year, the festival is held to celebrate African cultures and increase awareness of people from African countries in Australia.

Lessons in this module

20A What shapes Australian society?

Lesson 20.1 Australian diversity and heritage
Lesson 20.2 Aboriginal and Torres Strait Islander cultures and beliefs
Lesson 20.3 Australian citizenship
Lesson 20.4 Australia's migrants
20A Skills in context The Census

20B What are Australian values?

Lesson 20.5 Shared Australian values
20B Skills in context #ChangeTheDate
Lesson 20.6 Review: Australia's diverse society

Lesson 20.1
Australian diversity and heritage

diverse including a range of people who have different racial, cultural, religious and socioeconomic backgrounds, lifestyles and life experiences

pluralist society a society where a number of people with different racial, cultural, religious and socio-economic backgrounds live together in a peaceful and united way

multicultural having many different cultures, races and/or religions

secular when the church and state are separated so that religious institutions are not directly involved in how the government is run

multi-faith having a variety of religions

Australia's diversity

Modern Australian society is very **diverse**. This means there are lots of people in our society who have different backgrounds, beliefs and customs. A diverse society can also be referred to as a **pluralist society**. In a pluralist society, a range of different people can coexist peacefully despite their different lifestyles, cultures and beliefs. As Australia's population becomes increasingly **multicultural**, this diversity has become an important part of Australia's national identity.

▶ **Key content video:** Australian diversity and heritage

Cultural diversity

Approximately 26 million people are living in Australia today. Aboriginal and Torres Strait Islander peoples make up approximately 3.3 per cent of the population. The rest of the population is made up of migrants and their descendants. The first migrants to Australia came from Great Britain. They established the first colony at Sydney Cove in 1788. Since then, migrants have come to Australia from approximately 200 countries. This makes Australia a culturally diverse nation with people from many different cultural backgrounds.

A secular nation

Australia is a **secular** nation, which means the church and state are separate when it comes to government. The government (also known as the state) is responsible for running our political and legal systems, and a core principle of Australia's democracy is that religious institutions are not allowed to directly influence the decisions of government. Australia's public health, education and political institutions are all free from religious connections. This ensures that the religious beliefs of one group are not forced onto Australians of other faiths. Being a secular nation allows Australia to be a **multi-faith** society where people have the freedom to choose their religious beliefs (see Source 1). While most nations around the world today adopt a secular system of government, some nations, such as Saudi Arabia, are non-secular states and base their legal system on religious teachings.

Source 1 The different religions or faiths of Australians according to the 2021 census.

Religious affiliation	Population ('000)	Population (%)
Christianity	11,148.8	43.8
Islam	813.4	3.2
Hinduism	684.0	2.7
Buddhism	615.8	2.4
Judaism	100.0	0.4
Other religions	325.4	1.3
No religion	9,887.0	38.9
Inadequately described	97.4	0.4
Not stated	1,751.1	6.9
Total	25,422.8	100.0

Source: Australian Bureau of Statistics

Years	1966	1991	2021
Religion		%	
Christian	88.2	74.0	43.9
Other religions	0.7	2.6	10.0
No religion	0.8	12.9	38.9
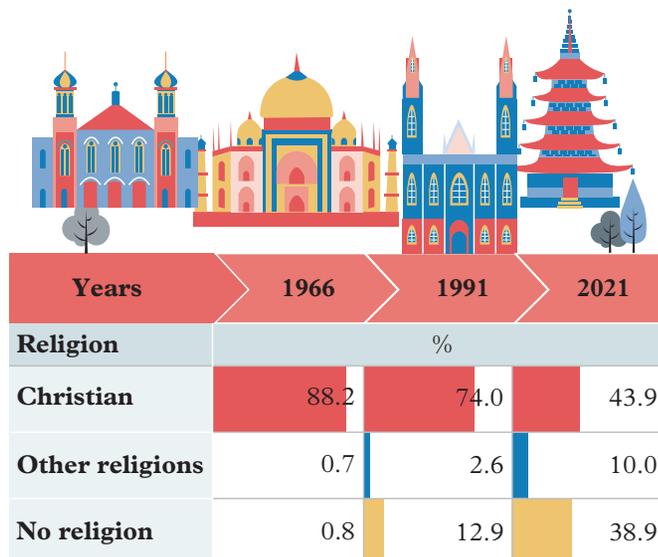
Source 2 This infographic shows how religious affiliation has changed in Australia since 1966.

Freedom of religion

Freedom of religion is the right to believe in or practise any religion, or to practise no religion at all. This freedom extends to all faiths; a person is free to practise any religion, such as Christianity, Islam, Judaism, Buddhism, Hinduism, Jainism, Sikhism or Taoism. Freedom of religion is one of the few rights included in the Australian Constitution. The Australian Government cannot force people to follow any religion or make it illegal for people to engage in any religious activities. The fact that the right to freedom of religion is protected in Australia is clear from our multi-faith society – Australians hold a variety of beliefs and religions (see Source 1).

Case study Australia's Western and Christian heritage

As a former British colony, Australia inherited a core set of ideals drawn directly from the Western world. This means that Australia inherited social norms (behaviours) and values, traditions and political systems from Britain. One example of Australia's Western heritage is seen in our parliamentary system, which follows Britain's representative government model. Australia also inherited many elements of culture (such as language, art, music and architecture) from Britain – for example, the classical architecture of the State Library of Victoria or Victoria's Parliament House.

Our values and ethics in Australian society also draw from Western influences. Australia has Christian heritage, which means our social and ethical values are inherited from Christian traditions. Our Christian heritage is seen in many parts of daily life, including national holidays like Christmas

Civics and citizenship

20.1

◀ Day and Good Friday. Some of the earliest understandings around human rights were influenced by Christian values. This influence can be seen in the shared Australian values of compassion and equality.

Christianity continues to impact Australian politics today. For example, there is an Annual National Prayer Breakfast in Parliament House in Canberra, and the 2017 *Marriage Equality Act* challenged the pre-existing Christian-inspired 1961 *Marriage Act*.

Source 3 Statue of Queen Victoria on display in Victoria's Parliament House.

Quiz me! Australian diversity and heritage

Check your learning 20.1

Check your learning 20.1

Review and understand

1 In your own words, **define** the following terms:
   a pluralist society
   b multicultural
   c secular
   d multi-faith
   e Christian heritage.
2 **Describe** two benefits of separating the church and state.

Apply and analyse

3 Using Source 2, **summarise** the changes that have been happening in Australia from 1966 to 2021.

Evaluate and create

4 Some of the public holidays that are observed in Australia come from the Christian faith (such as Easter and Christmas). However, around 49 per cent of Australians are not Christians. Use Source 1 to choose a non-Christian faith and research which holidays are observed by that religion. **Create** an infographic or calendar to display these holidays.

Lesson 20.2
Aboriginal and Torres Strait Islander cultures and beliefs

Introduction

First Nations peoples in Australia live all over the country in different places as parts of many different communities. There are two recognised groups of First Nations peoples in Australia. The largest group is the Aboriginal peoples from mainland Australia and Tasmania. The second group is from the Torres Strait Islands, the islands between Australia and Papua New Guinea.

There are many different language groups of First Nations peoples across Australia. Each language group has its own unique beliefs and spiritualities.

Learning intentions and success criteria

Spirituality in Aboriginal communities

Many Aboriginal cultures developed on the Australian continent over thousands of years. At the centre of some Aboriginal cultures is a belief system known as the Dreaming. The Dreaming is equivalent to other religions or belief systems such as Christianity, Islam or Hinduism, which all have specific beliefs, practices and creation stories. The Dreaming is about the knowledge, beliefs and practices that originated from Creation stories, which describe how the landforms and life on Earth came into being. The Dreaming guides the way people live on the land and care for it. For some Aboriginal peoples, all living things are part of the deep and spiritual tradition of the Dreaming.

Country

Country is a term used by Aboriginal and Torres Strait Islander peoples to refer to all living things present on the land that they belong to. Country refers to both the physical and the spiritual features of the land, seas and stars. Country includes animals, plants and people as well as creeks, waterholes and hills. Creation spirits and seasons are also part of Country. When an Aboriginal person is on Country, their spirit and the spirits of their ancestors live through the features of the land.

Source 1
(A) The Aboriginal flag. In the flag, the black represents Aboriginal peoples, the red represents the earth and the yellow represents the sun. (B) The Torres Strait Islander flag. In the flag, the green represents the land, the blue represents the sea, the black represents Torres Strait Islander peoples and the white star represents the five major island groups. The centre of the flag shows a white dhari (dancer's headdress), which represents Torres Strait Islander culture.

A

B

Civics and citizenship
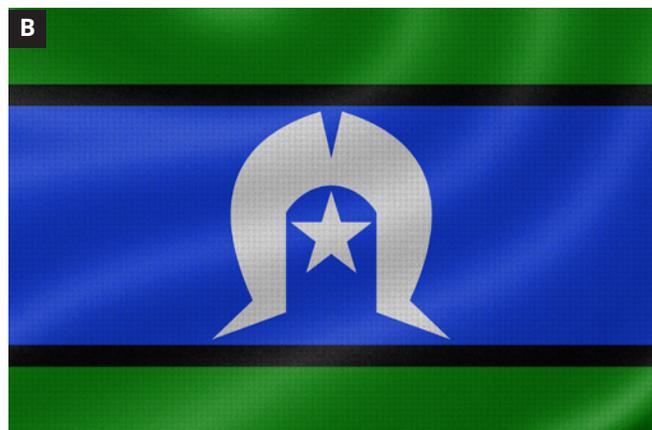
Source 2 Land is deeply connected to the Dreaming. Aboriginal peoples see themselves as custodians (caretakers) of the land, rather than owners of it.

Spirituality in Torres Strait Islander communities

There are many island groups in the Torres Strait Islands, each with their own unique cultural beliefs. At the centre of Torres Strait Islander spiritual beliefs is Tagai. Tagai is a warrior of the sea whose body can be seen in the constellations of Orion and the Pleiades. Tagai connects Torres Strait Islander peoples as sea people, who share a common way of life.

Case study Recognition of Aboriginal and Torres Strait Islander beliefs and cultures in modern Australia

Though Aboriginal peoples have lived in Australia for over 65,000 years, there has been very limited legal, political and Constitutional recognition of either Aboriginal or Torres Strait Islander beliefs and values.

The first major recognition of Aboriginal and Torres Strait Islanders claims to land is through the landmark 1992 *Mabo* decision that formally recognised the spiritual connection to the land which, in this case, was the Meriam People of the Murray Islands.

Another form of recognition that has become common in recent years is the Acknowledgement of Country. This is based on the Aboriginal and Torres Strait Islander tradition of recognising when you are entering into someone else's territory. It was customarily done between different Aboriginal and Torres Strait Islander groups. In 2010, the Federal Parliament established the practice of beginning each session with an Acknowledgement of Country. It is now

official practice to do so at formal events (such as the starting of parliament sessions), large gatherings (such as sporting events) and formal assemblies (such as schools).

For example, an Acknowledgement of Country that might be used at a Melbourne event is: I would like to acknowledge the Wurundjeri people as the Traditional owners of the Kulin Nation and I pay my respects to Elders past and present.

Acknowledgement of Country is one way that Aboriginal and Torres Strait Islander peoples' connection to the land and their spirituality is protected.

Source 3 Eddie "Koiki" Mabo, who petitioned the High Court to recognise the Meriam people of the Murray Islands to be acknowledged as the traditional owners of their land.

Source 4 The Chair of the Yoorrook Justice Commission, Wergaia/Wamba Wamba Elder Professor Eleanor Bourke (left) at a smoking ceremony at the launch of the Yoorrook Justice Commission in Melbourne in 2022.

Quiz me! Aboriginal and Torres Strait Islander cultures and beliefs

Check your learning 20.2

Check your learning 20.2

Review and understand

1 **State** what the Mabo Decision defined.
2 **Describe** the key elements of an Acknowledgment of Country.

Apply and analyse

3 **Explain** the significance of the Mabo Decision for Aboriginal and Torres Strait Islander peoples.

Evaluate and create

4 **Consider** the changes made to recognise the beliefs and importance of Country to Aboriginal and Torres Strait Islander peoples. Doing some research, **investigate** the recent 2023 Referendum and make an infographic documenting the timeline of changes.

Lesson 20.3
Australian citizenship

Introduction

A citizen is a person who legally lives in a geographical area, such as a town or country (like Australia). Legally, all Australian citizens have responsibilities such as:

- obeying the law
- enrolling to vote, and voting in federal, state and territory, and local elections once they are 18 years old
- serving on a jury if asked
- defending the country should the need arise.
  Australian citizens also have privileges, such as:
- being able to vote for members of parliament to represent their views
- being able to stand for election to parliament
- being able to apply for an Australian passport to enter and leave the country freely
- being entitled to receive official help from the Australian Government (if needed) when in another country.
  Australian citizens also have a social responsibility to members of our community.
  Citizenship is a person's status as a citizen and the rights and responsibilities this status involves.

▶ **Key content video:** Australian citizenship

Source 1 Wiradjuri and Yorta Yorta activist Bill Onus demonstrated outside Parliament House in Canberra in the lead-up to the 1967 referendum.

Aboriginal and Torres Strait Islander peoples and citizenship

The citizenship experiences of Aboriginal and Torres Strait Islander peoples have been very different to those of non-Indigenous people. For example, when Australia was federated in 1901, the newly written Australian Constitution stated that "aboriginal natives shall not be counted". Essentially, this meant that Aboriginal and Torres Strait Islander peoples were not considered to be part of the Australian population. It was not until 1967 that a referendum was held to remove this section of the Constitution. It was not until 1962 that all Aboriginal and Torres Strait Islander peoples were given the right to vote in federal elections.

Becoming an Australian citizen

Migrants to Australia can choose to become citizens after living in Australia for a certain period of time and meeting certain requirements. The final stage of becoming an Australian citizen is the citizenship ceremony. This ceremony gives the Australian Government the chance to welcome and celebrate its new citizens. During this ceremony, new citizens are given the opportunity to take the Australian citizenship pledge:

> From this time forward, I pledge my loyalty to Australia and its people, whose democratic beliefs I share, whose rights and liberties I respect, and whose laws I will uphold and obey.

Once a person becomes an Australian citizen, they take on the rights and responsibilities that come with it.

Active citizenship

Many Australian citizens go beyond the legal responsibilities they have as citizens because they care about the community they live in and believe they have a social responsibility to make it a better place. These people are active citizens. Citizens who were born in Australia or who chose to become Australian citizens can be active citizens by being involved in their community and displaying Australian values such as equality.

I used to think, now I think

Reflect on your learning about the citizenship experiences of Aboriginal and Torres Strait Islander peoples and complete the following sentences.
· I used to think …
· Now I think …
What has changed in your understanding?

Case study Adam Goodes' active citizenship

Adnyamathanha man Adam Goodes, a former AFL player, was awarded Australian of the Year in 2014 for his "leadership and advocacy in the fight against racism both on the sporting field and within society". Since receiving this award, Goodes has made a significant contribution to society by raising awareness of the need for Australia to address racism and improve the lives of Aboriginal and Torres Strait Islander peoples. Together with former AFL teammate Michael O'Loughlin and businessman James Gallichan, he has established an organisation called Go Foundation that focuses on promoting education, employment and healthy lifestyles for First Nations peoples.

Source 2 Adam Goodes is a First Nations Australian who has been recognised for his active citizenship.

Quiz me! Australian citizenship

Civics and citizenship

20.3

Check your learning 20.3

Check your learning 20.3

Review and understand

1 **Identify** one responsibility and one privilege of Australian citizens.
2 **State** the final stage of becoming an Australian citizen for migrants to Australia (who choose to become citizens).

Apply and analyse

3 **Summarise** why Adnyamathanha man Adam Goodes has been recognised as an active citizen.
4 **Distinguish** between the rights of Aboriginal and Torres Strait Islander peoples in the early days of European settlement and today.

Lesson 20.4
Australia's migrants

Learning intentions and success criteria

Introduction

Due to migration, Australia's national identity has gone through many changes over the past 250 years. Australia has changed from a land where only First Nations peoples lived, to being occupied by British colonists, to the present day, where Australia is home to people with a range of different backgrounds. Today, half of all Australians have at least one parent who was born overseas.

▶ **Key content video:** Australia's migrants

Reasons why people migrate

migrant a person who moves from one place to another

Migrants are people who move from one place to another. International migrants often move to a new country to improve their way of life. People might migrate in search of better employment or education opportunities. Migrants make the decision to leave their home country for many different reasons. To understand why people migrate, it is helpful to understand the different types of migrants:

- migrant: a person who moves from one country (or region) to settle in another country; this includes both emigrants (people leaving a country) and immigrants (people entering a country)
- economic migrant: a person who migrates for reasons such as seeking employment or to improve their financial position
- assisted migrant: a person who migrates under a government program that offers financial assistance to migrants

- skilled migrant: a migrant who is granted favourable treatment for their skills or job
- illegal migrant: a person who enters or remains in a country without a legal right to do so; this does not include asylum seekers and refugees.

refugee a person who moves to another country to avoid persecution or seek protection

Refugees

Refugees are people who have to move to another country. Many refugees flee their home country because they fear for their personal safety if they remain. Others have to leave their home country due to devastating natural disasters. Asylum seekers are people who have sought protection as refugees.

Migration to Australia

Throughout Australia's history, migration has been closely tied to its relationships with other countries. For example, due to Australia's history as a British colony and its political ties with Britain, Britain remains the top country of origin of overseas-born Australians (see Source 2 in 20A Skills in context The Census, page 574). Australia's relationships with countries in the Asian region such as China and Vietnam have also influenced the numbers of migrants choosing to settle here. Today, Australia's population includes migrants born in nearly every country of the world, making Australia a very multicultural country.

Source 1 Host of *The Project*, Waleed Aly, is a Sunni Muslim, born and raised in Melbourne by Egyptian migrant parents.

This multiculturalism has resulted in a diverse range of music, food, beliefs and customs from more than 200 nations being present across Australia. As a result of our diverse society, Australians have the opportunity to learn about other cultures through community events such as food festivals, film festivals and traditional celebrations from other countries (such as Lunar New Year).

After living in Australia for a period of time, many migrants to Australia choose to become citizens. Once a person becomes an Australian citizen, they accept the rights and responsibilities that come with citizenship.

Quiz me! Australia's migrants

I used to think, now I think

Reflect on your learning about why people migrate and complete the following sentences.
· I used to think …
· Now I think …
What has changed in your understanding?

Check your learning 20.4

Check your learning 20.4

Review and understand

1 In your own words, **define** the terms:
   a economic migrant
   b skilled migrant
   c refugee.
2 **Name** the top country of birth of overseas-born Australians.

3 **Describe** the impact multiculturalism has had on Australian society.

Apply and analyse

4 **Explain** the reasons why people might migrate.
5 **Analyse** two factors about why Australia would be a popular choice for migration. **Consider** the categories of migrants in your response.

Civics and citizenship

20A Skills in context
The Census

Introduction

Every five years, the Australian Government conducts a survey of the entire nation. It is known as the Census and it gathers data on every person in Australia. This information is used by the government in many ways.

The Census is conducted by the Australian Bureau of Statistics (ABS). It gathers data about people such as their age, gender, income, occupation, type of home, languages spoken and ancestry. It has optional questions, including religion (see Source 3). This information helps the government understand the types of people living in Australia and can be useful for assisting the government in decisions they make for and on behalf of the Australian people.

Source 1 A Census form

These decisions might include providing community services in areas where a lot of people whose first language is not English live, or building schools in areas where a lot of babies are being born.

However, the data collected by the ABS is not just used by the government. Individuals, businesses and private organisations such as research facilities can search the ABS data for specific information that would suit their purposes. The ABS does not include people's names on the data they make public.

Top 10 countries of birth of Australia's overseas-born population

Australian-born 70.9%
Total overseas-born 29.1%
England 3.8%
India 2.8%
China 2.3%
New Zealand 2.2%
Philippines 1.2%
Vietnam 1.0%
South Africa 0.8%
Malaysia 0.7%
Italy 0.7%
Sri Lanka 0.6%

Source: Australian Bureau of Statistics

Source 2 The 2021 census showed that almost 30 per cent of Australia's population was born overseas.

Buddhism: 2.5% / 2.4% / 2.4%
Islam: 2.2% / 2.6% / 3.2%
Hinduism: 1.3% / 1.9% / 2.7%
No religion: 22.3% / 30.1% / 38.9%

2011
2016
2021
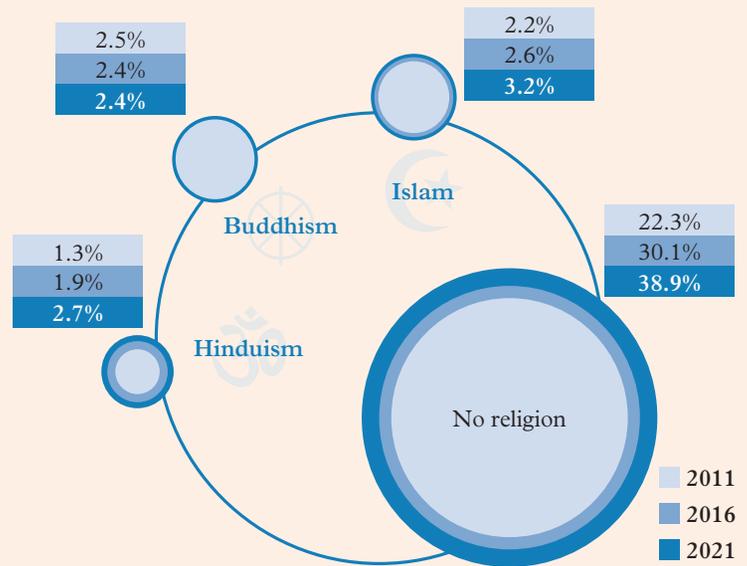
Source: Australian Bureau of Statistics

Source 3 While overall, Australians are becoming less religious, the 2021 Census showed that the proportion of people identifying with non-Christian religions is increasing.

Conducting a census survey

A census survey can be used to gather information about any population. The following steps can be used to conduct a survey. A census tries to gather information about every person in the population.

- **Step 1** Think of a range of questions that you would like to gather information on, such as age, religion, gender, income and so on. It is easiest if you give people options to choose from when answering each question, so make each question multiple-choice whenever possible. Just make sure there is an option that suits all possible responses.
- **Step 2** Compile all your questions into a single document and give it to every person in the population you are surveying.
- **Step 3** Add up the results for each question.
- **Step 4** Present the results. There are many different ways to present statistics, such as calculating percentages or creating graphs. A simple way to present results is in a table.

Source 4 The government body in charge of collecting and analysing census data is the Australian Bureau of Statistics (ABS).

For more information on evaluating democratic institutions and systems, see Lesson 18.2 Investigating contemporary civics and citizenship issues (page 525).

Practise the skill

1 **Conduct** a census of your class to find out information about classmates' country of birth, language spoken at home, age and gender. As people might be sensitive to some of these questions, include an option to choose "prefer not to say" for each question.
2 Present your findings in a table. Do not include people's names on the table.
3 Use the results from your census survey to answer the questions below.
   a Which language is most often spoken at home?
   b How many of the participants were born in Australia? What percentage of the class is this?
   c Which is the most common gender in your class?

Extend your understanding

Investigate the results of Australia's most recent census. Log onto Oxford Digital to find this data on the ABS website. Answer the following questions.

1 When was the most recent census conducted?
2 What was Australia's population?
3 How much had the population increased from the previous census?
4 Which state or territory has the largest population?
5 When is the next census scheduled to occur?
6 According to the ABS data, how often is a new person added to the Australian population?

Weblink: ABS Census data

Lesson 20.5
Shared Australian values

Introduction

Australia's national identity is made up of our shared history and values. As you have learned, Australia is one of the most culturally diverse nations in the world. Australia's population is made up of Aboriginal and Torres Strait Islander peoples, migrants who were born overseas (and their descendants) and the descendants of those who settled in Australia following British colonisation in 1788.

▶ **Key content video:** Shared Australian values

The values of Australia's democracy

Australia is a liberal democracy. This means that, as a nation, we aim to protect basic human rights and values that improve the well-being of individuals. For example, one of the democratic rights protected under Australian law is freedom of speech. Freedom of speech generally refers to the right of Australians to publicly state their views and opinions on a range of political issues without fear of being punished by the government for their actions (as long as their statements are not false or hateful and do not cause harm).

Contemporary religious values

British colonisers introduced Christianity to Australia, where it is still the most dominant religion today. However, modern Australia is a multi-faith country. Many religions, each with their own unique set of values and beliefs, are practised in Australia. Certain values are shared by many religions, such as compassion. These religions include:
- In Islam, compassion is an essential value. Muslims believe compassion is one of the attributes (features) of Allah.
- In Buddhism, compassion is known as "karuna". Buddhists believe they should always show compassion.
- In Judaism, the values of compassion and mercy are known as "rahmanut". Jewish people believe people should show compassion to themselves and others.
- In Hinduism, "ahimsa" is a belief that encompasses compassion, care and love towards all living creatures.

The Australian National Dialogue of Christians, Muslims and Jews (ANDCMJ) is one example of a multi-faith group in Australia. The ANDCMJ was formed in 2003 to recognise the shared values of all Australians. In 2021, the ANDCMJ released a joint statement encouraging the Australian Government to address climate change.

Shared values in Australia

Although Australians come from a range of different backgrounds, many of us share common values. Values are the beliefs and behaviours that we consider important as a nation. Shared values allow us to live in harmony, and they are reflected by our laws, and in the ideals of the majority of people within our society. The Australian Government has outlined several values in the Australian Values Statement, most recently updated in 2020, which is supplied to visa applicants to Australia. Some of these values are shown in Source 2.

Source 1 A cancelled postage stamp designed to commemorate Australia Day in 1982; it shows a First Nations person, a British colonist and a migrant.

Source 2 Some shared Australian values

Respect for freedom of individuals	Freedoms of speech, association, assembly, religion and movement	A "fair go"	Commitment to the rule of law	Parliamentary democracy
Australians should respect the dignity and freedoms of every person.	Freedom is being able to make our own decisions, without being controlled. Australians enjoy many freedoms. However, most of these freedoms are not protected by law in Australia; they are a privilege rather than a right written into the Australian Constitution and each freedom must be enjoyed responsibly.	This applies to access to education and health care, and the opportunity to work and earn a sufficient living, regardless of gender, race or socio-economic status. It means that discrimination on any of these grounds is not acceptable. A "fair go" embraces: • mutual respect for each other • tolerance • compassion for those in need • equal opportunity for all.	All people should obey the law.	Our laws are made by parliament, which is elected by the people of Australia.

We will now examine the shared values of:
• freedom
• a "fair go"
• compassion
• equality.

Civics and citizenship

20.5

Source 3 Freedom of assembly gives Australian people the right to assemble (gather) and protest. In this image, student protesters challenge inaction on climate change.

Freedom

Freedom is being able to make our own decisions, without being controlled. Australians enjoy many freedoms, such as freedom of speech, association, assembly and movement. However, many of these freedoms are not protected by law in Australia; they are a privilege rather than a right written into the Australian Constitution. Each freedom must be enjoyed responsibly.

A "fair go"

A "fair go" means making things reasonable, fair and equitable so that people have a chance to participate and succeed. This applies to access to education and health care, and the opportunity to work and earn a sufficient living, regardless of gender, race or socioeconomic status. It means that discrimination on any grounds is not acceptable.

Compassion

Compassion is a human response to the suffering of others that makes us want to help or relieve that suffering. Some Australians feel a responsibility to help those less fortunate, and they pressure the government to fulfil its responsibilities to people suffering in Australia and overseas. Compassion is perhaps the most important value of any society, as it influences people to help others who are experiencing extreme suffering. The value of compassion has resulted in the Australian Government developing polices that welcomed migrants who were seeking safety from violent and/or unsafe countries.

Source 4 Although Australians come from a range of different backgrounds, many of us share common values, which helps us live in harmony.

Equality

Equality is the idea that every person in society is treated the same way and considered equal. It is an important part of any fair society that cares about making sure no one is discriminated against. But equality is difficult to achieve. Economic inequality has increased in Australia as fewer people control more of the country's wealth. Nevertheless, giving everyone an equal opportunity to succeed is a value held dear by many Australians.

Expressing shared values

There are many ways that the values shared by diverse communities within Australia can be expressed; for example, by flying Australian flags or singing Australia's national anthem. As of 1 January 2021, the second line of the Australian National Anthem became "For we are *one* and free". The original line – "For we are *young* and free" – was changed to reflect Aboriginal and Torres Strait Islander peoples' long history in Australia. Then Prime Minister Scott Morrison stated that the change was to be more inclusive of all Australians and helped to better reflect Australia's unity. Not everyone agreed with this change, and some argued that the national anthem should be rewritten completely.

Shared values and reconciliation

For many people, truly recognising the past injustices suffered by Aboriginal and Torres Strait Islander peoples since British colonisation is a necessary step towards properly defining Australia's identity. They argue that until we confront our past, we will never be able to honestly promote the values that we want our nation to stand for, such as a "fair go" for all. The process of acknowledging the past and strengthening the relationship between Aboriginal and Torres Strait Islander peoples and non-Indigenous peoples is known as **reconciliation**.

Quiz me! Shared Australian values

reconciliation in Australia, the process of strengthening the relationships between First Nations peoples and non-Indigenous peoples by acknowledging the past injustices, valuing First Nations cultures and building positive connections between all Australians

Check your learning 20.5

Check your learning 20.5

Review and understand

1 **Define** "national identity" in your own words.
2 Why is it important for a society to have shared values?

Apply and analyse

3 Look at Source 2. **Explain** how values such as "freedom of speech" and "commitment to the rule of law" might make it easier for us to live together.

Evaluate and create

4 Think about the four values described in this lesson. Rank them in order of how important you think they are. **Justify** (give reasons for) your rankings.

5 **Create** a poster that could be used at international airports in Australia to welcome new migrants to the country. Include at least one important value that must be respected and one piece of information that would be helpful for new arrivals to know.

6 Choose a religion that is practised in contemporary Australia (such as Christianity, Islam, Buddhism, Judaism or Hinduism). Go online and **investigate** two key values of your chosen religion.

7 **Create** a new verse or entirely new version of the national anthem. What values or ideas should be represented to reflect Australia's modern, multicultural society?

20B Skills in context
#ChangeTheDate

Introduction

The date of Australia Day, 26 January, is the anniversary of the arrival of the First Fleet of British ships at Port Jackson, New South Wales, in 1788. It marks the beginning of British rule of the Australian continent.

Some people think that Australia Day is a significant day that celebrates Australia's national identity. It is marked by a public holiday in all states and territories.However, many people believe that celebrating Australia Day on 26 January is wrong because it is offensive to First Nations peoples. First Nations peoples consider 26 January to be a day of mourning and have named it "Invasion Day". More and more Australians are demanding that the date of Australia Day be changed to a date that both Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians can celebrate.

On Australia Day 2024, Prime Minister Anthony Albanese confirmed he had no intentions of shifting the date of Australia day.

Some have proposed alternative dates, including: 1 January (the day Australia became a Federation in 1901), 19 January (one week prior to the current date and in the calendar it would be 19/01 - the year of Federation), dual days of 25 January (to be called First Australians Day) and 26 January (New Australians Day), 8 May (pronounced as May 8, it sounds like "mate" - a commonly used phrase in Australia), and 3 December (the date of the Eureka Stockade event from 1854).

Australia Day was first celebrated in 1934 when the vast majority of the Australian population had European ancestry. This has changed and today Australia is a multicultural

Source 1 Many Australians are happy to celebrate the Australia Day public holiday on 26 January with a great sense of patriotism.

Source 2 Many Australians feel that 26 January represents the British invasion of the continent.

society, with many Australians recognising the injustices experienced by Aboriginal and Torres Strait Islander peoples as a consequence of the First Fleet's arrival. Many Australians believe that celebrating "Invasion Day" goes against Australia's values. They also argue that Australia Day has been celebrated on many different dates (such as 28 July and 30 July) in the past.

People opposed to changing the date argue that celebrating Australia Day on 26 January is an important tradition that forms part of the Australian identity. Many of these people believe that the nation we live in today was shaped by the arrival of the First Fleet and it should be remembered.

Whatever side they take, people across Australia can exercise their democratic right to voice their opinion on the debate through means such as protests, marches and petitions.

Key skill Communicating

Writing a letter to your local MP or to the prime minister

In our democracy, the role of politicians is to represent the people's opinions, concerns and interests. One way of ensuring your opinion is heard is by directly contacting your local member of parliament (MP) or the prime minister via an email or letter.

Here are some steps to follow when writing such a letter:

- **Step 1** Before you write, research the topic you are concerned about and make note of important facts that support your view.
- **Step 2** When you are addressing the politician, make sure you use their correct title – for example, Ms Rachel Payne MP.
- **Step 3** Introduce yourself and state the reason you are writing.
- **Step 4** In your own words, politely write the main points you wish to share with the politician.
- **Step 5** Explain what you would like them to do about the issue.
- **Step 6** Sign off the letter with "Sincerely" and your full name below it.
- **Step 7** Wait for a response and contact them again if you have not heard from them after a month.

◀ For more information on communicating, see Lesson 18.5 Communicating (page 532).

Practise the skill

1 Write a letter to your local MP or to the prime minister discussing why you think the date of Australia Day should or should not be changed. You may also wish to include your opinion on whether 26 January should be recognised as a day of mourning. You can also propose a new date on which to celebrate Australia Day.

Extend your understanding

1 Using the internet or an Australian calendar, **identify** all the public holidays celebrated in Victoria.

2 Research the historic significance of these public holidays. In your own words, **summarise** how each one is portrayed and/or celebrated in the media and in popular culture.

3 **Explain** how these public holidays form part of our national identity.

Source 3 Every year on 25 April, Australians have a public holiday to mark Anzac Day. Anzac Day is a national day of remembrance to recognise the service and sacrifice of members of the Australian and New Zealand Defence Forces. It commemorates the first landing of the Anzac soldiers at Gallipoli on 25 April 1915. As the home of commemoration in Victoria, the Anzac Day Dawn Service and Veterans' March is held at the Shrine of Remembrance (pictured) every year.

Review: Australia's diverse society

Review activity

Deng Thiak Adut is a former child soldier who came to Australia from Sudan in 1998. He became an Australian citizen in 2001. Read the following extract from the Australia Day address Adut gave in 2016, then answer the questions that follow.

What does it mean to be Australian?

Source 1

I came to Australia as an illiterate, penniless teenager, traumatised physically and emotionally by war. In Sudan, I was considered legally disabled, only by virtue of being black or having a dark skin complexion. As you can see, I am very black and proud of my dark skin complexion. But in the Sudan, my colour meant that my prospects could go no further than a dream of being allowed to finish a primary education … Australia educated me. How lucky I became. How lucky is any person who receives an education in a free land and goes on to use it in daily life.

In 1987, the year before the Australian bicentennial celebrations, I was among many young children forcibly removed from their homes and families and marched to Ethiopia, for reasons that were unknown to me at the time. I walked thousands of kilometres without shoes or underwear.

What do we take for granted as Australians? Free education, food, clothing (more than shoes and underwear), shelter, health care and personal safety. We take those things for granted until we don't have them.

Australia is a nation where most of us, most of the time, seek to give and receive a 'fair go' and 'respect democracy'. It's that 'fair go' that you see in every new Australian success story. That is the 'advance Australia fair' in the anthem.

I know that some who are watching and listening will be wondering why I, so black, am ignoring that the ruling majority appear to be white. I don't ignore

it, just as I don't ignore that the colours and faces of the Australian community are such a rich palate. Take a trip around an Australian city, visit a building site, walk around an educational campus, look at the names in our sporting teams, and hear, see, smell, and taste the richness of the cultures in any of our shopping centres. White is a colour to which so much can be added.

Source: Australia Day address given in 2016 by Deng Thiak Adutt

1 **Explain** why Deng Thiak Adut fled to Australia from Sudan as a refugee. (3 marks)
2 **Analyse** Adut's message about what is means to be Australian.
   a Note down all the reasons Adut gives for being proud to be an Australian.
   b Note down any comments he makes that are critical of life in Australia. (4 marks)
3 What do you think it means to be an Australian? Try to **summarise** your own point of view in approximately 30 words. (3 marks)
4 "Australia is a nation where most of us, most of the time, seek to give and receive a 'fair go' and 'respect democracy'." **Discuss** this statement in a short paragraph. In your paragraph, include points for and against this statement and conclude with your overall opinion. (10 marks)

(Total: 20 marks)

Source 2 Deng Thiak Adut

🖱 **Module checklist:** Australia's diverse society

💻 **Module review quiz:** Australia's diverse society

[STEAM project 1]

How can we reduce contaminants in local waterways so that biodiversity in the area is protected?

Australia is one of the driest continents in the world. But according to an Australian Government report, Australians consume more water per person than any other country, using an average of 100,000 L per person every year.

Water is an important resource in Australia, so it is critical to manage our waterways carefully.

Australia has many waterways, including rivers, groundwater systems, wetland environments and other human-made passages for water. Waterways are vital to our existence and are valuable economic assets.

Waterways play an important role in supporting biodiversity in our local areas, by providing habitats for wildlife (such as fish and turtles) and plants.

Humans rely on local waterways for drinking water, irrigation of crops, industrial processes and recreational activities. But sometimes these human activities can impact waterways, endangering the biodiversity of a local area.

Waterways also hold spiritual significance for many people. Due to the importance of local waterways to Aboriginal and Torres Strait Islander Peoples, waterways are part of our cultural heritage.

We must, therefore, manage our waterways to maintain their complex ecosystems.

Water quality and contaminants

A contaminant is a substance that pollutes or poisons something. Contaminants can occur naturally, or be caused by humans – such as
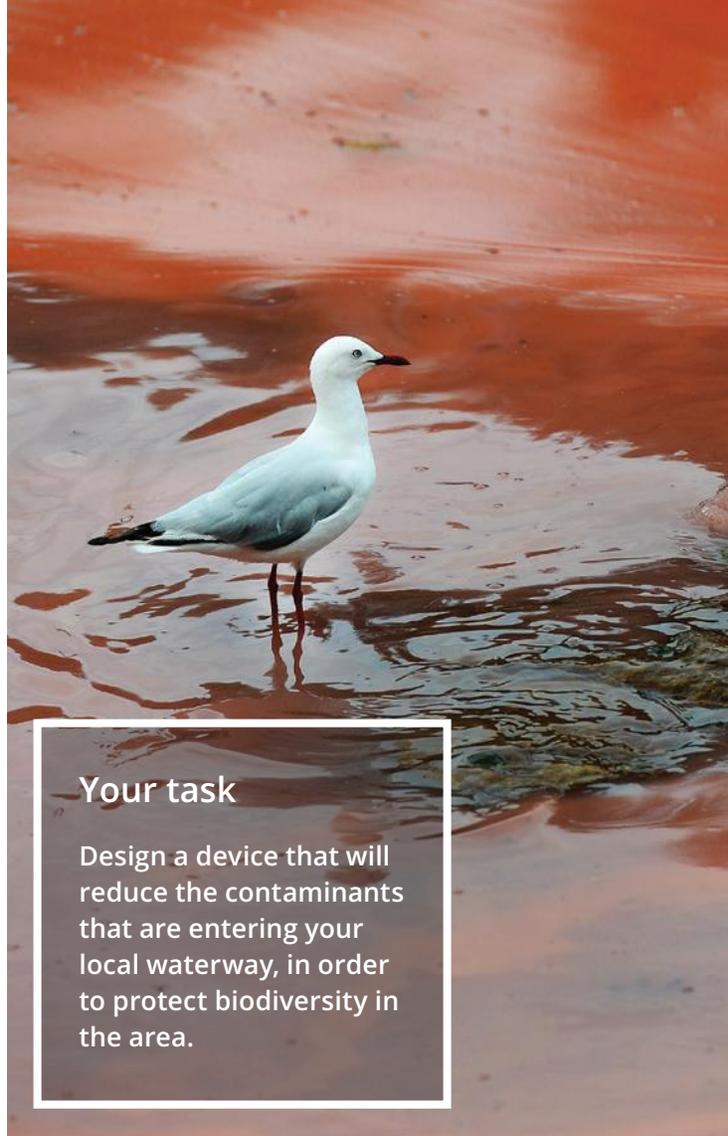
Your task

Design a device that will reduce the contaminants that are entering your local waterway, in order to protect biodiversity in the area.

Figure 1 Algal blooms occur when an oversupply of nutrients in the water allows algae populations to quickly increase, covering the water's surface. Contaminants such as industrial fertiliser running into waterways can cause algal blooms. Algal blooms are often toxic to other aquatic life.

microplastics, pesticides and litter. Litter is an example of a physical contaminant, while pesticides are examples of chemical contaminants. There are many types of contaminants, which are often more heavily concentrated in industrial, urbanised or agricultural areas.

Human land-use and major weather events, such as floods and bushfires, can introduce contaminants into local waterways and affect the water quality.

When water becomes contaminated, it can affect the health of an entire ecosystem, leading to serious environmental issues, such as acidic soil or algal blooms. So it is important for all waterways to be managed to protect the organisms that rely on them to survive.
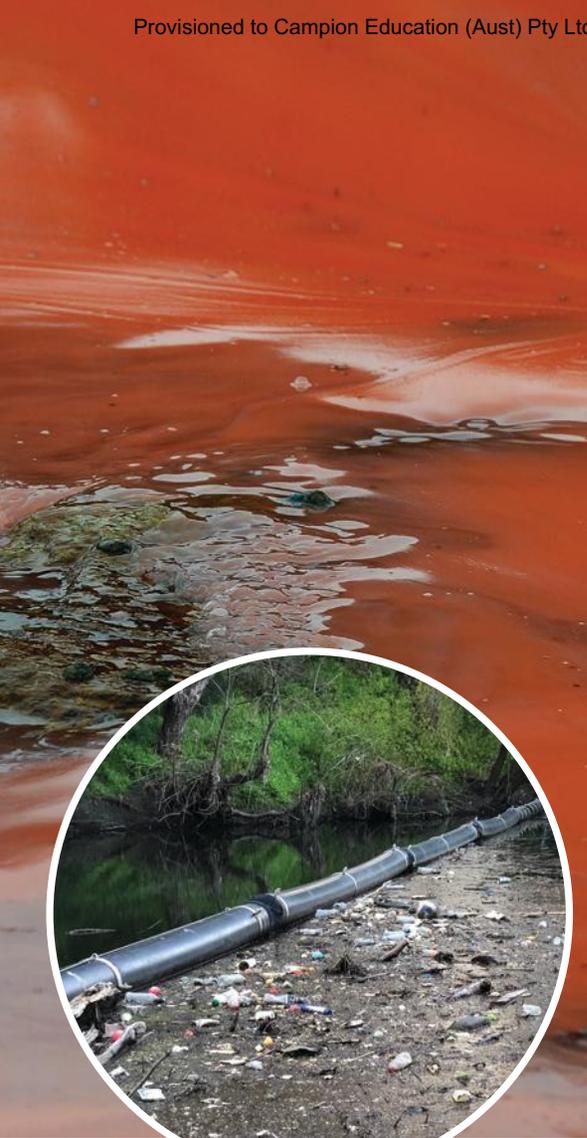
HUMANITIES

In Geography this year, you will learn about water as a resource and how it connects places as it moves through the environment. You will also study the variability and scarcity of water in Australia.

In History, you will investigate the importance of water in sustaining ancient civilisations.

To complete this task successfully, you will need to investigate the health of a local waterway and the nearby land uses that may be introducing contaminants to the water. You will then need to research strategies that will help to reduce these contaminants.

You will find more information on this in Module 2 "Water as a resource" and Module 3 "Valuing and managing water" of *Oxford Humanities 7 Victorian Curriculum*.

MATHS

In Maths this year, you will consolidate your understanding of area and volume and different units for measuring them. You will learn to perform calculations involving fractions, decimals and percentages – both with and without digital technology.

To complete this task successfully, you will need to combine these mathematical skills with your understanding of chemical and physical changes. You can then determine the scale of the problem and design your prototype in detail. You may need to perform calculations that relate the concentrations of contaminants, the dimensions of your prototype, the volume of water that can and needs to be processed, and the quantity of contaminants that need to be disposed of.

You will find help for applying these maths skills in Module 3 "Fractions and ratios", Module 4 "Decimals and percentages", and Module 9 "Length, area and volume" of *Oxford Maths 7 Victorian Curriculum*.

SCIENCE

In Science this year, you will learn about how particles move in solids, liquids and gases. Each of these states of matter occurs during the water cycle, which is influenced by both nature and humans. When water is combined with other particles, it forms different types of solutions and mixtures. The unique properties of each particle (including the water molecule) can allow it to be isolated and purified once more.

To complete this task successfully, you will need to consider the properties of each contaminant, and how these properties can be used to separate the contaminants from the water. You will also need to be familiar with the scientific method, and understand how to conduct a fair test.

You will find more information on this in Module 7 "Particle model" and Module 8 "Mixtures" of *Oxford Science 7 Victorian Curriculum*.

Figure 2 Litter is a contaminant in local waterways, such as the River Torrens in Adelaide.

Figure 3 The Yarra River is known to local Wurundjeri people as Birrarung, and has great cultural significance.

STEAM project 585

The design cycle

To successfully complete this task, you will need to complete each of the phases of the design cycle.

discover

communicate

define

test

build

ideate
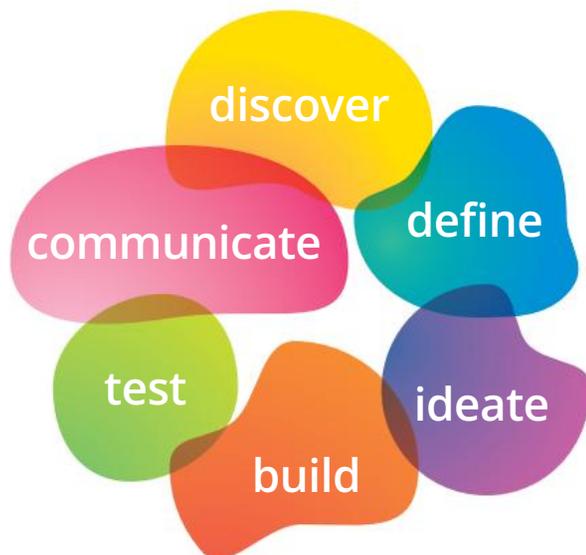
Discover

When designing solutions to a problem, you need to know who you are helping and what they need. The people you are helping, who will use your design, are called your end-users.

Consider the following questions to help you empathise with your end-users:

- Who am I designing for?
- What problems are they facing? Why are they facing them?
- What do they need? What do they not need?
- What does it feel like to face these problems?
- What words would you use to describe these feelings?

To answer these questions, you may need to investigate using different resources, or even conduct interviews or surveys.

Define

Before you start to design your device, you need to define the criteria that you will use to test that the problem is solved.

Define your version of the problem

Rewrite the problem so that you describe the group you are helping, the problem they are experiencing and the reason it is important to solve it. Use the following question as a guide:

"How can we help (the group) to solve (the problem) so that (the reason)?"

Determine the criteria

1 Define each contaminant that is present in the waterway. Describe the properties of each contaminant.
2 Describe how you could test whether the contaminant was present in the water.
3 Describe how the contaminant would affect the biodiversity of the area if it were not removed from the waterway.

Ideate

Once you know who you're designing for, and what the criteria are, it's time to get creative!

- Outline the criteria or requirements your device must fulfil (for example, the weight and height of your design).
- Brainstorm at least one idea per person that fulfils the criteria.
- Consider whether your idea will prevent contamination from occurring or solve the problem after it has already occurred.

Remember that there are no bad ideas at this stage. One silly thought could lead to a genius innovation!

Build

Draw each individual design for your device. Label each part of the design. Include the materials that will be used for its construction.

Include in the individual designs:

a the method you will use to isolate each contaminant

b the location of the device in the waterway.

If there is more than one separation method used in your design, identify the order in which you will carry out each method.

Present your design to your group. Use the criteria or requirements that you identified to decide which design your group will build.

Build the prototype

Build and test the prototype of your group's chosen device.

Use the following questions as a guideline for your prototype:

- What materials will you need to build your prototype?
- How will you test whether each step of the design is successful? What will the outcome of each step look like?
- How will you record the steps you use when testing your device?
- How will you record the details of each extracted contaminant?
- How will you dispose of the extracted contaminants after your project is completed?

Test

Use the scientific method to design and experiment with each separation method to ensure its success. You will need to control your variables between each test.

What criteria will you use to determine the success of your prototype?

Conduct your tests and record your results in an appropriate table.

Communicate

Present your design to the class as though you are trying to get your peers to invest in your device.

In your presentation, you will need to:

- explain why removing the contaminant is important for the local wildlife
- describe the key features of your design and how it will reduce the amount of contaminant in the waterways
- construct a labelled diagram of your prototype in the natural environment
- explain the principles that support your design – the importance of water in the local environment and in sustaining civilisations, how some waterways become contaminated and how these contaminants can be reduced
- estimate the number of devices needed to reduce contaminants in the waterways in your local area
- calculate the cost of implementing your design.

Online resources:

Student booklet
This helpful booklet will guide you step-by-step through the project.

What is the design cycle?
This video will help you to better understand each phase in the design cycle.

How to manage your project
This "how-to" video will help you to manage your time throughout the design cycle.

How to pitch your idea
This "how-to" video will help you with the "Communicate" phase of your project.

[STEAM project 2]

How can we reduce waste so that we don't exploit resources?

In 2019, the United Nations estimated that every year 90 billion tonnes of resources (including fossil fuels, precious metals and non-metals) are extracted from the earth and turned into usable products. When these products are no longer used or wanted, only 9 per cent are recycled.

If we want to have enough resources left for future generations, humans cannot continue to extract materials from the earth in this way. It is unsustainable.

E-waste

In Australia, millions of electronic devices are thrown away every year. This is known as e-waste. E-waste can be difficult to recycle, but it often contains valuable metals.

The average mobile phone contains 0.034 g of gold, 16 g of copper and 0.35 g of silver. When a phone is thrown into landfill (along with all the other e-waste that once used electricity or batteries) the materials can take many decades to break down (sometimes releasing toxins into the ground).

Recycling these materials reduces the need to mine new resources.

Fast fashion

Fast fashion is the term used for affordable clothing produced rapidly for the general public. It is designed and produced quickly to reflect current fashion trends. When fashion becomes outdated, the clothes or products that reflect that fashion are often thrown away. The Australian Bureau of Statistics (2020) identified that, on average, each person sends 23 kg of clothing to landfill each year. Over 60 per cent of this clothing is made of synthetic fibres (made from fossil fuels) that can take many years to biodegrade.
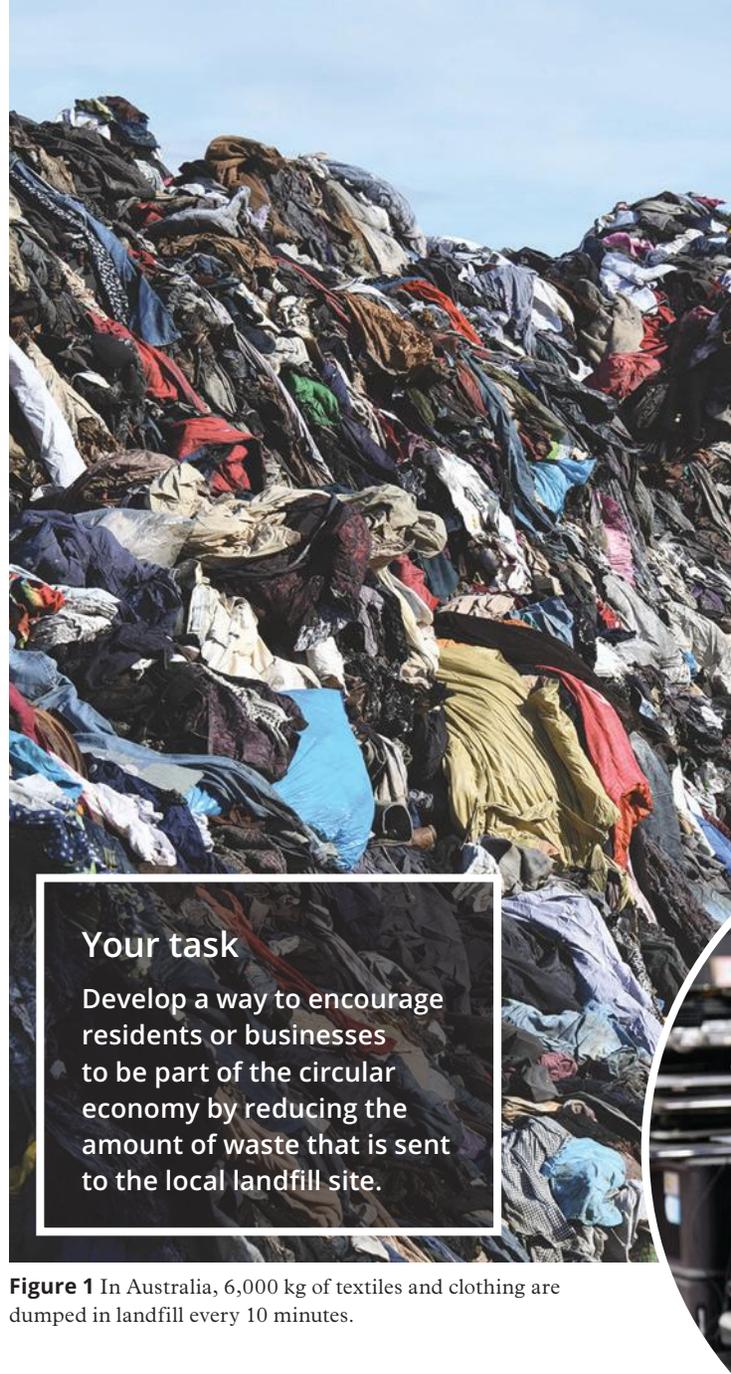
Your task

Develop a way to encourage residents or businesses to be part of the circular economy by reducing the amount of waste that is sent to the local landfill site.

Figure 1 In Australia, 6,000 kg of textiles and clothing are dumped in landfill every 10 minutes.

What is a circular economy?

One potential solution to our unsustainable use of resources is a "circular economy". In a circular economy, resources are used and reused as much as possible. This benefits businesses because the longer a resource can be used, the more value it has. A circular economy is based on three key principles:

1 eliminate waste or pollution in the production of a product
2 keep products and materials in use
3 regenerate natural systems.

Some companies are already using the principles of a circular economy in the products they sell in Australia.

HUMANITIES

In Economics and Business this year, you will learn how consumers and producers respond to and influence each other in the market, particularly through price mechanisms. You will consider how resources are distributed, allocated or used in the production of food, clothing and electronics, and the growing consumer demand for sustainable products.

In Geography, you will investigate how the environment can affect the liveability of a place. You may survey the local area to understand the role of services and facilities provided to minimise, reduce and prevent waste, and strategies used to enhance liveability.

To complete this task successfully, you will need to consider the products you buy and the decisions businesses make when deciding what to produce, and the consequences when a product reaches its end-of-life. You will also need to gain an understanding of people's perceptions in your local area towards waste management, recycling and the importance of the environment in measuring liveability.

You will find more information on this in Module 5 "Liveable cities" and Module 16 "Making choices" of *Oxford Humanities 7 Victorian Curriculum*.

MATHS

In Maths this year, you will use fractions, percentages and decimals to represent numbers, and ratios between quantities. You will consolidate your knowledge of volume, learning about cubic units and how to convert between different units of volume. You will perform calculations with and without digital technology.

To complete this task successfully, you will need to quantify the problem, which will include using ratios or fractions to scale between individual, local, national and global situations. You will need to cost your solution, accounting for any costs saved by recycling valuable materials.

You will find help for applying these maths skills in Module 3 "Fractions and ratios", Module 4 "Decimals and percentages", and Module 9 "Length, area and volume" in *Oxford Maths 7 Victorian Curriculum*.

SCIENCE

In Science this year, you will learn about separating mixtures, recycling different materials and disruptions to ecosystems. You will need to use your knowledge to consider the role of renewable and 'non-renewable' resources in different products, and how constantly sourcing new materials will affect the surrounding ecosystem.

To complete this task successfully, you may need to consider how the change in state of matter can aid a circular economy. You will also need to be familiar with the scientific method and understand how to conduct a fair test.

You will find more information about these issues in Module 3 "Ecosystems" and Module 8 "Mixtures" of *Oxford Science 7 Victorian Curriculum*.

Figure 2 Electronic waste does not belong in landfill. Laptops that are no longer working or wanted are examples of e-waste.

Figure 3 The average mobile phone contains gold, copper and silver.

[STEAM project 2]

The design cycle

To successfully complete this task, you will need to complete each of the phases of the design cycle.

discover

define

communicate

test

ideate

build
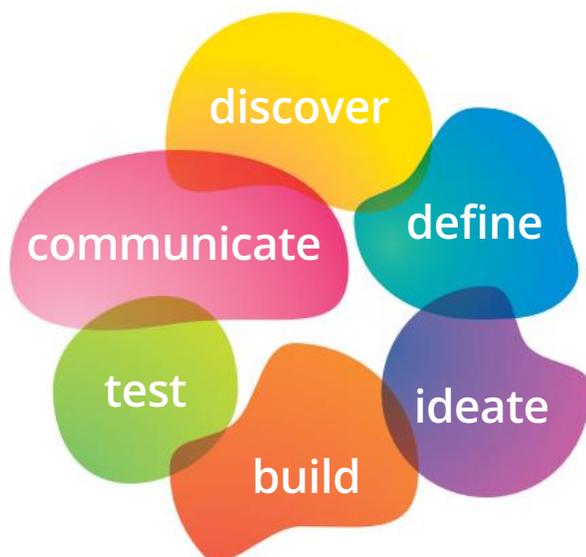
Discover

When designing solutions to a problem, you need to know who you are helping and what they need. The people you are helping, who will use your design, are called your end-users. This stage involves thinking about the problem (not possible solutions).

Consider the following questions to help you empathise with your end-users:

- Who am I designing for?
- What problems are they facing? Why are they facing them?
- What do they need? What do they not need?
- Who is producing the waste? Why is the waste being produced?
- What does it feel like to face these problems?
- What words would you use to describe these feelings?

To answer these questions, you may need to investigate using different resources, or even conduct interviews or surveys.

Define

Before you start to design your solution, you need to define the criteria that you will use to test the success of your solution.

Define your version of the problem

Rewrite the problem so that you describe the group you are helping, the problem they are experiencing and the reason it is important to solve it. Use the following phrase as a guide.

"How can we help (the group) to solve (the problem) so that (the reason)?"

Determine the criteria

1   Describe the product that is being used. How much product is needed for normal functions?
2   Describe the waste that is being produced. In what units could you measure the amount of waste? How could you estimate how much waste is currently being produced?
3   Describe the different things that currently happen to this waste. To what fraction of the waste does this happen?
4   Describe the criteria that you will use to measure the success of your design.

Ideate

Once you know who you're designing for, and what the criteria are, it's time to get creative!

As a group, brainstorm ways to solve the problem. Remember that there are no bad ideas at this stage. One silly thought could lead to a genius innovation!

Once you have many possible solutions, select three to five ideas and research whether these ideas have already been produced by someone else. If the prototype idea is already on the market, can you make a better version? If it's not, what will be needed to make it?

Build

Draw your top two ideas. Label each part of the designs. Include the materials or skills required for their construction.

Include in the designs:

a a description of how the users will interact with the prototype idea

b a description of how the amount of waste will be decreased, and by roughly how much

c a description of how the design will contribute to the circular economy

d at least one advantage and disadvantage of each design.

Select one of the designs to take to the building and testing stage.

Build the prototype

You will need to build at least three versions of your prototype idea. The first version will be tested for usefulness; the second will be used to test or survey the group you are helping; the third will be used for the presentation.

Use the following questions as a guideline for your prototype idea.

• What skills will you need?

• How will you produce a physical version of your prototype idea?

• How will you collect data on the effectiveness of your idea?

Test

Prototype 1

Use the scientific method to design an experiment that will test the effectiveness and strength of your first prototype. You will test the prototype more than once so that you can compare, but you will need to control your variables between tests.

What criteria will you use to determine the success of your solution?

Conduct your tests and record your results in an appropriate table.

Prototype 2

If your prototype will be used to reduce waste, then you will need to generate a survey to test whether the prototype is appropriate for the user. (How would they use it? Would it make their work easier or harder? How likely do you think they are to buy it, and why? How will the prototype affect normal behaviours? How will the production of the prototype affect the environment?)

Prototype 3

Use the information you have obtained from testing the first two versions to adapt your last prototype to be more effective and usable for the group you are helping. You may want to use the first two prototypes to demonstrate how the design has been improved over time.

Communicate

Present your solution to the class as though your peers are going to invest their money. How will you convince them it is a good idea?

In the presentation, you will need to:

• explain why we need to reduce the amount of waste going to the local landfill

• describe the key features of your design and how they will reduce the amount of waste in the landfill, using calculations to justify a quantitative estimate of that reduction

• construct a labelled diagram of your prototype in the natural environment

• describe how the ecosystem will be impacted by your prototype idea

• explain the principles that support your design – such as the circular economy

• use calculations to estimate the cost of implementing your design.

Online resources:

Student booklet
This helpful booklet will guide you step-by-step through the project.

What is the design cycle?
This video will help you to better understand each phase in the design cycle.

How to manage your project
This "how-to" video will help you to manage your time throughout the design cycle.

How to define a problem
This "how-to" video will help you to narrow your ideas down and define a specific problem.

Glossary

A

access
one of the principles of justice; access means that all people should be able to use the legal system to resolve their disputes and understand their legal rights

acropolis
a raised and fortified area within a Greek city-state on which public structures such as temples were built

agriculture
the science and practice of farming, including cultivating soil for growing crops, and raising animals to provide food, wool and other products

alliance
an agreement between countries or political parties to work together in order to achieve something that they all want

alluvial
made of sand and earth that is left by rivers or floods

alphanumeric grid
a coordinate system on a grid in which each cell is identified by a combination of a letter and number; using this system makes it easy to locate a specific position on a map

amenity
a feature that makes living in a place more attractive (e.g. public transport, good roads, a park)

amphitheatre
an ancient versions of today's football stadiums, where raised seating rose up around a flat central area where events or performances were held

amulet
a charm thought to keep away evil

ancestor
a person in your family who lived a long time ago

annotated visual display (avd)
a way of presenting the final results of a research project, incorporating images, graphs, notes and explanations in a poster-style format

aquaculture
the farming of seafood

aqueduct
a human-made channel for transporting water

aquifer
a layer of rock or soil in the ground that hold water or that water can pass through

archaeologist
a person who uncovers and interprets sources from the past, such as the remains of people, buildings and artefacts

argon dating
a method of determining the age of rocks

aristocrat
a person who (through wealth or birth) belongs to the upper class of a social group

artefact
an object that is made or changed by humans

artillery
large, heavy guns which are often moved on wheels

Australian Constitution
a document that describes the rules or laws that govern Australia; the Constitution defines the structure of government in Australia, and also the rights of citizens

autocrat
a person who rules with unlimited authority

available water
fresh water that is accessible for use by humans without treatment

B

bandit
a member of an armed group of thieves who attacks travellers

battering ram
an ancient military machine with a heavy horizontal beam for battering down walls, etc.

beyond reasonable doubt
the standard of proof in a criminal trial; the judge or jury must be satisfied that there is no "reasonable doubt" before finding an accused guilty

bias
a pre-set view about someone or something that is not altered by the presentation of facts and opinions to the contrary

bill
a proposed law that has not been passed by both houses of parliament

biodiverse
a term used to describe an ecosystem containing a large range of different types of plants and animals

boycotting
refusing to buy or use something or take part in an event as a way of protesting

BP (before present)
a dating method involving radiocarbon dating; used by archaeologists to indicate the number of years before the present, e.g. 10,000 years BP is 10,000 years before the present date

burden of proof
the responsibility for proving the case

C

canopic jar
a jar used in ancient Egypt to store body parts removed during the mummification process

cardinal points
the four main directions: north, south, east and west

caste system
a strict hierarchy (class system) used to organise society

catchment
an area where water is collected by the natural landscape

causes and consequences
the link between what causes an action and the outcome of that action; understanding that events that take place are linked and can have effects on people and places for many years to come

cavalry
soldiers on horseback

census
an official count or survey of something, especially a country's population

chronological order
the order in which events have taken place

chronology
a record of events in the order they took place

citizen
a person who, through birth (or by meeting certain conditions) is recognised as a legal member of a community

city dweller
a resident or inhabitant of a city

city-state
an independent settlement made up of an inner fortified city surrounded by houses and farmland

civil law
an area of law that defines the rights and responsibilities of individuals, groups and organisations, and regulates private disputes

civil war
a war between citizens of the same country

civilisation
the societies, cultures and ways of life in particular areas

climate
the average weather – particularly rainfall and temperature – experienced in a particular area over a period of time (usually 30 years)

coalition
two or more political parties that join together in an attempt to win an election and form government

colony
a country or area under the full or partial control of another country, and occupied by colonisers from that country

colonisation
when a country, kingdom or empire sets up an outpost in another land, taking control of that land from its people, often for social, economic or military reasons. Many Aboriginal peoples use the phrase "invasion" instead

colonists
those who take control of a country or territory for financial, political or military gain

Colosseum
a large amphitheatre built and used during the Roman Empire to stage gladiator fights and other forms of public entertainment

common law
law that is created by the courts when a judge makes a ruling about a case; also referred to as a precedent, because it sets a standard for all future judges to refer to when deciding a case

commonwealth
the federated states and territories of Australia

compass
an instrument with a magnetic needle that points to the north; used for navigation

compass bearing
a precise way of giving compass directions, such as 135° south-east

competitive advantage
when a business is able to outperform other businesses, e.g. by producing better or cheaper products

compulsory
when you have to do something; in this instance all Australian citizens over the age of 18 must vote

concubine
a woman who lives with a man, often in addition to his wife, but who is less important than the wife

condensation
the process that takes place when a gas cools and forms a liquid; for example, water vapour becoming water droplets

conscripted
when somebody is ordered by law to join the armed forces

constituents
people living in an area who have elected someone to act as a political representative

consul
a chief magistrate in ancient Rome

contestability
refers to explanations or interpretations of past events that are open to debate

continuity and change
the historical concept that explains that while some aspects of a society stay the same over time (continuity), others will develop and transform (change)

continuous resource
a resource, such as the Sun, that will never run out no matter how much it is used

contour lines
lines drawn on a map that connect points at the same height to show the height and steepness of land

corroboree
a ceremonial gathering practised by Aboriginal peoples

cosmos
the universe

Country
the physical environment that a particular Aboriginal and Torres Strait Islander peoples' group has a spiritual relationship with; this includes lands, waters and the sky. For Aboriginal and Torres Strait peoples, Country both owns and is owned by the people

crime
an act that breaks an existing law, is harmful to an individual or to society as a whole, and is punishable by law

culture
the customs and traditions that a community, society or civilisation develops over time that are passed down from generation to generation

customary law
traditional Aboriginal law connected to the Dreaming

Cyclades
an early Greek civilisation based on a group of rocky islands in the Aegean Sea from about 3000 to 1700 BCE

D

deference
behaviour that shows that you respect somebody or something

deity
a god or goddess

delta
a fan-shaped deposit of soil formed where a river enters an ocean or lake

democracy
a political system in which people hold the power, either directly or through representative democracy

demotic and hieratic
both simplified systems of writing based on hieroglyphs; demotic was faster and easier to write

dendrochronology
a method used to estimate the age of trees by counting the rings in the cross-section of a tree trunk

desalination
the process of removing salt from seawater

desert
an area that receives less than 250 mm of rain every year; can be hot or cold

desertification
the process by which fertile land becomes desert

developing country
less economically developed countries that have some difficulties supporting their own people

discharge
the volume of water flowing through a river

distance
the amount of space between two objects or places, generally measured by using the scale on a map

distribution
the way in which things are arranged on the Earth's surface; the pattern formed by the way objects or places are distributed across a space

diverse
including a range of people who have different racial, cultural, religious and socioeconomic backgrounds, lifestyles and life experiences

DNA
short for deoxyribonucleic acid; DNA is found in the cells of all living organisms and holds the genetic code of how a living thing develops

dowry
money and/or property that, in some societies, a wife or her family must pay to her husband when they get married

dugong
also known as a sea cow, the dugong is native to Queensland and was a rich source of protein for early peoples in Australia

dynasty
a period of rule by members of the same family who come to power one after the other

E

eastings
the gridlines that run vertically on a topographical map

economist
a professional in the field of economics and business

Elder
a key person who is the keeper of cultural and spiritual knowledge within Aboriginal communities

election
the process whereby the people are able to choose their representatives and members of parliament

electorate
a geographical area represented by members of parliament that has approximately the same number of votes

embankment
a wall or bank made of stone or earth made to keep water back

empathy
empathy is the ability to "walk in someone else's shoes" – to be aware of, and sensitive to, their feelings, thoughts and experiences

empire
a group of countries and/or areas, often with different languages and cultures, that are ruled by a central power or leader (known as an emperor or empress)

employees
people who work for a business

employers
businesses that employ workers to produce goods and services

enrolled
when a person is put on a roster or list by their name, location and date of birth

entrepreneur
a person who starts a business or independent organisation, takes risks and uses initiative to achieve success

environmental resource
anything human or natural that can be used by people to satisfy a need

equality
one of the principles of justice; equality means people should be treated alike and have an equal opportunity to present their case, without advantage or disadvantage

equator
an imaginary line that runs around the middle of the Earth separating the Northern Hemisphere from the Southern Hemisphere

erosion
the wearing away of the Earth's surface by forces such as river, wind and ice

ethnicity
the background, nationality or culture of a person, or group of people

evidence
a key concept in history; information provided by a source that supports a given interpretation, or provides support for possible answers to inquiry questions

evolution
the theory by which different living things have developed from early forms; evolution occurs very gradually over many thousands or even millions of years

export
the selling and transporting of goods to another country

F

factors of production
economic resources that are divided into four categories: land, labour, capital and enterprise

fairness
one of the principles of justice; fairness means having legal processes in place to make sure disputes are resolved in a consistent and unbiased way

fault lines
cracks in the Earth's crust; movement along these cracks causes earthquakes

federal
relating to the central government

federal parliamentary system
a political system where the responsibility to make or change laws is shared by one national (or federal) parliament and several state parliaments

feminism
a belief that women and men are equal

fertile
soils that have the nutrients and minerals to support the growing of plants

feudalism
a social system that existed in Europe and Asia in which people were given land and protection by a lord, and had to work and fight for him in return

fieldwork
geographical study that takes place outside the classroom at the site of inquiry

First Nations peoples
people who identify as Aboriginal peoples from mainland Australia and Tasmania and Torres Strait Islander peoples from the Torres Strait Islands, located between Australia and Papua New Guinea

floodplains
low-lying land next to a river or stream that is regularly flooded

fluorine dating
a scientific method used to estimate the age of objects by measuring the amount of fluorine they contain

fortification
a tower or wall built to defend a place against attack

G

game
meat-based food that has been hunted, such as kangaroo or emu

garrison
a group of soldiers living in a town to defend it

geneticist
a scientist who specialises in the study of genetics

genetics
the study of genes; our genes carry information that gets passed from one generation to the next

geographical inquiry
a process that geographers use to guide their investigations of places, people and issues

goods and services
goods are physical things (e.g. food and clothing), while services are things people do for us (e.g. cutting our hair)

government
the elected members of parliament who make decisions for a nation or state

H

Hades
the ancient Greek god of the Underworld; also the name of the Underworld itself – the place that the souls of people went when they died

hearth
the Latin term for "focus"; the hearth fire in the home was used for cooking food, heating water and as a gathering place for family

heir
a person who has the legal right to receive somebody's property, money or title when that person dies

hierarchy
a way of organising things (or people) from top down in order of importance or significance; ancient societies had strict hierarchies with a ruler at the top and peasants at the bottom

hieroglyphs
picture-like signs used in the original writing system of the ancient Egyptians

historical significance
the importance given to a particular historical event, person, development or issue

hominids
a group of primates that includes humans and their ancestors

hoplites
Greek warriors

hydraulic engineering
the planning and management of the flow, pressure and storage of water

hydroelectricity
a form of energy that harnesses the power of water in motion to generate electricity

hypothesis
a considered theory or statement, based on research and evidence, about something that has not been proven (hypotheses is the plural form)

I

Ice Age
a cooler period in the Earth's history when ice covered much of the northern hemisphere and sea levels were much lower than they are today

imperial
belonging or relating to an empire or the person or country that rules it

importing
bringing in a product or service to one country from another

infrastructure
the facilities and services necessary for any community, city or country to function (e.g. buildings, electricity, roads, airports and water supply)

interest
the cost of borrowing money from a bank; a person has to pay the bank interest on top of the original amount borrowed from the bank

interpretation
the assumption and conclusion historians make about an event after the fact; interpretations are formed by examining evidence

inundation
a term used for a flood; there was a yearly inundation (flooding) of the Nile River in Egypt

irrigation
the watering of crops in some way other than by precipitation

J

judge
an impartial adjudicator whose role is to ensure proper processes are followed in court to ensure justice is upheld

jury
a group of people who are required to decide on a "guilty" or "not guilty" verdict for a case

K

khepresh
a blue crown often worn by the Egyptian pharaoh when in battle; it was often studded with semi-precious stones to create a hard surface

kinship
an important part of Aboriginal and Torres Strait Islander cultures and values; kinship relates to relationships between people, and between people and the land

L

land bridge
an area of land that was exposed during the last Ice Age, allowing people and animals to cross areas that are now under water

latitude
imaginary lines running east–west around the Earth's surface, parallel to the Equator, used to work out location and direction

latrine
the early name for toilets

law of demand
when prices rise, the quantity demanded decreases and when prices fall, the quantity demanded increases

law of supply
the higher the price that a good or service can be sold, the higher the quantity that producers are willing to supply

law
a formal rule that governs the way people behave

leased
when a person(s) has a contract that allows them to use a property for a period of time, usually in exchange for rent (money), it is leased

legal system
a set of institutions (for example, courts and the police) and processes that make, implement and enforce the law

legalism
a belief that people need to be controlled by laws

legion
a military unit in the army of ancient Rome made up of 60 centuries (i.e. around 6,000 soldiers); soldiers in a legion were called legionaries

life expectancy
the average number of years a person can expect to live

linen
a natural fabric, made from the flax plant, that allows sweat to evaporate more easily

literacy
the ability to read and write

liveability
an assessment of what a place is like to live in, based on factors such as access to schools, safety and health care

lobbying
making requests to politicians or public groups to try to influence the government to change the law

longitude
imaginary lines running north–south around the Earth's surface, from the North Pole to the South Pole, used to work out location and direction

lore
Aboriginal and Torres Strait Islander peoples' traditional knowledge, customs, beliefs and spirituality passed down through oral stories from the Dreaming

M

magistrate
an official who hears and judges minor cases

map
a simplified plan of an area shown from directly above the area

market force
a change in supply and demand that affects how much people are willing to pay for or sell goods and services

mausoleum
a special building made to hold the dead body of an important person or the dead bodies of a family

megafauna
a number of large animal species that lived in Australia during ancient times

Mesopotamia
the fertile land lying between the Tigris and Euphrates Rivers (now covering a large part of Iraq); Mesopotamia is an ancient Greek word meaning "between rivers"

meteorologist
a scientist who studies the atmosphere to predict and understand the weather

metropolitan
a term used to describe a city and its surrounding suburbs

middens
Aboriginal and Torres Strait Islander occupation sites that contain the remains of meals such as shells and bones

migrant
a person who moves from one place to another

millennium
a period of 1,000 years

minimum wage
the lowest amount of money that a worker can be paid; it is usually an amount for each hour worked

Minoans
an early Greek civilisation on the island of Crete from about 2500 to 1600 BCE

monarchy
a system of government in which a single monarch (such as a king or queen) has power

monsoon
weather or climate produced by major wind systems that change direction seasonally; in northern Australia, the north-western and south-easterly winds that produce the rainy season between December and February

motif
a symbol or image, especially one that is repeated to form a pattern

mouth
the end of a river where it enters a lake or ocean

multi-faith
having a variety of religions

multicultural
having many different cultures, races and/or religions

mummification
the process of preserving a dead body by preventing its natural decay; in ancient Egypt a body was mummified by removing internal organs (except the heart) and drying out the remaining body tissue, and the mummy was then buried

mummy
a body of a human or an animal that has been mummified

Mycenaeans
an early Greek civilisation on the mainland from about 1600 to 1100 BCE

mythology
a series of beliefs that the ancient civilisations used to explain life and the natural world

N

natural disaster
a major hazardous event resulting from a natural process of the Earth (e.g. floods, volcanic eruptions, tsunamis)

need
a thing that we physically cannot survive without, including food, water and shelter

non-renewable resource
a resource that cannot be regenerated once it is used up (such as oil or coal)

northings
the gridlines that run horizontally on a topographical map

O

objective factor
a factor contributing to liveability that can be measured in numbers, such as the climate, cost of housing, number of schools or hospitals, level of crime and availability of public transport

ochre
a natural pigment found in the earth; often used in artwork created by Aboriginal and Torres Strait Islander peoples

official
a person who is in a position of authority in a large organisation

opportunity cost
what we miss out on when making a choice

Opposition
the second-largest political party, or coalition of parties, after the government party in the lower house of parliament, which works to scrutinise and oppose government policies

optically stimulated luminescence dating
a method used to date mineral grains by measuring how long it is since they were exposed to sunlight

oral history
historical information collected through interviews with or recordings of people telling their story or memory of the past

oral tradition
the passing on of law, culture, history and lore through speaking – storytelling, song and dance

Out of Africa theory
one model in the theory of how modern humans spread around the world, hypothesising that they developed in Africa before spreading outwards. This theory is rejected by many Aboriginal peoples because it differs from many Creation stories.

P

palaeontologist
a scientist who studies life in the geological past by examining the fossils of plants and animals

paleo-anthropologist
a scientist who studies human evolution by examining the archaeological record

paleo-archaeologist
a scientist who studies human evolution and the remains of hominids

palynology
the study of microscopic organic matter in soil

papyrus
a type of riverside plant; the ancient Egyptians made paper from the crushed pulp of the plant

parliament
an organisation that makes the laws in a country, often with a lower house to draft laws and an upper house to review the proposed laws

paterfamilias
a Latin word meaning "father of the family"; male head of a household in ancient Rome

patrician
an educated and usually influential male member of one of ancient Rome's aristocratic families; usually wealthy landowners

phalanx
a tight battle formation used by the ancient Greeks in which soldiers would pack together with their shields overlapping; spears in the front row were held forward, those in the rows behind were held higher

pharaoh
the leader of ancient Egypt who was believed to be a god; the pharaoh had absolute power and total control

Place
for Aboriginal peoples, special places that exist within Country, including places of ceremony and learning, and landmarks related to the ancestor spirits and creation. For Torres Strait Islander peoples, spaces (including lands, waters and sky) that individuals or groups occupy and regard as their own

plan view
a way of showing something as if the viewer is looking down on it from above; a bird's-eye view

plateau
an area of flat high ground

plebeians
a term used to describe the many poor and uneducated people in ancient Rome

pluralist society
a society where a number of people with different racial, cultural, religious and socio-economic backgrounds live together in a peaceful and united way

polygamy
marriage to more than one person at the same time

potential water
water that needs to be treated in some way to make it ready for use

praetor
an official who worked under the consuls; one praetor commanded the army while the other was a magistrate in the justice system

precedent
a previous case or example that is used as a guide for decision making when similar circumstances arise

price mechanism
the way price can affect the supply and demand of goods and services

primary data
data for a geographical inquiry that was collected in the field by a geographer conducting the inquiry (e.g. survey data, hand-drawn maps or photographs)

primary source
a source that existed or was made in the time being studied

primates
a group of mammals that includes monkeys, apes and humans

Prime Meridian
an imaginary line of longitude that runs from the North Pole to the South Pole; longitude is defined as 0° at the Prime Meridian

prime minister
the leader of the party that forms the government due to their party having a majority in the House of Representatives

product
an item (either a good or service) that is offered for sale

profit
the amount of money a business earns after taking away its expenses

provenance
a history of ownership or custody of an object that can be traced or verified by other sources

Q

quaestor
the lowest ranking elected official who usually looked after public spending and saving

qualitative data
any information that can be recorded in words; e.g. Uluru is very large

quantitative data
any information that can be recorded as numbers; e.g. Uluru is 3.6 kilometres long

R

radiocarbon dating
a method used to estimate the age of something that was once alive; the amount of radioactive carbon in the remains of the object is tested and gives a good indication of age because carbon breaks down over time at a known rate

reconciliation
in Australia, the process of strengthening the relationships between First Nations peoples and non-Indigenous peoples by acknowledging the past injustices, valuing First Nations cultures and building positive connections between all Australians

referendum
a national vote where all eligible citizens vote to change the wording of the Constitution

refugee
a person who moves to another country to avoid persecution or seek protection

regent
a person who acts as head of state if the true ruler is too young, too ill or missing

reincarnation
the process of being born again; to live life again in another body (human or animal)

relative scarcity
the problem that arises because our wants are unlimited, but the natural resources we use to fulfil them are limited

renewable resource
a resource that can regenerate or be regrown (such as trees) as opposed to one that cannot be regenerated (such as coal)

repatriation
the return of someone or something – in this context, the remains and artefacts of Aboriginal and Torres Strait Islander peoples – to their place of origin

representative democracy
a political system based on citizens voting to elect representatives

republic
a system of government in which the people and their elected representatives (such as a president, politicians or senators) have power

reputable
having a good reputation

resin
a sticky substance (similar to the sap from a tree) used in ancient Egypt to glue bandages together

resource
a natural or manufactured material that can be used to produce goods and services

responsible government
the requirement that the government must be accountable to the people for its actions and decisions, and that members of the government must carry out their duties in an honest manner or resign

revolt
a protest against authority, especially that of a government, often involving violence

Roman Senate
a group of officials (senators) with ruling power in ancient Rome

rule of law
the idea that everyone is equal before the law, regardless of their power or status in society

runoff
the flow of water on the ground when excess rainwater can no longer infiltrate the soil

rural–urban fringe
the areas on the edge of a city where the city ends and country or farming areas begin

S

sacred site
a place that has special importance or cultural significance to Aboriginal peoples

sanitation
measures designed to ensure good health in a community by preventing human contact with health hazards (such as sewage)

sarcophagus
the outer case (usually stone) of the nest of coffins containing the dead body of a person of importance

scar tree
a tree where bark has been removed to create items such as canoes, shelters, weapons or containers

scarab
a type of beetle considered sacred by the ancient Egyptians; the word "scarab" also refers to items of stone or metal jewellery in the form of the scarab beetle

seal
an engraved stamp

seasonal movement
movement based on needs and the availability of seasonal resources; in ancient Australia, this was determined by the seasons, climatic conditions and the availability of food, water and shelter

secondary data
data used for a geographical inquiry that was not collected by the geographer conducting the inquiry (e.g. textbooks, atlases and government websites)

secondary source
a source created after the time being studied

secular
when the church and state are separated so that religious institutions are not directly involved in how the government is run

self-cultivation
the development of one's mind or capacities through one's own efforts

separation of power
the principle in which the government's power is divided into three distinct branches: the legislative, the executive and the judicial

shrine
a place or building where respect and devotion is paid to a god or goddess; shrines often house religious objects known as relics

Silk Road
a trade route stretching west from China to the Mediterranean Sea; the main route by which silk was introduced to the West

silt
small sediment particles that travel downstream through rain, water flow and eroding riverbanks

sistra
metal musical instruments in ancient Egypt that rattled when shaken; the singular form is *sistrum*

slum
a settlement within a city where the inhabitants have inadequate housing and poor access to basic services

societies
communities of people living in a particular area who have a shared culture, customs and laws

songlines
travel routes across the Australian landscape that link important locations with ancient stories of Country, and often refer to landscape features, such as trees, waterholes and creatures

Sorry Business
an Aboriginal English expression, mostly adopted from mainland Aboriginal peoples, to refer to a period of cultural practices associated with death

species
a group of living things that look similar and can breed with each other

standardised
to bring together (into one order) activities that have similar features

statute law
law that is made by parliament; also called statute, legislation, Act of Parliament or statutory law

strategy
a plan for achieving goals

stratigraphy
a method used to determine the approximate (or likely) age of remains from the past based on the strata (or layer) of earth or rock in which they were found

stupa
a religious structure built to house Buddhist relics

subjective factor
a factor contributing to liveability that cannot be measured in numbers, such as personal likes and dislikes, connection to family and friends, and feelings of spirituality and belonging

surface water
any body of water above ground, including oceans, rivers, lakes, wetlands, reservoirs, streams and creeks

T

tenant
a person who pays rent in exchange for living in a house owned by someone else

the Dreaming
the belief system central to many Aboriginal cultures; the Dreaming also provides a moral code and guidance on interacting with Country; the Dreaming is not fixed in time – it is in the past, present and future

thermoluminescence dating
a method used to estimate the age of objects; it involves heating an object to help experts measure how much radiation the object can store and therefore judge its age

timeline
a sequence of related historical events shown in chronological (date) order

totem
an animal or object that has spiritual significance for Aboriginal and Torres Strait Islander peoples, including within Creation stories; different totems are given to children at birth and are considered guides and protectors

U

Underworld
the place where spirits of the dead were believed to reside according to ancient Greek beliefs

UNESCO
United Nations Educational, Scientific and Cultural Organization

V

value
a quality of character that a society or community regards highly

verification
the act of checking the something is true or accurate

W

wage
the amount of money that a worker is paid based on the work they do

want
a thing that we desire but can survive without

wastewater
water that has been used by people in domestic or industrial settings for washing, cleaning or flushing that contains waste products

water cycle
the continuous cycle by which water evaporates from lakes and oceans, condenses into clouds, falls on land as rain, finds its way into rivers (often after human use) and returns to the oceans

World Heritage List
a list compiled by UNESCO of natural or built sites, structures or features identified as being of international importance and worthy of special protection

Y

yam
a vegetable similar to a sweet potato

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World: Political

ARCTIC

Svalbard (Norway)

Kalaallit Nunaat (Greenland) (Denmark)

Jan Mayen (Norway)

NORWAY

Reykjavik · ICELAND
Faroe Islands (Denmark)

FINLAND
SWEDEN
Helsinki
Oslo
Stockholm · Tallinn · ESTONIA
RUSSIA

UNITED KINGDOM
DENMARK
Copenhagen · Berlin
Dublin · IRELAND
London
2 POLAND
GERMANY Warsaw
Paris
FRANCE
3
1 7
4 10 11 UKRAINE
12 13 14
15 16 ROMANIA
17 19 Bucharest
5 6 8 18 20 BULGARIA
9 21 Sofia
22
Moscow

Astana

KAZAKHSTAN

MONGOLIA
Ulan Bator

PORTUGAL
Lisbon · Madrid
SPAIN
Gibraltar (UK)
Madeira Islands (Portugal)
Canary Islands (Spain)

ITALY
Rome
Algiers · Tunis
23 GREECE
TUNISIA CYPRUS Athens
Tripoli Nicosia
MOROCCO
Rabat

Beijing

NORTH KOREA
Pyongyang
Seoul
SOUTH KOREA
JAPAN
Tokyo

Western Sahara
ALGERIA
LIBYA
EGYPT
Cairo

GEORGIA
Tbilisi AZERBAIJAN
Ankara ARMENIA Baku
TÜRKIYE Yerevan
SYRIA
24 Damascus
25 Amman IRAQ
JORDAN Baghdad
26
SAUDI
ARABIA 27
28
Riyadh 29
Muscat
OMAN

UZBEKISTAN Bishkek
Tashkent KYRGYZSTAN
TURKMENISTAN Dushanbe
Ashkhabad TAJIKISTAN
Tehran Kabul
IRAN AFGHANISTAN Islamabad
PAKISTAN
New Delhi NEPAL
Kathmandu BHUTAN
Thimphu
BANGLADESH
Dhaka

CHINA

Taipei
TAIWAN

MAURITANIA
Nouakchott MALI
30 NIGER
31 BURKINA CHAD
32 Bamako FASO Niamey
GUINEA Ouagadougou N'Djamena
33 NIGERIA
34 35 Abuja
CENTRAL
AFRICAN SOUTH
REPUBLIC SUDAN
CAMEROON Bangui Juba
38
Yaounde
CONGO UGANDA
39 GABON Kampala
Libreville DEMOCRATIC 40 KENYA
Brazzaville REPUBLIC 41 Nairobi
Kinshasa OF CONGO
TANZANIA
Dodoma
Luanda
ANGOLA
MALAWI

Khartoum
SUDAN
Asmara
ERITREA
Djibouti DJIBOUTI
Addis Ababa
ETHIOPIA
SOMALIA
Mogadishu
Sana'a
YEMEN

INDIA
Colombo
SRI LANKA
MALDIVES
Male

BURMA
Naypyidaw Hanoi
Rangoon LAOS
THAILAND Vientiane
Bangkok VIETNAM
Phnom Penh CAMBODIA

PHILIPPINES
Manila

NORTHERN
MARIANAS
Saipan
Guam (USA)

LIBERIA
Monrovia
Conakry

MAURITIUS
SEYCHELLES
Victoria
COMOROS
Moroni
MADAGASCAR
Antananarivo
MOZAMBIQUE
ZIMBABWE
ZAMBIA Lusaka
Harare
NAMIBIA BOTSWANA
Windhoek Gaborone Pretoria
Bloemfontein Maputo
SOUTH Mbabane ESWATINI
AFRICA Maseru
Cape Town LESOTHO

BRUNEI
MALAYSIA Bandar Seri Begawan
Kuala Lumpur
SINGAPORE Singapore
INDONESIA
Jakarta
Dili
TIMOR-LESTE

PALAU
Melekeok Palikir
FEDERATED STATES
OF MICRONESIA

PAPUA
NEW GUINEA
Port Moresby

INDIAN OCEAN
ATLANTIC OCEAN

Chagos Archipelago (UK)
Christmas Island (Australia)
Cocos Islands (Australia)

AUSTRALIA
Canberra
Lord Howe Island (Australia)

Ascension (UK)
St Helena (UK)
Tristan da Cunha (UK)
Port Louis
Reunion (France)

Amsterdam (France)
St Paul (France)

Heard Island (Australia)
Macquarie Island (Australia)

SOUTHERN
ANTARCTICA

| 1 **Luxembourg** – Luxembourg	18 **Montenegro** – Podgorica	34 **Ivory Coast** – Yamoussoukro
2 **Netherlands** – Amsterdam	19 **Serbia** – Belgrade	35 **Ghana** – Accra
3 **Belgium** – Brussels	20 **Kosovo** – Pristina	36 **Togo** – Lome
4 **Switzerland** – Bern	21 **North Macedonia*** – Skopje	37 **Benin** – Porto-Novo
5 **Andorra** – Andorra-la- Vella	22 **Albania** – Tirane	38 **Equatorial Guinea** – Malabo
6 **Monaco** – Monaco	23 **Malta** – Valletta	39 **Sao Tome and Principe** – Sao Tome
7 **Liechtenstein** – Vaduz	24 **Lebanon** – Beirut	40 **Rwanda** – Kigali
8 **San Marino** – San Marino	25 **Israel** – Jerusalem	41 **Burundi** – Bujumbura
9 **Vatican City**	26 **Kuwait** – Kuwait	42 **Belize** – Belmopan
10 **Czechia** – Prague	27 **Bahrain** – Manama	43 **Jamaica** – Kingston
11 **Slovakia** – Bratislava	28 **Qatar** – Doha	44 **St Kitts and Nevis** – Basseterre
12 **Austria** – Vienna	29 **United Arab Emirates** – Abu Dhabi	45 **Antigua and Barbuda** – St John's
13 **Hungary** – Budapest	30 **Senegal** – Dakar	46 **Dominica** – Roseau
14 **Moldova** – Kishinev	31 **Gambia** – Banjul	47 **St Lucia** – Castries
15 **Slovenia** – Ljubljana	32 **Guinea Bissau** – Bissau	48 **Barbados** – Bridgetown
16 **Croatia** – Zagreb	33 **Sierra Leone** – Freetown	49 **St Vincent and the Grenadines** – Kingstown
17 **Bosnia and Herzegovina** – Sarajevo		50 **Grenada** – St George's

Former Yugoslav Republic of Macedonia

OCEAN

OCEAN

Kalaallit Nunaat
(Greenland)
(Denmark)

Arctic Circle

Alaska
(USA)

Reykjavik • **ICELAND**

60°N

CANADA

ATLANTIC

Ottawa

St Pierre and Miquelon
(France)

OCEAN

Azores
(Portugal)

Washington DC

30°N

UNITED STATES OF AMERICA

Bermuda (UK) •

PACIFIC

BAHAMAS
• Nassau

Tropic of Cancer

Havana

Hawaii
(USA)

Socorro Island
(Mexico)

MEXICO
Mexico City •

CUBA

HAITI
Port-au-Prince

DOMINICAN REPUBLIC
Santo Domingo

**CAPE
VERDE**

Clarion Island
(Mexico)

42

43

44

45

Praia •

GUATEMALA
Guatemala City
San Salvador •
EL SALVADOR

HONDURAS
Tegucigalpa

46
47
49 48
50

OCEAN

Clipperton
(France)

Managua •
NICARAGUA

San Jose •
COSTA RICA

Caracas •

Panama City •

TRINIDAD AND TOBAGO
Port of Spain

**MARSHALL
ISLANDS**
• Majuro

PANAMA

VENEZUELA

GUYANA
Georgetown •

SURINAME
Paramaribo •
French Guiana (France)

• Bogota
COLOMBIA

NAURU
• Yaren
• South Tarawa

Galapagos Islands
(Ecuador)

Quito •
ECUADOR

Equator

KIRIBATI

0°

**SOLOMON
ISLANDS**
• Honiara

Funafuti •
TUVALU

PERU
Lima •

BRAZIL

SAMOA
Apia •

American Samoa
(USA)

French
Polynesia
(France)

• Brasilia

VANUATU
Port Vila •

FIJI
Suva •

NIUE
• Alofi

**COOK
ISLANDS**

La Paz •
BOLIVIA
• Sucre

New Caledonia
(France)

TONGA
• Nukualofa

• Avarua

PARAGUAY

Tropic of Capricorn

Pitcairn Island
(UK)

Asuncion •

Norfolk Island
(Australia)

Rapa Nui
(Easter Island)
(Chile)

San Felix
(Chile)

CHILE

30°S

Chatham Islands
(New Zealand)

Juan Fernandez Islands
(Chile)

Santiago •

Buenos Aires •
ARGENTINA

URUGUAY
• Montevideo

NEW ZEALAND

Wellington •

Legend

Country border

Country capital city

Dependency

Falkland Islands (UK) •

Auckland Islands
(New Zealand)

Azores
(Portugal)

South Georgia (UK) •

0

1,000

2,000

3,000 km

60°S

OCEAN

N

SCALE 1:77,000,000 at 40°N and S
1 centimetre on the map measures
770 kilometres on the ground.
Modified Times Projection

ANTARCTICA

Antarctic Circle

180°

150°W

120°W

90°W

60°W

30°W

0°

Wardandi Boodja is a steel bust sculpture that watches over Koombana Bay, on Wardandi Country in Bunbury, Western Australia. Standing at over 5 metres high and 6 metres wide, the work represents and pays respect to all Wardandi Bibbulmun peoples.

Other titles in this series

OXFORD
UNIVERSITY PRESS
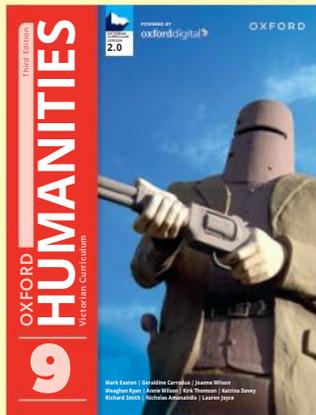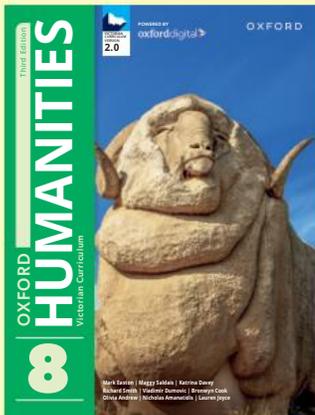
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