

INVESTIGATING HUMANITIES

FOR THE VICTORIAN CURRICULUM

7

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pages

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Cambridge University Press & Assessment © De Fanti et al, 2025
ISBN 978-1-109-62408-4

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First published 2025

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

Cover designed by Denise Lane (Sardine)

Cover illustration by Adrienne Shelford

Text designed by Loupe Studio

Typeset by QBS Learning

Printed in Singapore by Markono Print Media Pte Ltd

A catalogue record for this book is available from the National Library of Australia at www.nla.gov.au

ISBN 978-1-009-62408-4

Additional resources for this publication at www.cambridge.edu.au/GO

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How to use this resource

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TO COME

Introduction: What do we need to know about and do when learning about First Nations Peoples?

Sharon Davis and Julie Bover

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Starting your learning journey

Humanities is about exploring the connections between people, places, cultures and histories. For Australians, it's a chance to engage with the stories and cultures that shape our nation's identity. By learning from these perspectives, we expand our understanding of the humanities, think critically, appreciate diverse experiences and work towards a more inclusive future.

Understanding Aboriginal and Torres Strait Islander perspectives is essential

to truly knowing Australia. For a long time, First Nations Peoples' stories and experiences were left out of the history taught in schools, creating an incomplete view of Australia's past. By starting with this introduction, we can begin to fill in the missing parts of history and make sure the voices of First Nations Peoples are heard. This helps all Australian students understand who we are as Australians.

cultural safety ensuring people feel secure, respected and supported in their cultural identity. This concept can only be validated by individuals from the culture experiencing it.

What is cultural safety?

Cultural safety ensures that people feel respected, valued and supported in their identity, culture and history.

It creates environments where individuals can confidently engage without fear of judgement, exclusion or discrimination.

This is especially important when engaging with Aboriginal and Torres Strait Islander people, whose cultures represent the world's oldest continuing traditions.

Cultural safety involves addressing power imbalances, systemic injustices and racism to create inclusive spaces where everyone feels they belong. It goes beyond recognising diversity by reflecting on and challenging behaviours, practices and biases that may contribute

to inequality. Importantly, cultural safety can only be confirmed by those from marginalised groups who experience the space or interaction.

As June Oscar AO, former Aboriginal and Torres Strait Islander Social Justice Commissioner, explains: 'Cultural safety is about creating environments where Aboriginal and Torres Strait Islander Peoples feel safe and secure in their identity, culture and community.'

Why do we need cultural safety? _____

Since 1788, the arrival of the British and the doctrine of terra nullius led to dispossession for Aboriginal and Torres Strait Islander communities. Policies that separated families, restricted access to lands, and silenced voices have caused deep and lasting harm. Racism – whether interpersonal, institutional or **systemic** – continues to impact many aspects of life today. Cultural safety is a response to

these challenges, offering a way forward by creating spaces that are inclusive and respectful.

Wherever people are in Australia, they are on Aboriginal and/or Torres Strait Islander land. Acknowledging this is a starting point for understanding the connections between histories, cultures and Country.

systemic racism
discrimination
embedded in the
rules, policies and
practices of society.

What does cultural safety look like in the classroom? _____

Creating cultural safety in the classroom means making it a place where all students, especially those from Aboriginal and Torres Strait Islander communities, feel respected, valued and able to express their identity without fear of judgement or discrimination. Here are some actions you, as students, can take to help foster cultural safety in your learning environment:

For example, ask, 'Would you be open to sharing more about that?' rather than assuming or making uninformed statements.

1 Be an active listener

- **Listen without interrupting:** Pay close attention when Aboriginal and Torres Strait Islander People share their stories and perspectives.
- **Ask questions thoughtfully:** If you are curious about something, frame your questions respectfully.

2 Challenge racism and stereotypes

- **Speak up:** If you hear hurtful or disrespectful comments about someone's culture or background, respectfully challenge them. For example, say, 'That comment could be hurtful – let's think about how we can rephrase it.'
- **Think critically about language:** Use respectful and accurate terms when discussing Aboriginal and Torres Strait Islander histories and cultures. Avoid stereotypes or deficit-focused language.

3 Reflect on your actions and privilege

- **Practice critical self-reflection:** Think about your own assumptions and biases. For example, ask yourself:
 - Do I give everyone an equal chance to contribute in group discussions?
 - Have I unintentionally dismissed someone's perspective because it was different from my own?

4 Respect and learn about cultures

- **Acknowledge Country:** Begin your day or class by showing respect for the Traditional Owners of the land. You can deliver an Acknowledgement of Country or support others who do.
- **Participate respectfully:** Explore the significance of important dates like NAIDOC Week with an open mind and willingness to learn.
- **Celebrate:** Recognise and share the achievements of Aboriginal and Torres Strait Islander People across different fields, from science to art.

Activity: Reflect and respond

- 1 Reflect on the phrase, 'Wherever you are in Australia, you're on Aboriginal and/or Torres Strait Islander land'. What does this mean to you?
- 2 Why is cultural safety important in schools and communities?
- 3 Think about a time when you saw an example of cultural safety. What made it successful, and what could have been done better?

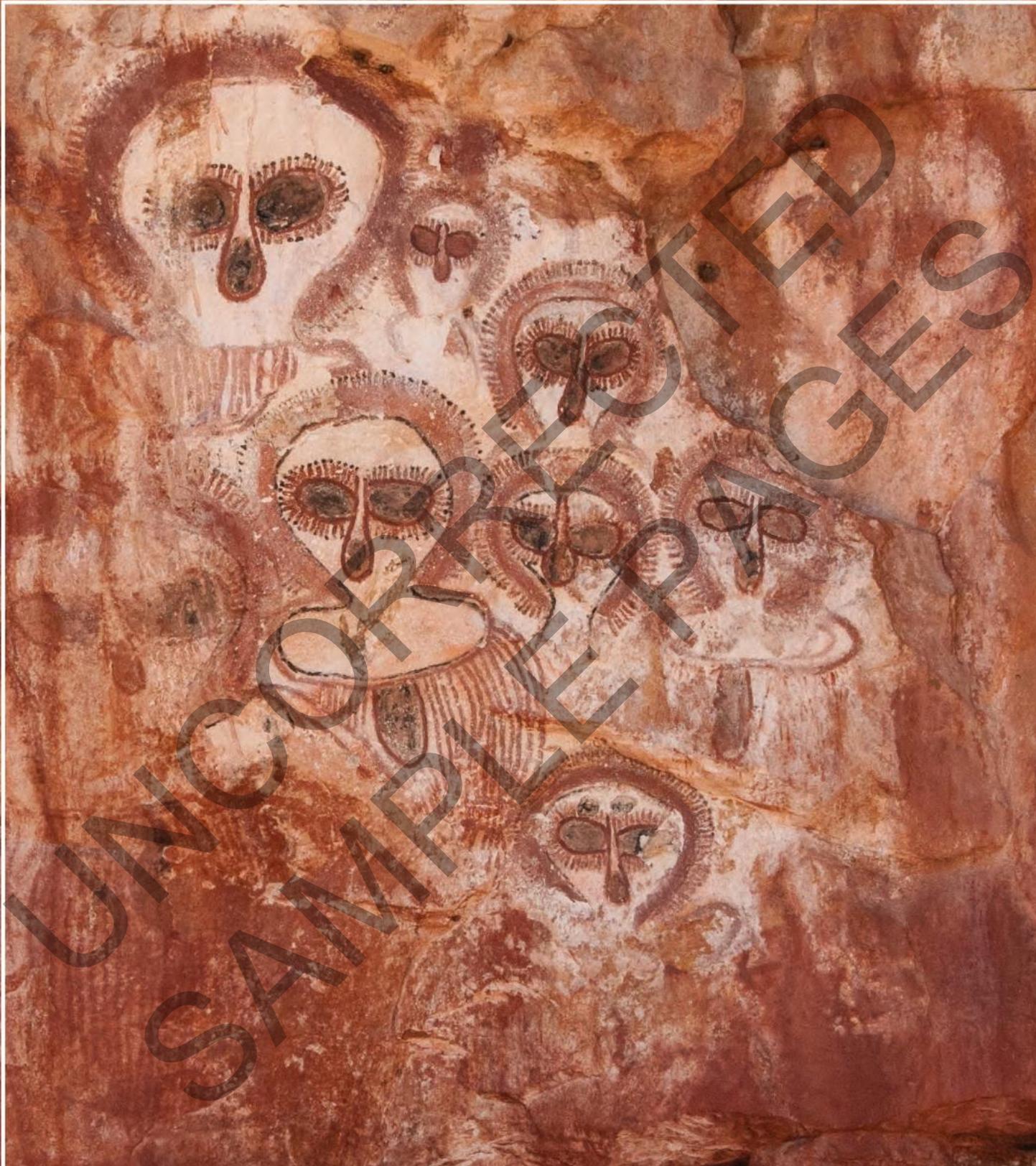


Image: Rock painting of Wandjina by the Worrora People, located at Wunnumurra Gorge, Barnett River, Kimberley, Western Australia. This site is part of a continuous cultural and spiritual tradition that spans thousands of years, with the painting estimated to be over 4000 years old. The Wandjina are ancestral beings and rainmakers central to the Law and cultural responsibilities of Worrora, Ngarinyin and Wunambal Peoples. The site is sacred and reflects an ongoing relationship between people, Country and ancestral beings.

Part 1

History



FPO

Watch the video for an introduction to History in Year 7 and the historical skills and concepts you will be working with.

CHAPTER 1

Overview: The ancient world – How did civilisation begin?



LESSON	TITLE
1.1	Setting the scene: What was ‘the ancient world’?
1.2	How did early humans evolve, migrate and establish ancient societies?
1.3	How did people come to the Australian continent?
1.4	What were the key features of ancient societies?
1.5	How do historians and archaeologists investigate ancient societies?
1.6	End of topic review: How did civilisation begin?

↓ Image: A representation of a Neandertal man

Warning: Aboriginal and Torres Strait Islander Peoples should be aware that this chapter may contain images, names and links to footage of people who have passed.

Setting the scene: What was 'the ancient world'?



Learning intention

In this lesson, you will learn about the story of the earliest humanity and explore some of the common features across these societies.

The ancient world

The story of humanity begins over 60 000 years ago, when some archaeologists believe we began to move out of Africa and cover the globe. This theory of population movement is known as the Out-of-Africa Theory. Early humans gradually spread from Africa across almost all other continents, including Asia and Europe. This led to the establishment of a range of diverse cultures and societies.

Around 3100 BCE, ancient Egypt emerged as a powerful **civilisation** along the Nile River. The Egyptians developed a system of writing called hieroglyphics and built iconic structures like the pyramids. Similarly, the Indus Valley civilisation in India, around 2500 BCE, became known for its advanced urban planning and early forms of handwriting.

civilisation
a large, organised society with complex structures, including cities, governments, social classes and cultural developments

↓ Source 1.1.1 Fragment of a wall with hieroglyphs from the tomb of Seti I (reign c.1294 or 1290–1279 BCE) from ancient Egypt. *How might writing have helped civilisations to develop?*



Timeline of the ancient world



↑ Source 1.1.2 Farming scene from an ancient Egyptian tomb

Key features of ancient societies

Across much of the world, the Neolithic period (later Stone Age) saw the development of more settled societies. As people learned how to domesticate animals and plants, hunter-gatherer tribes became larger communities, which then developed into cities.

Farming

Different forms of farming evolved, depending on the types of animals and crops suited to the area. Different agricultural techniques also developed.



Trade

Ancient societies developed Stone Age barter systems between different groups into networks of trade across much of the world. From 130 BCE, China, India, Persia and Europe established the trade routes known as the Silk Road.



40 000 BCE

Construction of the Brewarrina fish traps, Australia

10 000 BCE

Neolithic period begins (New Stone Age)

100 000 BCE

Homo sapiens have begun to migrate from Africa

6500–4000 BCE

Beginning of agriculture in Europe and Egypt

4000–2500 BCE

Farming and villages in western India

2 000 000 BCE

Palaeolithic period begins (Old Stone Age)

63 000 BCE

Humans living at Madjedbebe, Australia

15 000–10 000 BCE

Painting of the Lascaux caves in France

5000 BCE

Farmers in the Andes in South America begin to domesticate potatoes

Social classes

The wealth created by agriculture and trade led to specialised jobs such as craftspeople, artists, scribes and priests, as well as leaders. Most ancient societies were hierarchical, with their leaders at the top and warriors, priests, scholars and peasants below them.



Rule of law

Written laws, such as the Code of Ur-Nammu (c.2100–2050 BCE) and the Code of Hammurabi (c.1700 BCE), developed in many ancient societies. In other societies, laws were remembered and taught via song, story and art.



8000–4000 BCE

Development of agriculture and silk weaving in China

Religion

From the Dreaming Stories and spiritual beliefs of First Nations people in Australia to the gods and goddesses of ancient Egypt and Greece, spiritually detailed systems of belief developed in all ancient societies. These beliefs determined laws, social organisation, marriage and rituals associated with death, fertility and crop production.



Oral transmission

Oral transmission refers to the passing down of knowledge, history and cultural traditions through spoken word. For First Nations Peoples, this includes storytelling, song, dance and ceremony. Oral traditions have been used for thousands of years to share laws, kinship structures, and deep understandings of Country. These living knowledge systems continue today, ensuring that cultural knowledge is preserved and passed to future generations.



Evidence for the development of ancient societies

Historians rely upon archaeologists and scientists to find and analyse sources for evidence about the development of ancient societies across the world. Because many everyday objects – including clothing, timber and paper – decay over time, the types of artefacts used by historians to learn about ancient societies are usually made of stone, pottery, or metal.



↑ Source 1.1.3 A terracotta warrior from the tomb of Chinese emperor Qin Shi Huangdi

Art



Artworks, including statues, architecture and paintings on rock, papyrus and paper, can provide evidence of daily life, religious beliefs and the environments and politics of ancient societies.

Iconography



Iconography refers to the symbols used to represent the beliefs and values of a society. Studying these symbols, such as the scarab beetle in Egyptian artefacts or the yin-yang from ancient China, provides historians with evidence about the values of ancient societies.

Activity: Historical overview

- 1 **Identify** two examples of evidence supporting the idea that humans have lived in Australia for at least 40 000 years.
- 2 What challenges might historians face when analysing ancient written sources as evidence about the past?
- 3 Why might the rulers of ancient societies such as Sumer and Babylon have written down their laws and displayed them in public spaces?

Writing



Writing was first developed in ancient Sumer (cuneiform script) and Egypt (hieroglyphs), emerging from 3400 to 3200 BCE. Writing developed in India around 2600 BCE and in China between 1500 and 1000 BCE. Translating ancient texts and inscriptions can provide important evidence for historians.

2700–2200 BCE

Pyramids built in Egypt

800–700 BCE

Rise of the Greek *poleis* (city-states)

58–50 BCE

Roman conquest of Gaul, led by Julius Caesar

166 CE

Roman merchants reach China by sea

3180–1500 BCE

Neolithic settlements (e.g. Skara Brae) and megaliths (e.g. Stonehenge) built across Europe

79 CE

The Roman cities of Pompeii and Herculaneum are destroyed by a volcanic eruption

Pottery



Ancient pottery has been found across Africa, Europe, Central and South America, and Asia. Pottery enabled humans to store or transport food, allowing them to remain in one place rather than following food sources. Ancient pottery gives evidence of the food eaten by people in ancient societies, as well as the goods traded between different settlements.

Tools



The earliest human tools were made from stone or animal bone. Metal tools were used from around 4000 BCE, made first from copper, then bronze and finally iron from around 1500 BCE. From tools, historians can learn about farming, hunting, housing and clothing, as well as weapons used by ancient peoples across the world.

FPO

↑ Source 1.1.4

Evidence of ancient societies

c. before a date stands for 'circa' – meaning an approximation or guess by historians.

BCE stands for 'Before the Common Era' (sometimes, 'Before the Current Era'), while CE stands for 'Common Era' (sometimes, 'Current Era'). The calendar commonly used around the world, known as the 'Gregorian calendar', traditionally used the term 'BC' instead of BCE and 'AD' instead of CE. BC stands for 'Before Christ' and AD stands for 'Anno Domini', which is Latin for 'the year of our lord' (meaning from the time Jesus was born).

The first known Chinese dynasty, the Xia, is believed to have started around 2070 BCE. It established early Chinese culture and writing systems. Ancient Greece began to rise around 800 BCE. City-states like Athens and Sparta were known for their contributions to philosophy, democracy and the arts. Rome's development started around 753 BCE. Initially, it was a small city-state, and later grew into a vast empire by 27 BCE. It influenced law, engineering and governance in ways that are still felt today.

The oldest known Aboriginal rock art in Australia significantly predates ancient

civilisations like Egypt and China's Xia dynasty. Some Aboriginal rock art has been dated to at least 28 000 years ago, with estimates suggesting some pieces could be up to 40 000 years old or more.

This means that the oldest Aboriginal rock art is tens of thousands of years older than these ancient civilisations.

By 600 CE, these ancient cultures had experienced significant changes. Empires rose and fell, power shifted and traditions blended. These civilisations laid the foundations for the development of modern societies through their innovations, ideas and cultural practices.

Ancient societies: What they had in common

The ancient societies of Egypt, China, India, Rome and Greece were far apart and had distinct cultures.

But, they shared some important similarities that helped them grow and thrive.

↓ Source 1.1.5 For over three thousand years, families have lived on the banks of the Nile River, against the backdrop of ancient Egyptian monuments.



Water

One of the most crucial things they all had in common was access to water. Each of these societies developed around major rivers: Egypt by the Nile River, China by the Yellow and Yangtze Rivers, India by the Indus River, and Rome by the Tiber River. These rivers provided **fertile** soil for farming, fresh water for drinking and cooking, and routes for trade and travel. This made it possible for large groups of people to live together in cities.

Writing

Another common feature among these civilisations was the development of writing. Writing allowed people to keep records, create laws and share knowledge. For example, the Egyptians used hieroglyphics, the Chinese developed characters that would become Chinese script, ancient India used early forms of Brahmi script, the Greeks used the Greek alphabet, and the Romans used the Latin alphabet. Writing was essential for communication, keeping track of trade, and passing down stories and traditions. This allowed beliefs and rituals to develop.

Long before those civilisations, Aboriginal and Torres Strait Islander Peoples in Australia were using rock art,

symbols (such as message sticks) and oral narratives to support and communicate their communal beliefs and rituals. These methods allowed them to share important knowledge, laws and traditions across language groups and through generations. Even without a written script, their rock paintings and spoken stories conveyed meaning effectively. This ensured the preservation of their diverse cultures throughout millennia.

Architecture

Each of these ancient cultures also made contributions to art, architecture and technology.

Egypt is famous for its pyramids and China for the Great Wall. India is famous for its well-planned cities and Greece for its beautiful temples, Rome is well-known for its advanced roads and aqueducts.

By sharing these prominent features, these ancient societies left a lasting impact on the world.



↑ Source 1.1.6 Inscription on the Kang Hou *gui* (late 11th century BCE). *How is this writing different from the hieroglyphics in Source 1.1.1?*

fertile producing or capable of producing substantial amounts of crops

Lesson 1.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

1.1 Review questions

- 1 **Explain** how rivers would have impacted the development of civilisations.
- 2 **Identify** three ancient civilisations which used writing and give an example of how this changed these lives of everyday people.
- 3 **List** the societies that are mentioned in this lesson in chronological order (from oldest to most recent), based on when each society began.
- 4 Why was the development of writing important?
- 5 **Explain** how some of the ways in which the discoveries and buildings of this era still influence us today.

How did early humans evolve, migrate and establish ancient societies?



Learning intention

Last lesson, you were introduced to some of the ancient world's societies and their common features. In this lesson, you will learn how and when early humans migrated around the world.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** How would you describe the scene in Source 1.2.1? How are these people living?
- 2 **Think:** What significant changes can we see in how people lived then compared to now?
- 3 **Wonder:** How did these changes happen?

↓ Source 1.2.1 Prehistory, Neolithic Japan. Late Jomon period settlement

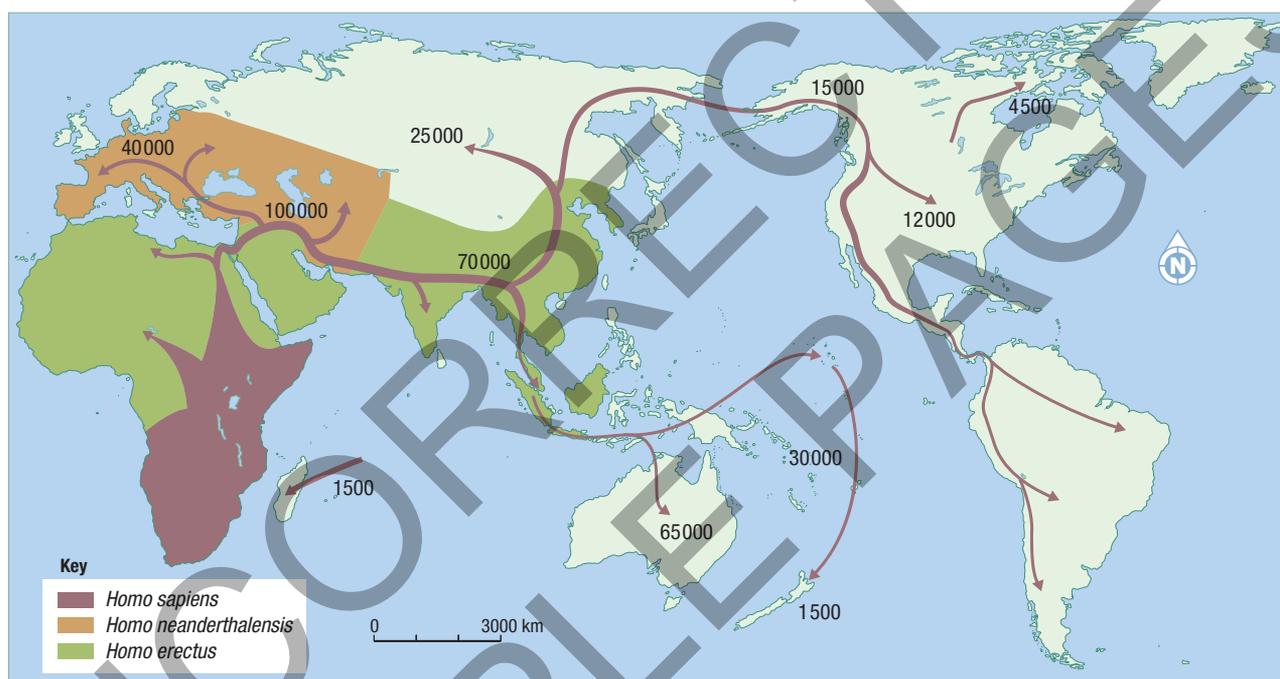


'Out-of-Africa' migration theory

The move out of Africa, often referred to as the 'Out-of-Africa' **migration** theory, is a key event in human prehistory. Our understanding of this migration and when it took place is always evolving as new archaeological evidence is uncovered. Note that while this is a widely accepted idea, there are also other theories about human migration.

The most current evidence suggests that waves of migration within the last 60 000 years. They included journeys eastward across southern Asia and then into western Europe. From there, humans gradually expanded into places now known as the Middle East, Europe, Asia and eventually into Australia and the Americas. It is believed that these early humans were driven by environmental changes and the need for resources.

migration
the process of a person or people travelling to a new place or country



↑ Source 1.2.2 Successive dispersals of *Homo erectus* greatest extent (green), *Homo neanderthalensis* greatest extent (ochre) and *Homo sapiens* (purple). These early peoples are our ancestors.

As they moved into new regions, humans encountered different climates, landscapes and challenges. This migration led to the development of diverse cultures and adaptations to various environments. This is significant because it set the stage

for the global spreading of humans and the eventual rise of civilisations. This is particularly true after the First Agricultural Revolution (described on the next page), when humans began to settle and develop complex societies all over the world.

Concepts and skills builder 1.2



Exploring continuity and change through migration and communication

Part 1: Mapping human migration

- 1 Draw a simple world map: On a blank sheet of paper, sketch a basic outline of the world's continents.
- 2 Highlight Africa: Place a prominent dot or circle on Africa – this is considered the starting point for early human migration according to the Out-of-Africa theory.

- 3 Map migration paths: Use arrows to draw possible paths from Africa to other continents like Asia, Europe and Australia. This illustrates how early humans may have spread across the world.
- 4 Write a brief description: In a few sentences, **describe** the movement of early humans based on the Out-of-Africa theory. *Note that while this is a widely accepted idea, there are also other theories about human migration.*

Part 2: Creating a timeline of communication

- 1 Draw a timeline: On a new sheet of paper, draw a horizontal line across the page to represent time, starting from 40 000 years ago to the present day.
- 2 Mark key events:
 - a Aboriginal rock art (~40 000 years ago): Place a point on the timeline to represent the creation of some of the oldest known rock art by Aboriginal people.
 - b Early writing systems (~5000 years ago): Mark the development of early writing systems such as Egyptian hieroglyphs.
 - c Ancient oral narratives: Note that throughout history, many cultures – including Aboriginal cultures – used oral storytelling to pass down knowledge, laws and traditions.
- 3 Add notes: For each event, write a brief note explaining its significance in supporting and communicating communal beliefs and rituals.

Part 3: Reflect on continuity and change

Write a short paragraph discussing how these different forms of communication show continuity (the ongoing need to share and preserve information) and change (the development of new methods like writing)

Historical concepts and skills: continuity and change, chronology, communication

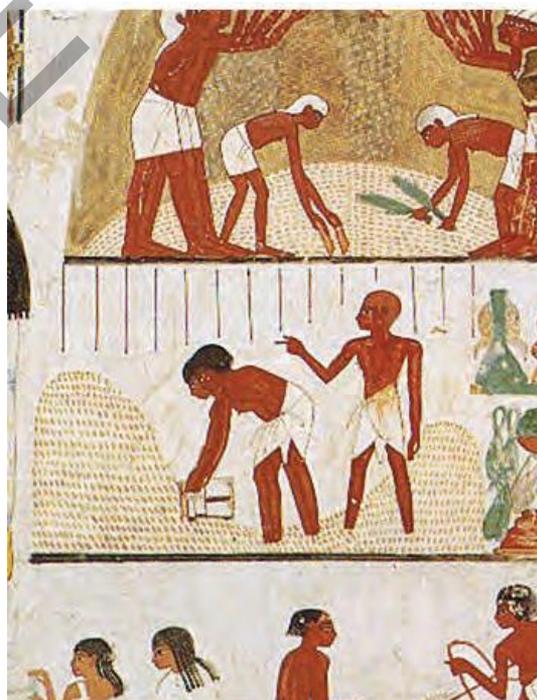
First Agricultural Revolution

Neolithic a period around 10 000 years ago when many/most human societies transitioned from a lifestyle of hunting and gathering to one of agriculture and settlement

domesticate the process of taming wild animals or cultivating plants for human use

The First Agricultural Revolution, also known as the **Neolithic** Revolution, marks one of the most significant turning points in human history. Before this period, people were primarily hunter-gatherers, moving from place to place to find food. They relied on wild plants and animals for their survival. This meant their lives were often unpredictable, depending on the weather and the availability of food.

Around 10 000 years ago, in various parts of the world, including Australia, people began to discover that they could grow their food. Instead of gathering wild grains, they started to plant seeds and grow crops. This process of farming allowed them to produce a steady supply of food. Along with crop farming, people also began to **domesticate** animals like goats, sheep and cattle, using them for meat, milk and other resources.



↑ Source 1.2.3 Agricultural scenes of threshing, a grain store, harvesting with sickles, digging, tree-cutting and ploughing from Ancient Egypt. *Explain how the development of agriculture impacted the lives of everyday people.*

Amazing but true...

In some regions, Aboriginal communities harvested native grains like millet and spinifex. They used grinding stones – some dated over 30 000 years old – to process the grains into flour for making bread.

The shift from hunting and gathering to farming had huge effects on human societies. For the first time, people could settle in one place instead of constantly moving around in search of food. This led to the development of permanent villages and eventually larger communities and cities. With a more reliable food source, populations grew, and people had more time to focus on other activities, such as

building homes, crafting tools and creating art.

The First Agricultural Revolution laid the foundation for the birth of civilisations. It allowed people to form complex societies with unique cultures. Understanding this revolution helps us see how human resourcefulness transformed the way we live, leading to the modern world we know today.

Sahul: A mega-continent

Sahul was a prehistoric landmass that connected present-day mainland Australia, Tasmania and New Guinea during periods of lower sea levels, particularly during the last Ice Age. (See Source 1.3.2 in the next section.) This **mega-continent** was formed when the shallow seas between these landmasses pulled back. This exposed land bridges that allowed early humans and animals to migrate across to what are now separate islands.

The inhabitants of Sahul were likely among the earliest people to leave Africa, according to the 'Out-of-Africa' migration theory, eventually reaching this vast

and diverse environment. The unique **ecosystems** of Sahul supported a variety of megafauna, including giant kangaroos, large marsupial lions and enormous flightless birds. However, many of these species became extinct, due to human hunting or climate changes.

People in Sahul adapted to various environments, from deserts to rainforests. Sahul split into three pieces – the Australian mainland, Tasmania and New Guinea – 10 000 years ago. The people in each area were isolated, which preserved their culture and languages.

mega-continent
several large land masses thought to have divided in the past to form the present continents

ecosystem
a geographic area where plants, animals and other living things work together

Lesson 1.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

1.2 Review questions

- 1 **Describe** the 'Out-of-Africa' theory.
- 2 Why did farming allow people to live in one place?
- 3 What impact did the First Agricultural Revolution have on the growth of human populations and the development of early cities?
- 4 What animals did early humans first domesticate? **Explain** why you think they picked these ones.

How did people come to the Australian continent?



Learning intention

Last lesson, you learnt about the early migrations of humans and the Out-of-Africa theory. In this lesson you will learn about how scientists believe the earliest Australians came to the continent.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

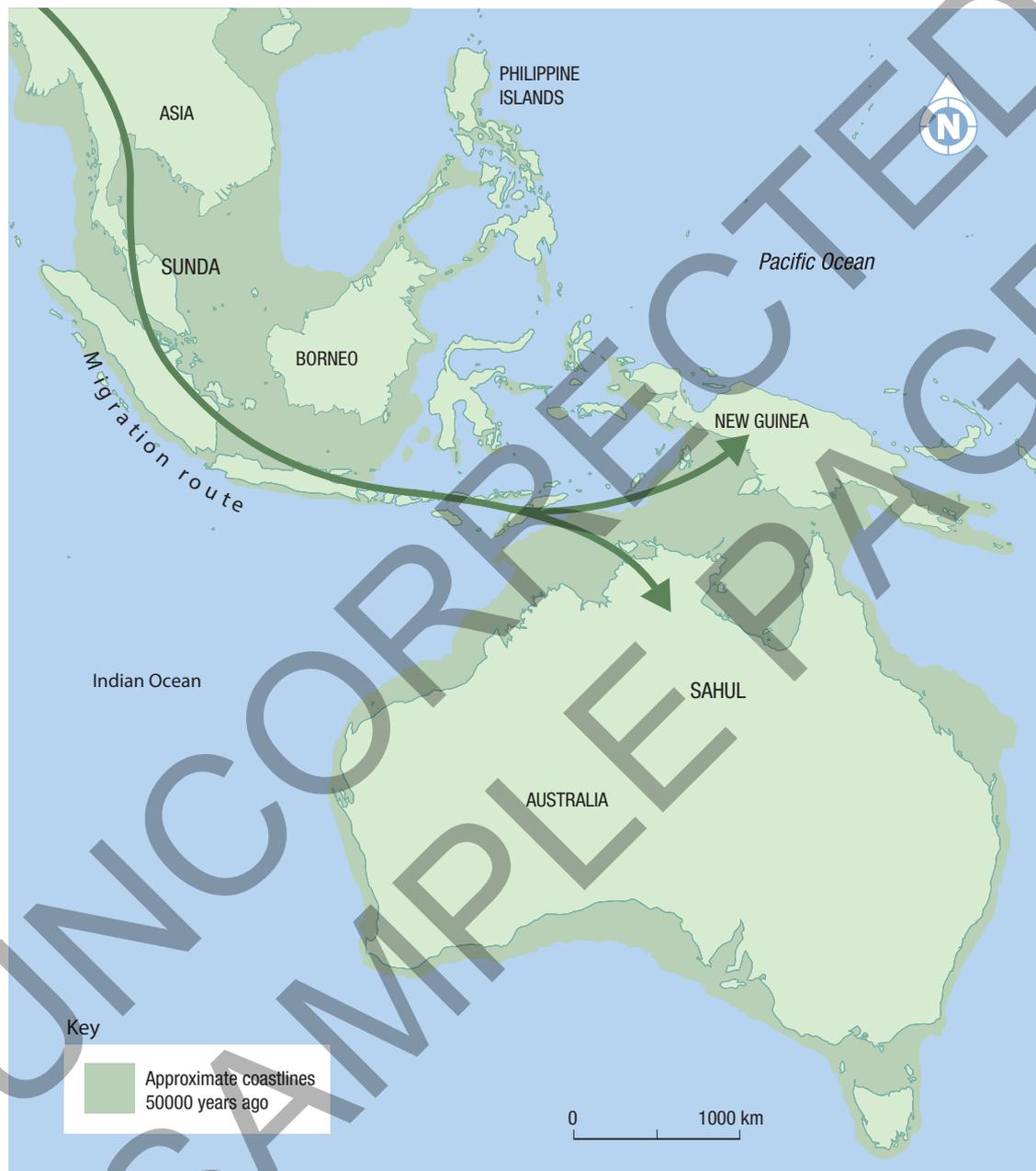
- 1 **See:** How would you describe the rock art in Source 1.3.1?
- 2 **Think:** Who made this rock art, and why?
- 3 **Wonder:** How did these people use the land and tell their stories?

↓ Source 1.3.1 Pictographs known as Wandjina created by the Worrora People in the Wunnumurra Gorge, Barnett River, Kimberley, Western Australia



Migration to Australia

It is important to note that many Aboriginal and Torres Strait Islander Peoples do not agree with the 'Out-of-Africa' theory and have deeply spiritual beliefs about the origins of their ancestors. It is important to recognise and respect these perspectives and ways of thinking.



↑ Source 1.3.2 Map of Sahul with Sunda. [Source: Cambridge University Press & Assessment]

Aboriginal and Torres Strait Islander Peoples are believed to be the first people to arrive on the continent now called Australia, and according to the 'Out-of-Africa' theory, their journey started over 60 000 years ago. During this time, the sea levels were much lower than they are today, and a large landmass called

Sahul connected mainland Australia, Tasmania and New Guinea. Early humans travelled out of Africa, spreading across Asia, and eventually reaching Sahul. They used boats or rafts to cross the short sea distances and walked across land bridges that connected the islands.

First Nations Peoples spread across the continent, adapting to many different environments, from deserts to rainforests. They became highly skilled in finding food, using natural resources, and developing unique tools and techniques to survive. Over thousands of years, First Nations Peoples developed diverse cultures with their own languages, stories and traditions.

According to the 'Out-of-Africa' theory, the arrival of First Nations Peoples on this continent marks one of the earliest human migrations and shows their remarkable ability to explore and adapt to new and changing environments. Today, First Nations Peoples in Australia are recognised as the oldest continuous cultures in the world, maintaining a profound connection to the land and a rich heritage that has been passed down through generations.

Madjedbebe rock shelter

The Madjedbebe rock shelter, located near Kakadu National Park in the Northern Territory of Australia, is one of the oldest known sites of human habitation. Archaeological findings at Madjedbebe have pushed back evidence of human presence on the Australian continent to about 65 000 years ago. This challenges our previous estimates and reshapes our understanding of early human migration.

Excavations at this ancient site have uncovered thousands of artifacts, including stone tools, grinding stones and ochre pieces. This indicates that the early

inhabitants had a complex culture and used a variety of tools. The presence of ground ochre also suggests symbolic or artistic practices. This discovery is significant as it predates similar evidence in other parts of the world. This makes it one of the most critical sites for studying early human history outside of Africa, and it makes some archaeologists question the 'Out-of-Africa' theory. The research at Madjedbebe highlights the deep historical and cultural connections of Aboriginal people to their land, offering insights into their resilience and adaptation over tens of thousands of years.

FPO

FPO

↑ Source 1.3.4 Walinynga (Cave Hill), created by the Anangu people, archaeological site, South Australia

Walinynga (Cave Hill)

Aboriginal rock art, such as the Walinynga (Cave Hill) archaeological site (Source 1.3.4), has been dated to around 30 000 years ago, although there are much older sites on the continent.

Walinynga is an important archaeological site located in South Australia. It features ancient rock art created by the **Anangu** People, including hand stencils, animal figures and symbols. Some of these artworks are estimated to be thousands of years old. Beyond its archaeological significance, Walinynga holds deep cultural and spiritual importance for the local Anangu communities. The site's enduring art reflects the strong connection between the people and their land, assisting researchers in studying the continuity of cultural practices over millennia.

Amazing but true...

Ancient rock art comes in two main types: engravings (called petroglyphs) and paintings or drawings (called pictographs). Petroglyphs are made by scraping or carving into the rock, using tools like hammers to leave marks or grooves. Pictographs are created by painting or drawing on the rock using different kinds of colours. Some drawings are made with dry powders like charcoal, clay, or ochre (a type of natural colour that can be yellow, red, or brown). Paintings, on the other hand, use wet colours made from minerals, which can be applied with fingers or brushes made from sticks or hair. Sometimes, people even make stencils by blowing paint over an outline.

Anangu the term used by several Aboriginal groups in the Western Desert, including the Pitjantjatjara, Yankunytjatjara and Ngaanyatjarra, to describe themselves

Concepts and skills builder 1.3



Asking historical questions about early migration to Australia

Review the two sources:

- Source 1.3.2 (Map of Sahul and migration)
- Source 1.3.4 (Walinynga archaeological site)

Write down two simple historical questions based on these sources. Focus on:

- The journey of early humans to Australia
- The cultural and historical significance of First Nations sites like Walinynga

Examples of questions you might ask:

- 'How did early humans reach Australia?'
- 'What does the rock art at Walinynga tell us about how long Anangu have lived on their land?'

Historical concepts and skills: historical questions, historical significance

Migration in Australia

The migration and settlement of Aboriginal and Torres Strait Islander Peoples occurred over thousands of years. It also happened in several waves.

Initially, early inhabitants followed the coasts and river systems, which provided reliable sources of water and food. From these coastal areas, people gradually moved inland, adapting to different environments such as deserts, forests and mountains. Their ability to adapt was important, as the climate and landscape of Australia varied, with some regions experiencing harsh conditions.

Aboriginal Peoples developed hundreds of distinct languages and cultural practices. This reflects the diversity of the landscapes they lived in. Over time, diverse groups established strong connections with specific areas, known as 'Country' in English, which became central to their identities, spirituality and ways of life.

This movement of First Nations Peoples across the continent created a complex tapestry of cultures and societies that have thrived for tens of thousands of years. This demonstrates their deep understanding and sustainable use of the land. The story of these waves of migration is evidence of the resilience and adaptability of Aboriginal people. This is explored in more depth in Chapter 2.

Historians' interpretations

As you read the History chapters in this book, and work through the activities, you will be conducting your own investigations into different topics using a range of sources. A key type of source for the study of history is to read what professional historians have said about a topic or issue. We refer to these opinions as 'historical interpretations'. Let us see what two historians have said about First Nations Peoples.

Table 1.3.1 Two historical interpretations on agriculture in Australia

Bruce Pascoe, an Aboriginal man of the Bunurong, Kulin nation and Yuin Peoples, historian and writer, in his book *Dark Emu: Aboriginal Australia and the Birth of Agriculture*, states:

Aboriginal Australians managed the land with an understanding of its rhythms, caring for it in ways that ensured its continued productivity and their survival. They adapted to the changing environments, from coasts to deserts, and developed complex societies and agricultural practices long before European settlement.

↑ Source 1.3.5 Bruce Pascoe, *Dark Emu: Aboriginal Australia and the Birth of Agriculture*, Magabala Press, 2018, p. 19

Bill Gammage, an Australian historian, and author of *The Biggest Estate on Earth: How Aborigines* Made Australia*, writes:

For over 60 000 years, Aboriginal people moved across the Australian continent, shaping the landscape with their sophisticated land management techniques. They understood fire, water, and soil, creating a mosaic of different ecosystems that sustained diverse plant and animal life, as well as their own communities.

↑ Source 1.3.6 Bill Gammage, *The Biggest Estate on Earth: How Aborigines Made Australia*, Allen and Unwin, 2011, p. 6

*Note that the term 'Aborigines' is no longer considered to be appropriate



← Source 1.3.7 Bunurong, Kulin nation and Yuin historian Bruce Pascoe, pictured in 2023

Lesson 1.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

1.3 Review questions

- 1 According to historian Bruce Pascoe, what were some ways that Aboriginal people ensured the continued productivity of the land?
- 2 Outline what historian Bill Gammage means by saying Aboriginal people created a 'mosaic of different ecosystems'. How might this have benefited their communities?
- 3 Both Pascoe and Gammage discuss Aboriginal Peoples' adaptation to the environment. **Identify** some examples of how people adapted to different environments across the Australian continent?

What were the key features of ancient societies?



Learning intention

In the last lesson, you were introduced to life in Australia 60 000 years ago. Now, you will learn about some of the common features of ancient societies.

Lesson starter

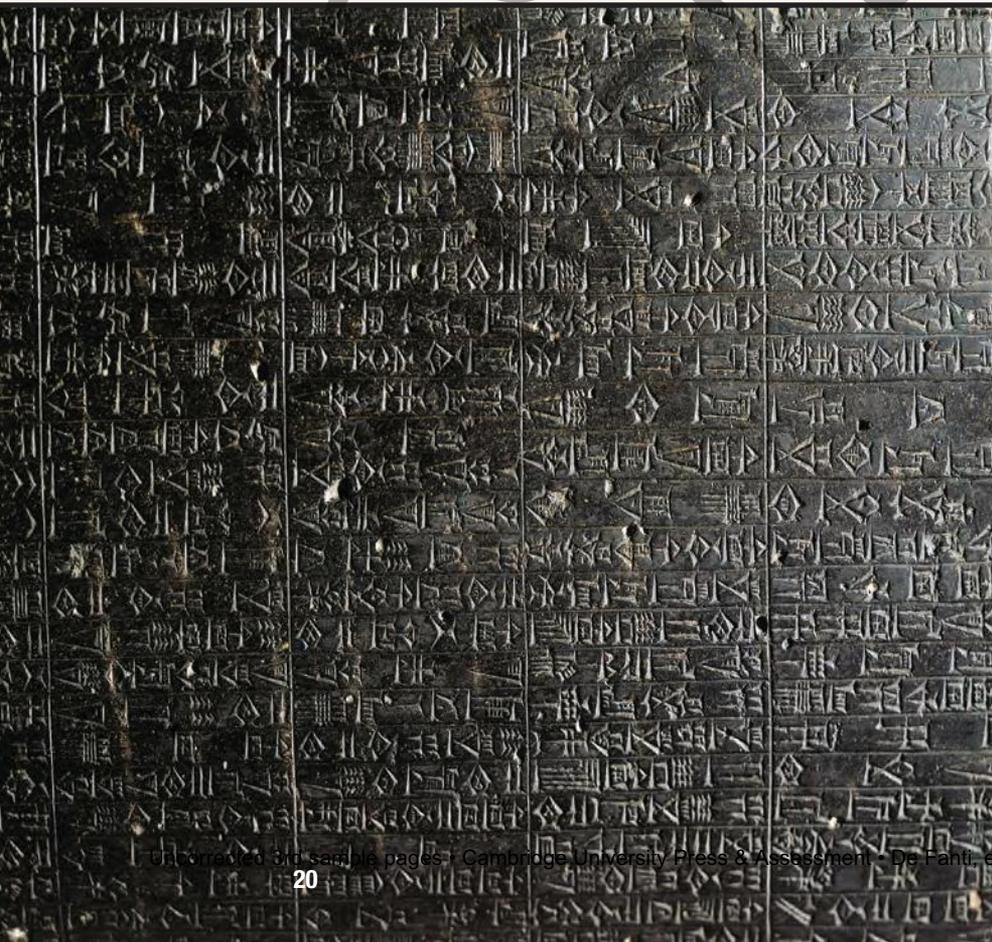


Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** How would you **describe** the object in Source 1.4.1?
- 2 **Think:** What might be significant about such an early example of writing?
- 3 **Wonder:** How did this writing occur?

↓ Source 1.4.1 Code of Hammurabi, in The Louvre, Paris



Common features

Early societies in Africa, the Americas, Asia, Australia and Europe developed unique characteristics that shaped their civilisations. In Africa, farming emerged in the Nile River Valley, with crops such as wheat and barley. Iron tools improved farming efficiency and helped expand trade networks. In the Americas, the Maya and the Inca societies developed sophisticated farming systems. These systems include terracing, **irrigation**, and the stone grinding tools used by bread makers.

This meant people could thrive in diverse environments.

Asia, especially Mesopotamia and the Indus Valley, saw the rise of early cities, with advanced irrigation, and writing systems such as **cuneiform** and **Sanskrit**. These developments increased trade and centralised governance. Europe's early societies, particularly in Greece and Rome, saw advancements in law, with the development of legal codes. Kings, priests and warriors ruled these countries.

irrigation the supply of water to land or crops to help growth, typically by means of channels

cuneiform system of writing used in the ancient Middle East

Sanskrit a language which is the root of many Indian languages

Herding (pastoralism)

Herding, or pastoralism, began when humans tamed animals for food, clothing and labour. In Africa, the taming of cattle and sheep began around 10 000 years ago, particularly in regions like the Sahel and East Africa. **Nomadic** pastoralism emerged in the grasslands and deserts. In Central Asia, herding of horses, goats and sheep became central to societies such

as the Mongols. In Europe, herding was common in regions like the Mediterranean, where sheep and goats thrived in rugged terrains. Herding also occurred in the Americas, with societies taming animals like llamas and alpacas in the Andes mountains. Consider why humans may have chosen animals like cows and sheep for early pastoralism.

nomadic people or groups who move from place to place without a permanent home

Crop cultivation (agriculture)

Crop cultivation first emerged in the **Fertile Crescent** with wheat, barley and legumes grown from around 10 000 years ago. In Africa, regions like the Nile Valley became early agricultural centres with crops like grains. Asia saw the early growing of rice in the Yangtze River Valley and later, in South

Asia, the domestication of crops in the Indus Valley. In Europe, early farming communities grew grains and cereals as part of the Neolithic Revolution. At the same time in Australia, Aboriginal people grew native plants like yams and managed the land through practices such as fire-stick farming.

crop a plant that is grown for a specific purpose such as food, fibre, or fuel

Fertile Crescent the modern-day Middle East

Fish farming (aquaculture)

Aquaculture has ancient origins as well. The Gunditjmarra people of present-day Victoria built intricate aquaculture systems over 6600 years ago at Budj Bim, constructing stone channels and weirs to farm eels. (You will learn more about First Nations aquaculture in Chapter 2!) China is widely recognised as another early adopter of aquaculture, particularly with the farming of fish around 3500 years ago. In South-East Asia, aquaculture

expanded with the farming of fish and shellfish. In ancient Egypt, fish farming was conducted in ponds near the Nile. In more recent history, European aquaculture developed in the Middle Ages, focusing on fish such as carp and trout. The Americas also saw traditional methods of aquaculture, particularly among Indigenous communities along the Pacific Northwest, who practised clam farming and salmon harvesting.

Concepts and skills builder 1.4



Continuity and change in the everyday lives of ancient peoples

Practice	Region	Continuity	Change
Herding	Africa, Central Asia	Continued use of pastoralism	Introduction of new breeds and methods
Crop cultivation	Mesoamerica, Fertile Crescent	Traditional crops still grown (maize, wheat)	Use of advanced irrigation, industrial farming
Fish farming	China, Egypt, Australia	Carp farming has persisted	New technologies, expanded fish species

Task: Using the table above, **explain** how the societies listed changed and how their everyday lives were impacted by these changes.

Historical concepts and skills: continuity and change, communication

Oral traditions of laws

Before the development of writing, societies had oral traditions of law. Elders, religious leaders, or chiefs passed down rules through storytelling and memory. They relied on shared understandings and customs to maintain social order. First Nations Peoples had highly developed ways of recording and passing on information that holds deep cultural

significance and have sustained Aboriginal societies for thousands of years:

- rock art and carvings
- **Songlines**
- message sticks
- petroglyphs
- weaving and artefacts.

Songlines are oral maps passed through generations by First Nations Peoples, using song, story, and ceremony to navigate Country, record history, and maintain deep cultural and spiritual connections to the land

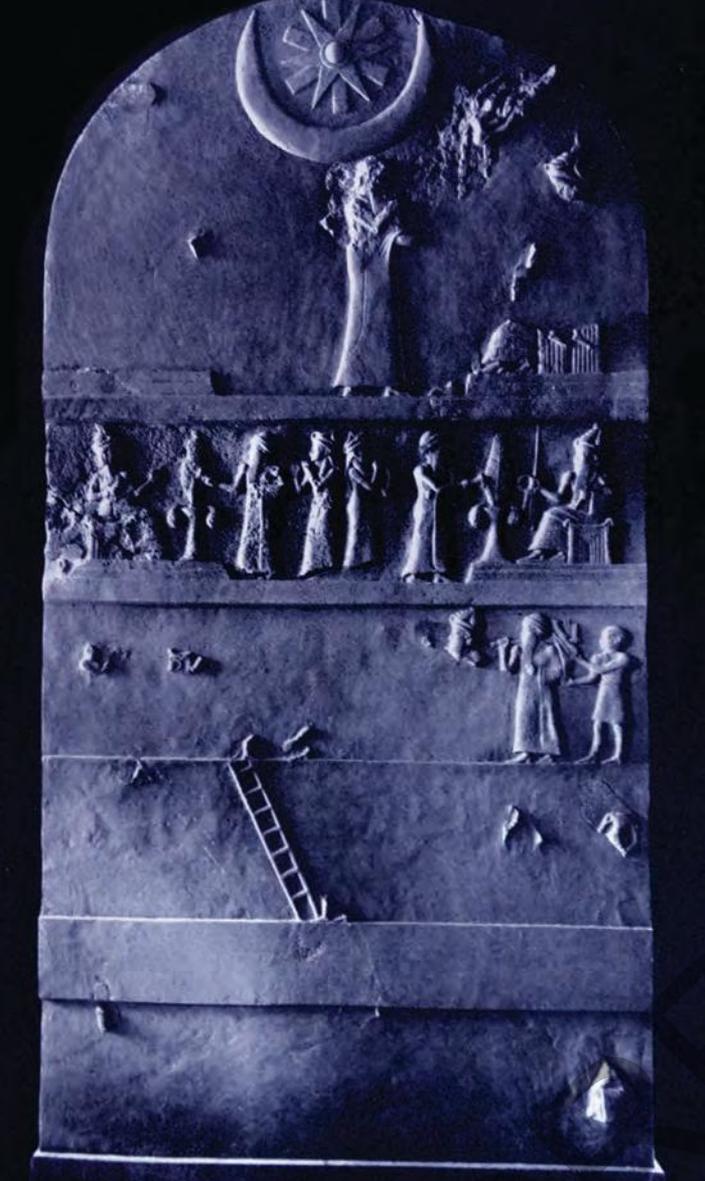
Early written codes of law

Early written codes of law, such as the Code of Ur-Nammu and the Edicts of Ashoka, were essential for shaping societies and maintaining order. These codes were similar but also had differences in their content and purpose.

The Code of Ur-Nammu, created around 2100 BCE in Mesopotamia, is one of the earliest surviving law codes. It focused on fairness and compensation, with punishments for offences like theft or injury. One important feature was that the punishments were often fines or compensation rather than physical.

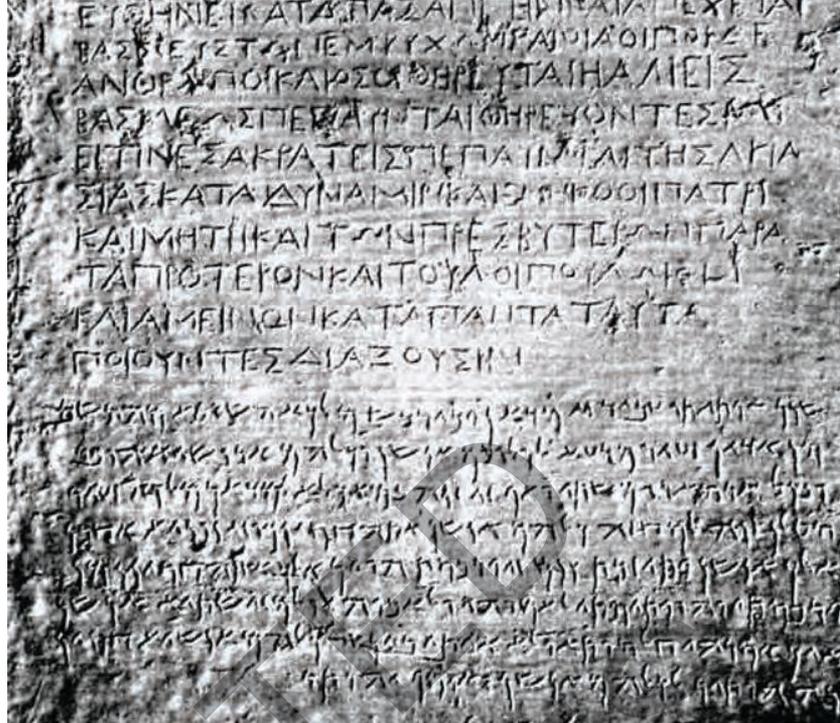
For example, if someone injured another person, they might have to pay a fine rather than suffer an equal injury. The code was hierarchical, applying differently to individuals based on their social class.

The Edicts of Ashoka, written around 250 BCE, were commands by Emperor Ashoka of the Mauryan Empire in India. After converting to Buddhism, Ashoka promoted laws based on moral principles and non-violence. His edicts, written on pillars and rocks, emphasised kindness, respect for all living beings and tolerance among different religions.



↑ Source 1.4.2 Code of Ur-Nammu in Istanbul Arkeoloji Müzesi (Istanbul Archaeology Museum)

While Ashoka's laws were based on Buddhist ethics, they promoted social welfare, including animal rights, and advocated for a just and compassionate society. Unlike the earlier legal codes, Ashoka's edicts were less about punishment and more on guiding moral behaviour.



↑ Source 1.4.3 The first known inscription by Ashoka, the Kandahar Bilingual Rock

Similarities and differences

Despite their differences, these early codes helped create social order. These rules that governed the behaviour of individuals offered protection to certain groups, and had punishments for wrongdoing. However, each reflected the values and priorities of its society. Mesopotamian laws focused on compensation and class hierarchy, while Ashoka's edicts were **humanitarian**, promoting social harmony and welfare.

humanitarian
concerned with or seeking to promote human welfare

All these codes aimed to regulate people's behaviour. These codes laid the foundation for modern legal systems. They show how different societies developed similar rules to maintain justice and order.

Lesson 1.4 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

1.4 Review questions

- 1 **Identify** the key benefits of herding animals.
- 2 **Explain** how the development of farms changed the way early societies organised themselves.
- 3 Before the development of written laws, how do you think early societies ensured that people followed agreed-upon rules and customs?

How do historians and archaeologists investigate ancient societies?



Learning intention

Last lesson you learnt about some of the common features of ancient societies. In this lesson, you will find out how historians and archaeologists uncover the ancient past.

Lesson starter



Complete the following activity to kick-start this lesson.

Creative questions

- Brainstorm at least 12 questions about archaeology. Try some of the creative question starts:
 - Why...?
 - What if...?
 - What is the purpose of...?
 - What if we knew...?
 - What would change if...?
- Review your list, **identify** the most interesting questions, and select one to discuss.

↓ Source 1.5.1 Excavation at the site of the Battle at the Harzhorn (Germany)



Historians and archaeologists

Historians study written records, such as ancient texts and laws, to understand how people lived in the past. These writings give clues about their government, religion and daily life. But for societies that did not leave written records, **archaeologists** play a key role in finding out how people lived.

Archaeologists study artifacts, like tools, pottery and ruins of buildings, to learn about past cultures. They carefully dig up these items and analyse them to understand how people farmed, built homes and traded. They also use special

techniques like **carbon dating** to find out how old things are and satellite imagery to explore large areas.

Conserving these artifacts and ancient sites is important because they help us learn about the past. Once they are damaged or destroyed, we cannot replace them. Protecting them ensures that people in the future can also learn from history. This is why archaeology and conservation are important – they help us keep a connection to our shared past and understand how early societies shaped the world we live in today.

historians scholars who study and interpret past events using written records and other sources

archaeologists experts who study human history through artifacts and physical remains

carbon dating determining the age of things that were once alive by measuring the amount of carbon-14 they contain - the less carbon-14 there is, the older the object is

Great archaeological discoveries

Archaeologists have made many remarkable discoveries that have expanded our understanding of ancient societies.

The Rosetta Stone is one of the most important archaeological discoveries in history. It was found by French soldiers in Egypt in 1799. This stone is special because it has the same text written in three different scripts: Greek, **Demotic**

and Egyptian hieroglyphs. Before its discovery, no one could fully understand hieroglyphs, the written language of ancient Egypt. By comparing the Greek text, which scholars could already read, with the hieroglyphs, they were able to crack the code of this ancient script. This breakthrough opened the door to understanding the rich history and culture of ancient Egypt.

Another significant find is Tutankhamun's tomb, unearthed by Howard Carter in 1922. The tomb, found in the Valley of the Kings, contained a wealth of treasures, including the young pharaoh's gold burial mask. The discovery gave archaeologists insight into Egyptian burial practices and the wealth and artistry of the time.

Demotic ancient Egyptian script used in the Nile Delta. The term was first used by the Greek historian Herodotus to distinguish it from hieroglyphics



↑ Source 1.5.2 The Rosetta Stone in the British Museum



← Source 1.5.3 The northwest corner of Tutankhamun's tomb's antechamber, as photographed in 1922



↑ Source 1.5.4 Terracotta Army in Xi'an, China

In China, the Terracotta Army, discovered in 1974, consists of thousands of life-sized clay soldiers buried with Emperor Qin Shi Huang. These figures were placed in the emperor's massive tomb complex to guard him in the afterlife. The army is remarkable for its scale and detail. Each soldier has distinct facial features, and their uniforms reflect the ranks of real soldiers, from infantry soldiers to archers and generals. Archaeologists believe this burial practice reflects Qin Shi Huang's desire for protection in the afterlife and his effort

to display his immense power. This find provided a glimpse into ancient Chinese military practices and burial traditions.

One of the greatest archaeological discoveries from Australia is the Mungo Man and Mungo Lady remains found at Lake Mungo in New South Wales. Discovered in 1968 and 1974, these ancient human remains are around 40 000 to 42 000 years old. Mungo Lady is the oldest known cremation in the world, indicating complex burial rituals among early Aboriginal societies.

Concepts and skills builder 1.5



Historical significance and putting events in chronological order

- 1 What do you see? How would you describe the great archaeological discoveries discussed above?
- 2 What does it make you think? What might be significant about these discoveries?
- 3 What do you wonder? How did these things get created?
- 4 Draw a timeline in your book, and record when each civilisation existed.

For example, ancient Mesopotamia (around 3000 BCE) would be earlier than ancient Greece (around 800 BCE). Use the classroom or a designated space as the 'timeline'.

- 5 Write down one key feature of that society (e.g., the pyramids of Egypt or the architecture of ancient Greece).
- 6 Once the timeline is complete, write an explanation of how archaeologists use artifacts to determine when and where these societies existed and how they built on the developments of earlier civilisations.

Historical concepts and skills: chronology, historical significance

Archaeological methods

Archaeologists use different methods to investigate the ancient past and uncover details about how people lived long ago. These methods help them learn about things like how old a discovery is, what people ate, what diseases they had, and even who they were. Let us look at a few important methods they use.

Stratigraphy

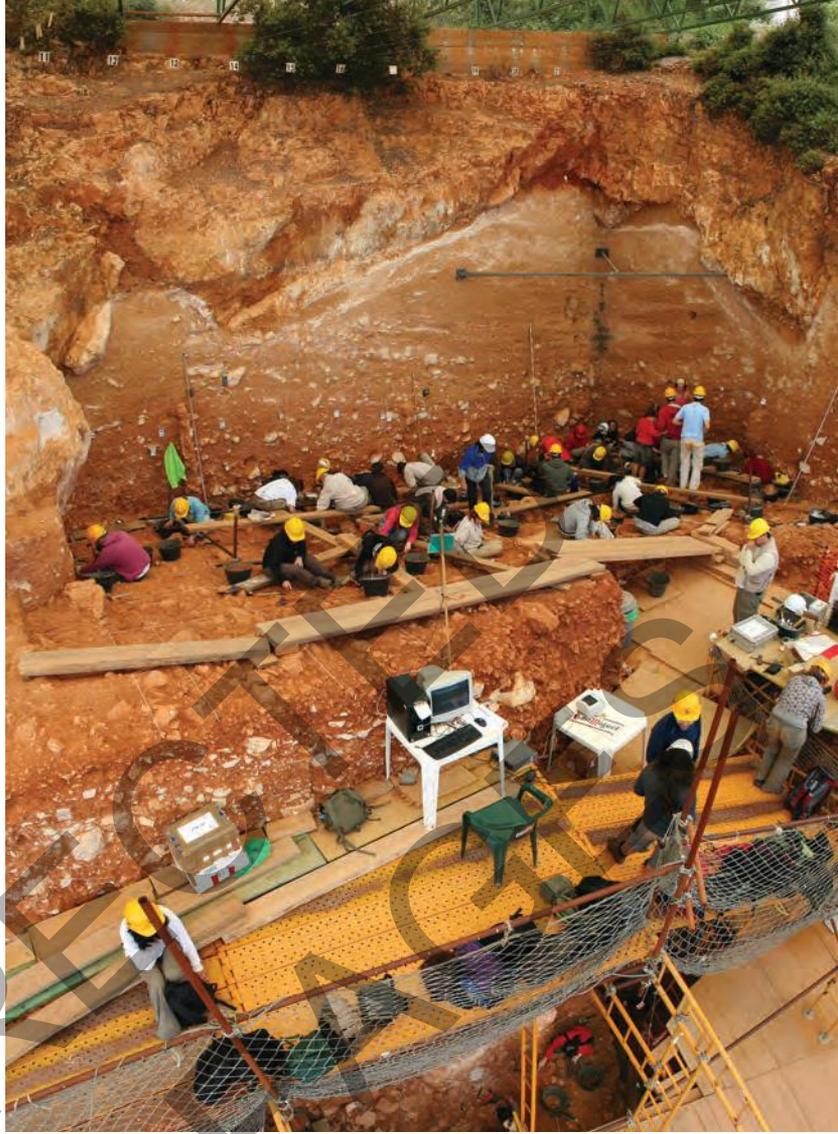
This process involves studying the layers of soil where artifacts or remains are found. Imagine a cake with many layers – each layer represents a different period. The deeper something is buried, the older it usually is. By looking at the position of an object in these layers, archaeologists can estimate how old it is. This is a simple but effective way to date discoveries without damaging the artifacts.

Carbon dating

Carbon dating is also known as radiocarbon dating. This technique determines the age of things that were once alive, like plants, animals, or humans. It works by measuring the amount of carbon-14, a radioactive element, left in an object. Over time, carbon-14 slowly disappears, so the less carbon-14 there is, the older the object is. This method has helped archaeologists date ancient bones, tools and even cave paintings.

DNA testing

This is another powerful tool. DNA is the genetic code that makes up all living things, including humans. By extracting DNA from ancient remains, such as Mungo Man and Mungo Lady or Egyptian mummies, scientists can learn more about past individuals. For example, they can find out where someone's ancestors came from or identify family relationships.



↑ Source 1.5.5 Excavations at the site of Gran Dolina, in the Atapuerca Mountains, Spain, 2008

DNA testing has even been used to study the common diseases that ancient people suffered from. For instance, scientists have used DNA from mummies to discover that ancient Egyptians had diseases like tuberculosis and malaria.

Excavation

Excavation is one of the most traditional and essential methods used by archaeologists to explore ancient sites. It involves careful and systematic digging of an area where artifacts, structures, or fossils might be buried. During an excavation, archaeologists use tools, such as brushes, shovels, trowels and picks, to remove layers of soil and debris slowly and carefully. This process must avoid damaging any fragile items that might be hidden beneath the surface.

excavation
the process of uncovering and studying physical remains from the past by digging at archaeological sites

Archaeologists often dig in small sections or trenches to better control the excavation and to document the precise location of each artifact. As they uncover objects, they map and photograph them in their original position before removing them for further study. The goal is to learn as much as possible about the context in which

these objects were found. This provides valuable clues about how ancient people lived, worked and interacted with their environment. Excavation helps reveal not only individual artifacts but also entire ancient cities, burial sites, or temples. This careful process is crucial for preserving history while uncovering the secrets of ancient societies.

Archaeologists' attitudes

Consider the opinions of two senior archaeologists, shown below in Table 1.5.1.

Table 1.5.1 Two opinions on archaeology

Dr Richard Leakey, in his 1994 book *The Origin of Humankind*, argues that archeology is the only subject where experts try to understand human behaviour and actions without having direct contact with the people being studied. Excavations by archaeologists reveal how people lived and the societies in which they lived.

Dr Colin Renfrew, in his book *Archaeology: Theories, Methods, and Practice*, emphasises:

The act of excavation is like unpeeling the layers of history, each stratum revealing a different era, a different society. What we find not only uncovers the material remains of the past but also challenges us to rethink our interpretations of the past and how human societies have evolved over time.

↑ Source 1.5.6 Colin Renfrew and Paul Bahn, *Archaeology: Theories, Methods, and Practice*, Thames & Hudson, 1991, p. 56



Go online to access the interactive lesson review and more!

Lesson 1.5 review

Online quiz



Review questions



Research task



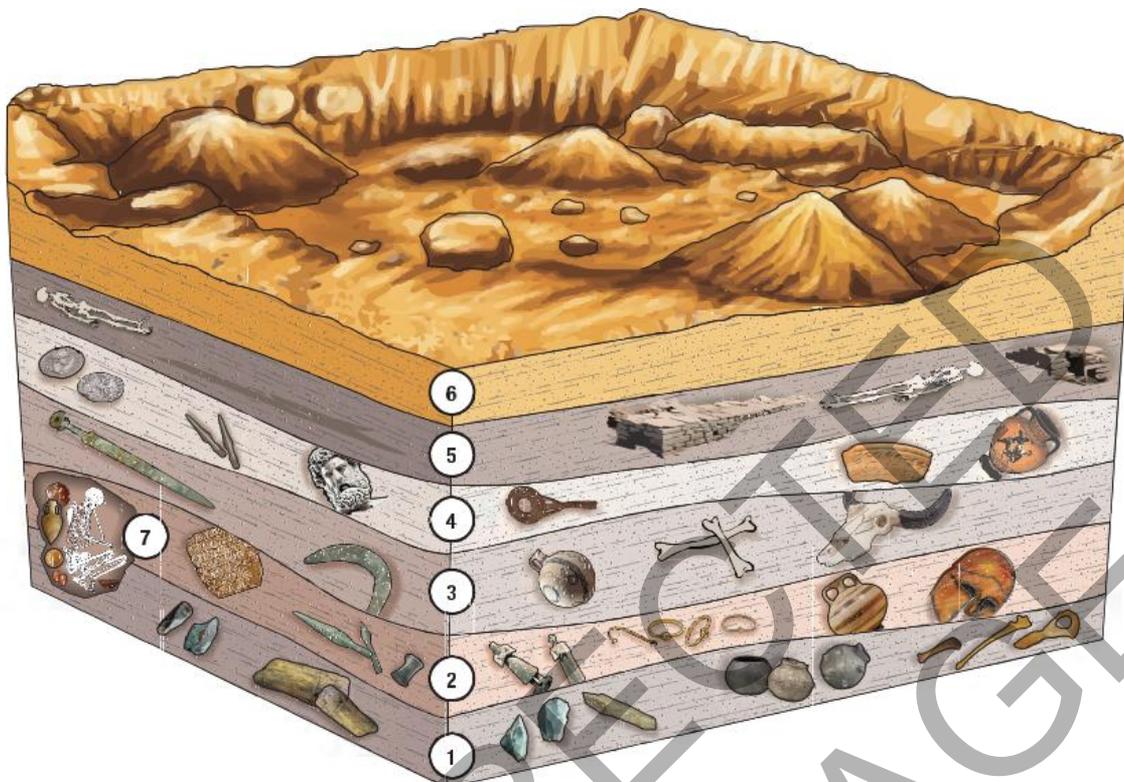
Teachers can assign tasks and track results



1.5 Review questions

- 1 Explain** the significance of stratigraphy in archaeology, and how archaeologists use it to understand the relative ages of artifacts.
- 2 Explain** the process of excavation and why archaeologists must be careful when digging up ancient sites. What tools do they use to ensure artifacts are not damaged?
- Based on Dr Colin Renfrew's quote, how does the act of excavation help archaeologists 'unpeel the layers of history', and why is this important for understanding ancient societies?
- Why is it important for archaeologists to conserve artifacts and ancient sites, and how does this help future generations study and learn from the past? **Explain.**

5 Use Source 1.5.8 to answer the following questions



Layer 7 Shaft burial with skeleton in crouch position, funeral offerings

Layer 6 No significant finds

Layer 5 Layer of ash, collapsed buildings, human remains

Layer 4 Coins, amphora, stone statue of Zeus, hand mirror, black figure pottery, spearhead, pottery shard with Greek script

Layer 3 Iron sword, iron scythe, foreign pottery, cattle bones

Layer 2 Tablet with Linear B writing, bronze weapons, gold jewellery, local painted pottery, bronze helmet, small clay and bone votive figurines

Layer 1 Flint tools, remnants of campfire, primitive pottery, midden animal bones

↑ Source 1.5.7 Stratigraphy cross-section diagram

- a Which layer is the oldest?
- b The burial pit (feature 7) was dug by the people from which layer? **Explain** your answer.
- c **Outline** the technological developments between layers 1 and 2.
- d **Identify** what kind of catastrophe may have occurred in layer 5.
- e **Identify** the most significant development of layer 2. **Explain** why you think this.
- f **Identify** the objects that show development in technology at this site.
- g Why might the inhabitants of layers 2 and 4 have used different written scripts (Linear B/Greek)?
- h **Explain** what the presence of foreign pottery in layer 3 suggests.
- i **Explain** why the site may have been abandoned.
- j **Identify** what type of person do you think was buried in feature 7. **Explain** your answer with reference to the goods found with the body
- k Write a historical account **explaining** what you think occurred at this site. When you have finished share your story with a partner.

End of topic review: How did civilisation begin?



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorchers timed competitive quiz

Brain dump



What have you learnt about the ancient world? For this activity, copy the diagram and fill out by explaining your understanding. Aim for two points per topic.

Topic	What I have learned
When was the ancient world?	
What were some of the earliest societies?	
What did some of the earliest societies have in common?	
How did humans migrate and develop?	
How did people come to the Australian continent?	
What were the key features of the earliest societies?	
How do historians and archaeologists investigate ancient societies?	

Practice questions



- 1 **Identify** and **explain** why the object in the image below was significant for our understanding of the past.



← Source 1.6.1 Visitors to the British Museum in London, England, inspect the Rosetta Stone.

2 **Analyse** the following historical source, using the questions below.



↑ Source 1.6.2 Burial chamber of Menna, the king's scribe. Scene: threshing of grain, c.1422–1411 BCE, ancient Egypt

- Who do you think created this source?
- When was it created?
- Who do you think the intended audience was for this painting?
- How did the domestication of animals (herding) and the cultivation of crops impact early civilisations in regions like Africa or Central Asia?

Response to chapter inquiry question: How did civilisation begin?



Write a paragraph in response to the question using all the key terms listed:

- stratigraphy
- excavation
- DNA testing
- domestication.

INVESTIGATION 1

Aboriginal and Torres Strait Islander Peoples' knowledge and understandings (Deep Time to the modern era)

OVERVIEW

[In this topic you will] ... learn about Aboriginal and Torres Strait Islander Peoples' communities, the world's oldest continuous cultures, and examine their histories, social organisation and practices that have continued from Deep Time to the present.

Source: VCAA, Victorian Curriculum V2.0, 'History', 'Band description – Levels 7 and 8'

CURRICULUM GOALS

- How do we know about the past?
- Why do societies change?
- What makes a society?
- What factors influence where societies are established?
- How do people understand their world?
- What were the consequences of contact between societies?
- Why are there different interpretations of the past?

Source: VCAA, Victorian Curriculum V2.0, 'History', 'Band description – Levels 7 and 8'

CHAPTER 2

How have First Nations Peoples maintained their significant connections to Country from Deep Time to today?



LESSON	TITLE
2.1	Setting the scene: How do young First Nations Peoples maintain their connections to Country?
2.2	What is Deep Time?
2.3	What is the importance of Country to First Nations Peoples?
2.4	How does Western science understand how First Nations Peoples came to the Australian continent?
2.5	How do First Nations Peoples understand how their ancestors came to the Australian continent?
2.6	What were the key events in the Australian continent's Deep Time history?
2.7	How have First Nations Peoples responded to environmental changes from Deep Time? Part 1: Land and landscape
2.8	How have First Nations Peoples responded to environmental changes from Deep Time? Part 2: Animal extinctions
2.9	What technological achievements have First Nations Peoples developed? Part 1: Earth and water
2.10	What technological achievements have First Nations Peoples developed? Part 2: Fire and sky
2.11	What are the significant cultural protocols for maintaining and preserving ancestral remains?
2.12	What is the significance of the Mithaka Indigenous-led archaeology dig?
2.13	How have interpretations of First Nations Peoples as the world's oldest continuous cultures changed over time?
2.14	End of investigation review: How have First Nations Peoples maintained their significant connections to Country from Deep Time to today?

Image: Bunjil Shelter, near Stawell, Victoria. This rock art painting is the only known painting of Bunjil, the Wedge-tailed Eagle. Bunjil is an important ancestral being for many First Nations Peoples of south eastern Australia.

Warning: Aboriginal and Torres Strait Islander Peoples should be aware that this chapter may contain images, names and links to footage of people who have passed.

Setting the scene: How do young First Nations people maintain their connections to Country?



Learning intention

In this lesson we will read the stories of two young First Nations writers and learn a bit about their lives growing up in Melbourne.

Country ancestral lands and waters that people are custodians for

The following is a personal story from young writer Nayuka Gorrie. As you read it, think about the importance of a connection to Country and culture for young Aboriginal and Torres Strait Islander Peoples living in Melbourne.

My Fitzroy connection

Before colonisation, Aboriginal people were 100 per cent of the population in this country. In the city I live in, Melbourne, we are now 0.5 per cent of the population.

The traditional owners of the **Country** I live on are the Wurundjeri (Wur-UND-geri) people of the Kulin nation. The Wurundjeri did not willingly give up their land and it is still theirs. The Wurundjeri people are still here and still practise their culture. Every single day I am thankful to live on their Country and think about how my presence on their Country came about.

I live in the suburb of Fitzroy in inner Melbourne. A few decades ago, it was mostly black people and poor people who lived there. Fitzroy is the birthplace of many Aboriginal organisations that have improved our quality of life. When I walk around it now, I see the ghosts of those organisations and all those black people in the form of plaques, and hear them in my grandfather's stories. In the shell of the houses where they used to live, or the buildings from which those organisations were run, are cafes filled with young wealthy families who would have been too afraid to venture there 30 years ago.

FPO

↑ Source 2.1.1 Nayuka Gorrie

My connection with Fitzroy goes back three generations. My great-grandmother was stolen from Lake Tyers Mission in Gippsland, south-east Victoria, at the age of eight, and then lived in Parkville and Abbotsford in inner-city Melbourne. My grandparents lived here back when it was cheap. Mum and I lived here when I was a baby. My brother and sister also live here. I can only imagine what it would be like to live on my Country where my connection goes back a few thousand generations.

Up the road from my house in Fitzroy is where my great-grandmother used to hang out as a teenager in the 1940s. Across the road from my house is where the old Aboriginal childcare centre used to be. A 20-minute walk is where my grandparents, my mum and I lived when I was a baby. I love where I live. I love having a history with the suburb I live in.

At the Carlton Gardens, a 15-minute walk from my house, is an old fig tree where my mob used to meet and have important political discussions. The conversations they had under that old tree no doubt helped shape the nation.

In many respects, my life in the city is just like the life of many other people my age. I need to work to pay for the roof over my head, food on my plate, and skincare products I can't afford but still buy. I drink too much coffee and don't eat at home enough. Yet, my life is also unlike many other people's. I don't see myself reflected in many places in the public parts of this nation – the education system, media, film or television, politics and so on – as they do. I have a history with this Country and a culture that is often erased – sometimes on purpose, sometimes by accident.

We are still here

Despite this attempt to erase our culture, black people exist in cities. You might be walking past us. We might be in your classrooms. We are still here. We connect as a community in a number of different ways. Sometimes, it is to celebrate. Sometimes, it is to mourn. Sometimes, it is to protest when something unjust has happened. Many of the **blackfullas** who live in the city are not traditional owners of that land. That means they are from somewhere else. If they are lucky, they will know where they came from; however, there are many that don't because of the government policies that existed to destroy that sort of knowledge.

Like many other blackfullas in the city, I have different ways of maintaining my connection to my culture. There are things that are naturally cultural to me: my set of values, the way I relate to people and how I see the world. There are also ways that I remain connected to my Country, such as visiting and learning about the different animals and plants that live on my Country. I also seek to understand more about my family history.



↑ Source 2.1.2 The Moreton Bay fig tree in Carlton Gardens. Between the 1920s and 1940s this was an important meeting place for Aboriginal people in Melbourne.

blackfella/blackfulla
'blackfella' is an Aboriginal English term used by Aboriginal and Torres Strait Islander Peoples to express their identity and sense of community. Aboriginal English is the name given to the various kinds of English spoken by Aboriginal people throughout Australia

The opposite of erasing black culture is black visibility. This is when our Aboriginality stands out to others. People can have their own ideas about what our Aboriginality means. Sometimes, this is negative. Sometimes, people have racist and stereotyped ideas about Aboriginal people and treat us poorly. This can play out in public spaces, such as being followed around in shops or being treated unfairly by the police. At school, it was mean jokes in the schoolyard, or sometimes, teachers assuming things about me.

Sometimes, I feel hopeful that things will change and sometimes, I don't. This doesn't mean I don't do anything, because at least if I try, there is a chance that things can change, but if I don't, there's no chance.

↑ Source 2.1.3 'My Fitzroy Connection', Nayuka Gorrie, *Our Land, Our Stories*, 'Our Mob, Our Stories', Cengage Learning Australia, 2019, pp. 1–3.

As you read the next story from young Wurundjeri writer Georgia Mae Copocchi-Hunter, think about the various ways Georgia Mae respects the cultural traditions of her people.

A city blackfella

My name is Georgia Mae Copocchi-Hunter. I am 18 years old and I am Italian through my dad and Aboriginal through my mum. My family come from Calabria in Italy and the Wurundjeri tribe of the Kulin Nation – an **alliance** made up of five **language groups**, the Woiwurrung, the Dja Dja Wurrung and the Taungwurrung, who all border each other.

I've been writing for a few years now, but mostly for my own enjoyment. It wasn't until I was about 15 or 16 that I started to use writing as a form of **activism** and education. Melbourne is a culturally **diverse** city, but also one where some people hold views of **intolerance**, and this gave me many opportunities to write.

Most of the time, my writing has been for school projects. I try to use my knowledge and life experience as a young Indigenous person to educate the kids in my class. I have made presentations on blackface (painting your face and body to look like a black person) and why it is racist, and about the real history of Australia regarding its First Peoples. [...]

Growing up Indigenous

I had a very normal childhood by Australian standards. [...] But there was another side to my childhood that most kids did not often experience. From a young age, my mother made sure I had an appreciation and love for my culture that has continued to grow and shape me throughout my life. On our camping trips, she would teach me about the native plants and how they had been used by my ancestors. If we were on a hike, sometimes she would find **artifacts**, like an old spear or axe head. She would always make us stop so we could have a proper look, and another lesson in my history would begin. Those lessons never bored me – I saw it as part of who I was. My mother was teaching me culture and that was something I was grateful for.



↑ Source 2.1.4 Georgia Mae Copocchi Hunter

alliance an agreement or partnership between groups

language groups a community of people who speak a common language, often reflecting cultural, historical and ancestral ties

activism working from outside the government to bring about political or social change

diverse many different kinds

intolerance refusing to accept views, beliefs, or behaviour that are different from your own

artifacts objects made by people, usually from another time



↑ Source 2.1.5 Georgia Mae Capocchi-Hunter and her mum, Tammy Hunter, who was an important role model for Georgia Mae.

My culture continues to play a part in my life, even now at 18. I uphold the traditions of the past, changed a bit to fit modern-day life. I was able to go through a traditional coming-of-age ceremony at 15 years old with my cousins – a ceremony that hadn't been performed for over a hundred years. I, along with members of my family, also make up the Djirri Djirri dance group. Together, we keep alive the dances and stories of my people.

I am lucky enough to have the opportunities to learn about and be connected to my history and culture. However, many Aboriginal and Torres Strait Islander Peoples who live in cities like Melbourne do not have those same opportunities. They may not live on their Country – they may not even know where that is. There are many reasons for this. Government policies and **massacres** all played a part in trying to erase Indigenous culture, but it lives on.

massacres large-scale killing of human beings

↑ Source 2.1.6 Adapted from 'A City Blackfella', Georgia Mae Capocchi-Hunter, *Our Land, Our Stories*, 'Our Mob, Our Stories', Cengage Learning Australia, 2019, pp. 4–6.

Lesson 2.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



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2.1 Review questions

- 1 How important is being connected to Country for Nayuka and Georgie Mae?
- 2 **Identify** the places in Victoria that are particularly significant for Nayuka.
- 3 Consider **when** each writer discusses First Nations people who have lost their connection to Country. **Identify** the reasons given. How would you describe the tone of the writing?
- 4 How important do you think family history is to Nayuka and Georgie Mae? In what ways do they try to maintain their links to their culture?
- 5 **Describe** how Georgia Mae demonstrates her pride in her Aboriginal heritage.

What is Deep Time?



Learning intention

We've looked at the stories of Nayuka and Georgie Mae. In this lesson, we will look at the concept of Deep Time and consider different ways of looking at the past.

Lesson starter



Complete the following activity to kick-start this lesson.

See/hear, think, wonder



QR code

↑ Source 2.2.2
<CAPTION TO
COME>

ochre a yellowish-orange colour, or a substance obtained from earth that is used for giving this colour to paints

historical significance relating to the long-term importance of an event

↑ Source 2.2.1 A piece of **ochre** used in Kakadu National Park, dated to 53 000–59 000 years ago, held by the National Museum of Australia collection.

Look at Source 2.2.1 and listen to the accompanying short audio piece (Source 2.2.2) from the National Museum of Australia.

- 1 **See/hear:** What is the object and what was it used for? How old has the object been dated to?
- 2 **Think:** What does Margot Neale say 'Westerners' like to hear about? What does this comment **suggest** about two ways of thinking about Australia's long history? What did people from New York question?
- 3 **Wonder: Describe** the **historical significance** of the object for Margot Neale. What do you wonder about the object and what it means for Australian and world history?

The study of an ancient *and* a contemporary society

In this investigation, we will explore the 65 000 years or more of human history on the continent now called Australia. We will learn about the people who lived here through **Deep Time**, and how those past times connect to the many vibrant Aboriginal and Torres Strait Islander Peoples and cultures of today. We will explore the beliefs, values and practices that help sustain relationships between Aboriginal and Torres Strait Islander people and Country.

Studying Aboriginal and Torres Strait Islander history means studying both an ancient and a contemporary society. This investigation brings together Aboriginal and Torres Strait Islander ways of knowing about the past as well as historians' ways of knowing about the past. It shares some of the Aboriginal and Torres Strait Islander Peoples' stories of what has come before now. Through this chapter, you will develop skills to respectfully engage with Aboriginal and Torres Strait Islander Peoples' **cultural heritage**.

Deep Time refers to the events and processes over vast spans of time

cultural heritage an expression of the ways of living developed by a community and passed on from generation to generation



Aboriginal and Torres Strait Islander ways of knowing about the past



Historians' ways of knowing about the past/ Western scientific methods

↑ Source 2.2.3 This investigation brings together two ways of understanding history.

Australia is home to over 250 distinct Aboriginal and Torres Strait Islander language groups. These groups are often referred to as First Nations. Each group has its own unique culture, language and traditions. These diverse groups are the original **custodians** of the land. They have deep connections to specific regions across the continent. In studying these living cultures, we respect the diversity of

Aboriginal and Torres Strait Islander Peoples by identifying the nations, language groups and places from which specific knowledge comes. When events occurred in Deep Time, which this chapter focuses on, the continent was not called Australia. First Nations Peoples focused on their own Countries rather than the entire continent. However, in this text, we will call the continent Australia for easier reading.

custodians

Aboriginal or Torres Strait Islander people or groups of people who have responsibilities in caring for their Country

archaeologist a person who studies human history by digging and uncovering sites, and investigating objects and other remains

continuity something continuing for a long period of time without being changed or stopped

What is Deep Time?

Deep Time is a term used by historians, **archaeologists** and scientists. They use it to describe the continuous cultural practices of Aboriginal and Torres Strait Islander people that have been developing

for tens of thousands of years. Unlike ancient civilisations like the Egyptians or Greeks, which have ended, these cultures are still alive today. This is a **continuity** or unbroken link to the past.

This is why using terms like ‘ancient history’, or ‘pre-history’ are often mistaken when talking about Aboriginal and Torres

Strait Islander cultures – they are not cultures of the past but are ongoing and connected to the present.

Concepts and skills builder 2.2



Historical significance: Deep Time history

Think: Does this image help you understand how long the Australian continent has been occupied by Aboriginal and Torres Strait Islander Peoples and non-Indigenous Australians?

Pair: Can you think of another way to show this information?

Share: Explain your approach to the class.



↑ Source 2.2.4 Twenty-four-hour clock depicting relative times of First Nations occupation of Australia and non-Aboriginal **occupation**.

Historical concepts and skills: historical significance

occupation a situation in which an army or group of people moves into and takes control of a place

oral history the recording of past events in a spoken form, including through song, story, or dance

geologist a person who studies rocks and similar substances that make up the earth's surface

Oral history stories confirmed by science

Aboriginal and Torres Strait Islander peoples have passed down detailed **oral histories** of natural events that have been confirmed by Western science, demonstrating the accuracy and longevity of their knowledge. Let's examine two examples.

The eruption of Budj Bim (Mount Eccles)

Cultural knowledge: The Gunditjmara People have stories describing the creation of Budj Bim, a volcanic mountain in Victoria. Their oral traditions tell of an ancestral creator, Budj Bim, who revealed himself in a volcanic eruption, shaping the landscape and creating waterways.

Scientific evidence: **Geologists** have dated the volcanic eruption of Budj Bim to about 37 000 years ago, aligning with the timeframes preserved in the oral histories.



↑ Source 2.2.6 A nineteenth-century drawing of the lake in the crater at the top of Budj Bim by Eugene von Guerd

↑ Source 2.2.5 Erin L Matchan et al., ‘Early human occupation of southeastern Australia: New insights from $^{40}\text{Ar}/^{39}\text{Ar}$ dating of young volcanoes’, *Geology*, Vol. 48, No. 4, April 2020

The formation of the Henbury Meteorite Craters

Cultural knowledge: The Luritja People have stories about a fiery devil man who came down from the sun, causing explosions and leaving holes in the ground. This is believed to describe a meteorite impact.

Scientific evidence: The Henbury Meteorite Craters in the Northern Territory were formed approximately 4700 years ago due to a meteorite breaking apart and striking the Earth – events consistent with the oral traditions.



↑ Source 2.2.8 The Henbury Meteorite Craters in the Northern Territory

↑ Source 2.2.7 Myles Gough, 'Aboriginal stories reveal ancient secrets to science', *BBC News*, 19 May 2015

These examples show how Aboriginal and Torres Strait Islander Peoples have maintained accurate records of significant natural events through oral traditions. This connects Deep Time to the present, as their understandings of the natural world have been passed down for thousands of years. Western science has begun to confirm the validity of these accounts.

Lesson 2.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

2.2 Review questions

- 1 **Explain** why it is incorrect to use the terms 'ancient history' or 'pre-history' to **describe** Aboriginal and Torres Strait Islander histories.
- 2 In your own words, **define** what 'the Deep Time history of Australia' means.
- 3 **Define** 'oral history'.
- 4 **Explain** the significance of Aboriginal and Torres Strait Islander oral history stories being confirmed by science.

What is the importance of Country to First Nations Peoples?



Learning intention

We've looked at Deep Time and different ways of understanding history. In this lesson, we will look at the concept of Country for Aboriginal and Torres Strait Islander Peoples. We will also examine respectful protocols around Country.

Lesson starter



Complete the following activity to kick-start this lesson.

Brainstorming: knowing place

- 1 **Identify** the First Nations Country your school is located on.
- 2 Is there any evidence of connections to this Country at your school (e.g. language, artworks or Aboriginal and Torres Strait Islander people regularly visiting the school)?
- 3 Brainstorm ways your school could increase its recognition of the Country it is on.

↓ Source 2.3.1 Ngarrindjeri People caring for Country. [Photo: © Department for Environment and Water]



What is Country?

As we saw in Lesson 2.1, 'Country' is a very important concept for Aboriginal and Torres Strait Islander Peoples. Country is more than a boundary that sets out the land that someone owns. Country is a living thing, created by the ancestors, interacted with, known and loved as its own entity. It is given a capital letter, just like a person's name. Country interdependence means that people and Country have found a way to be together that benefits both. Country is also a vibrant web of spiritual relationships. This makes it a **cultural landscape**, a place that people belong to, not land that belongs to people.

People have an important role in caring for Country. People need to

know all the plants, animals, seasons, weather patterns, waterways, canopy, sky country and sea country and how these fit together, and take actions that make sure all these aspects of Country are healthy and thriving. Part of the important role of people is managing who is on Country and who is using which resources, to ensure nothing is exploited or damaged.

Aboriginal and Torres Strait Islander Peoples are connected to Country in **kinship**. This means Country is like family and you treat Country like it is a person. Connections to Country are so important that they give someone their identity. Country is a living being, much like the people reading this book.



↑ Source 2.3.2
What are totems?

cultural landscape an area shaped by the practices, beliefs and cultural traditions of Aboriginal and Torres Strait Islander Peoples, reflecting their spiritual and historical connection
kinship a social system that establishes a person's relationships and responsibilities to other people and entities

Concepts and skills builder 2.3



Significance: Connections to Country

Read the following diverse range of sources about Country from across Australia, then answer the questions that follow.

The land is the mother, and we are of the land; we do not own the land rather the land owns us. The land is our food, our culture, our spirit, and our identity.

↑ Source 2.3.3 Gai-mariagal and Wiradjuri man Dennis Foley explains his perspective on the relationship to Country. Foley is an academic and university lecturer specialising in business.

People talk about Country in the same way that they would talk about a person: they speak to Country, sing to Country, visit Country, worry about Country, feel sorry for Country, and long for Country. People say that Country knows, hears, smells, takes notice, takes care, is sorry or happy . . . [C]ountry is a living entity with a yesterday, today and tomorrow, with a consciousness, and a will toward life.

↑ Source 2.3.4 Non-Indigenous **anthropologist** Deborah Bird Rose describes how Aboriginal and Torres Strait Islander people that she has interacted with describe Country.

anthropologist scientist engaged in the study of humankind, both from past and present societies

The first lesson from my friends around the campfire is the way they look at the world around them. They see its riches. They look at the sky and understand its meanings. They look to the land and sea around them and see additional sources of food. They look at the people who make up their family and community and they see the blessings in what they do have . . . There is also interconnectedness to the natural world . . . the interconnectedness to Country is a source of a contented life.

↑ Source 2.3.5 Eualeyai and Kamillaroï woman Larissa Behrendt explains her perspective on the Aboriginal and Torres Strait Islander connection to Country and community. Behrendt is an academic specialising in the law, a writer, a filmmaker and an Indigenous rights advocate.

To not know your Country causes a painful disconnection . . . It is this knowledge [of Country] that enables me to identify who I am, who my family is, who my ancestors were and what my stories are. We are indistinguishable from our Country.

↑ Source 2.3.6 Arrente and Luritja woman Catherine Liddle explains her perspective on the importance of Country and community. Liddle is a journalist and media expert. *How does this perspective connect to Nayuka and Georgia Mae's stories you read in lesson 2.1?*

We long for the land and the land longs for us . . . When there is no one there on the land it grows uncared for. Everything overgrows because you don't look after it, you don't burn it, you don't hunt on it to make a balance. So things get overgrown, they get out of balance. For us, we balance as we care for Country and it cares for us. But we are not separate from it. We are in kinship with it.

↑ Source 2.3.7 Gay'wu Group of Women explain their relationship with their Yolngu Country.

The Nhunggabarra [a First People] . . . had to maintain and improve the habitats of all the plants that the animals fed from. They learned this by observing animal behaviours from a young age. Knowledge and rules of behaviour were also embedded in stories, dances and ceremonies. It was the people's responsibility to keep this knowledge alive and in this way the animals were kept alive . . .

↑ Source 2.3.8 Non-Indigenous author Karl-Erik Sveiby with Nhunggabarra man Tex Skuthorpe explain the connection between knowledge and purpose. *How does this perspective show a deep passion for the natural environment?*

- 1 Practise naming sources by following the models in Sources 2.3.3–2.3.8 – for example, Arrente and Luritja woman Catherine Liddle. Practise your understanding by researching David Unaipon, who is featured on the \$50 note. If you were quoting Unaipon as a source, how would you respectfully introduce him?
- 2 **Suggest** reasons why some Aboriginal and Torres Strait Islander people have connections to more than one Country.
- 3 Reflect on your relationship with land or Country.
- 4 Using Sources 2.3.3–2.3.8, write a 100-word paragraph to **explain** how Aboriginal and Torres Strait Islander people connect to Country. **Justify** your explanation by discussing the diversity of Aboriginal and Torres Strait Islander Peoples' understandings of connection to Country.

Continuity and change: Welcome to Country and Acknowledgement of Country

Welcome to Country ceremonies are ancient practices that continue into present-day Australian society. They are an example of a continuity in Australia's past and present. They are usually conducted by an Aboriginal or Torres Strait Islander Elder, often performed at sporting and community events, as well as work and social gatherings. An **Acknowledgement of Country**, which happens before important events or meetings, can be done by any respectful person. They are not an ancient practice in the traditional sense but are deeply inspired by the longstanding customs and cultural values of Aboriginal and Torres Strait Islander Peoples.



↑ Source 2.3.9 Aunty Joy Murphy Wandin performs a Welcome to Country before a Constellation Cup netball match between the Australian Diamonds and New Zealand Silver Ferns, John Cain Arena, Melbourne, on 30 October 2024.

Watch the video and answer the questions that follow.

- 1 According to the video (Source 2.3.10), what was the historical purpose of a Welcome to Country?
- 2 **Describe** some features of a Welcome to Country ceremony or Acknowledgement of Country that you have seen.
- 3 **Compare** the Welcome to Country and Acknowledgement of Country practices. Include a consideration of who can conduct each ceremony.



↑ Source 2.3.10
Welcome to Country

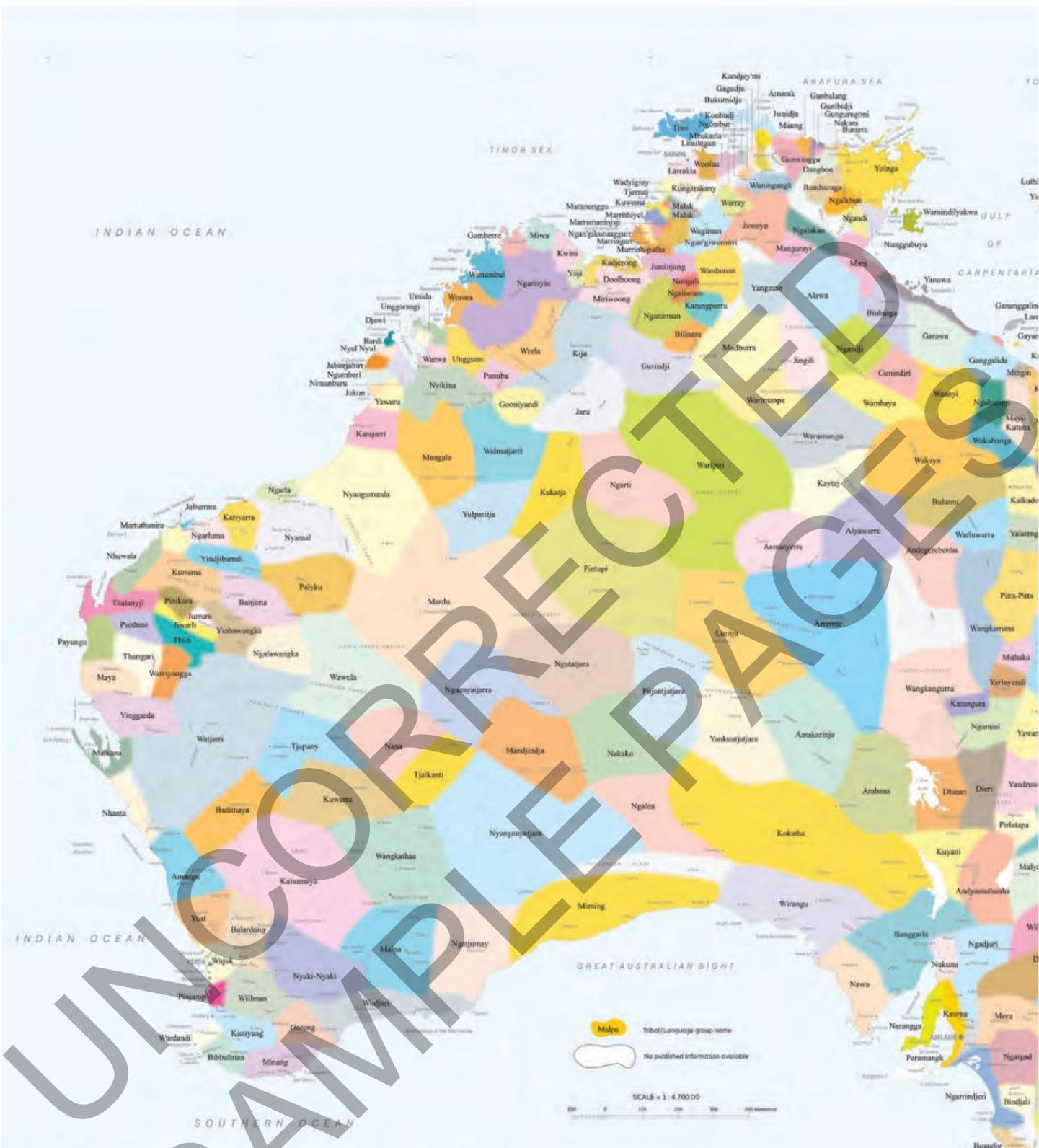
Historical concepts and skills: using historical sources, historical significance, continuity and change

How do Aboriginal and Torres Strait Islander people connect to Place?

Aboriginal and Torres Strait Islander peoples consider that they have always been in **Place**, since their ancestors created living landscapes. Aboriginal and Torres Strait Islander peoples know where their connections to **Country** are. Source 2.3.9 shows different language groups across the continent.

Welcome to Country where a custodian introduces a person to and grants permission to go onto Country
Acknowledgement of Country/Traditional owners a formal statement or gesture of respect for the traditional owners of the land and their spiritual and cultural connection to it

Country/Place spaces mapped out that individuals or groups of First Nations Peoples of Australia occupy and regard as their own and having varying degrees of spirituality. They include lands, waters and sky



THE AIATSIS MAP OF INDIGENOUS AUSTRALIA

David R Horton (creator). © AIATSIS, 1996. No reproduction without permission.

This map attempts to represent the language, social or nation groups of Indigenous Australia. It shows only the general locations of larger groupings of people which may include clans, dialects or individual languages in a group. It used published resources from the eighteenth century – 1994 and is not intended to be exact, nor the boundaries fixed. **It is not suitable for native title or other land claims.**



AIATSIS



←Source 2.3.11 A map of Indigenous Australia. This map attempts to represent the language, social, or nation groups of Indigenous Australia. It shows only the general locations of larger groupings of people, which may include clans, dialects, or individual languages in a group. It used published resources from the eighteenth century to 1994 and is not intended to be exact, nor the boundaries fixed. It is not suitable for native title or other land claims. David R Horton (creator), © AIATSIS, 1996. No reproduction without permission. To purchase a print version visit: <https://shop.aiatsis.gov.au>. *The sourceline for this map tells you where the person who created the map got their information from. Most information came from sources written by non-Indigenous people. Consider whose perspectives and information are being used to create this map. Whose perspectives and information might be missing?*

Amazing but true

Australian Rules Football developed from a game played by the Gunditjmara People (Western district of Victoria). At celebrations, they would play with a ball made from possum skin. Over time this developed into the modern game of AFL. (For more, see <http://cambridge.edu.au/redirect/11142>.)



Go online to access the interactive lesson review and more!

Lesson 2.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



2.3 Review questions

- 1 **Describe** the significance of Country to Aboriginal and Torres Strait Islander people.
- 2 **Explain** why Acknowledgment of Country and Welcome to Country ceremonies are described in the text as a 'continuity' with Australia's past.
- 3 **Discuss** as a class why many schools, organisations and others consider Welcome to Country and Acknowledgement of Country ceremonies an essential part of the way they organise their events, and why these are important in present-day Australian society.
- 4 How does the AIATSIS Map of Indigenous Australia (Source 2.3.11) differ from a map that shows the states of Australia? **Propose** why the maps are different.

↓ Source 2.3.12 Bobby Hill, of Whadjuk-Ballardong Noongar ancestry, won the Norm Smith Medal in the 2023 Grand Final for his team Collingwood.



How does Western science understand how First Nations Peoples came to the Australian continent?



Learning intention

We've looked at the important concept of Country to Aboriginal and Torres Strait Islander Peoples. In this lesson, we will investigate how scientists understand how people first came to the Australian continent.

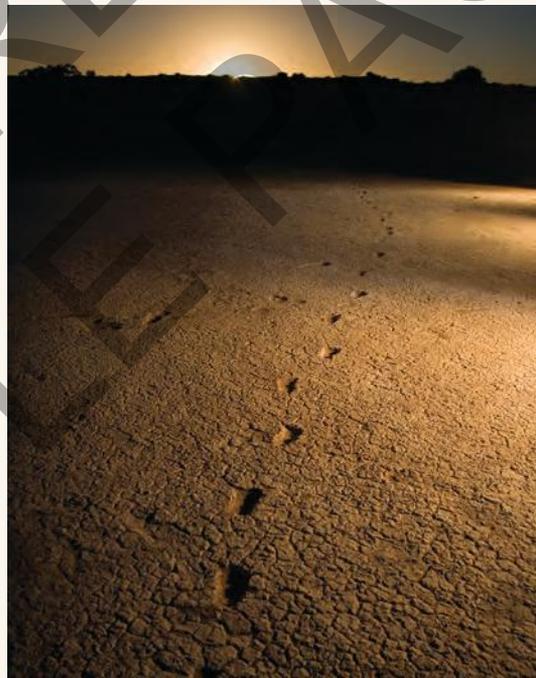
Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- See: Examine** the image (Source 2.4.1), the information in the caption and the video.
- Think:** How were the tracks discovered and dated? How did First Nations knowledge and Western science come together to help us learn more about the past of the Australian continent? With a partner, share your ideas.
- Wonder:** Prepare to share your notes with the class. **Discuss** with your classmates what this image makes you wonder.



↑ Source 2.4.1 Fossilised human footprints discovered in the Willandra Lakes region, a World Heritage site in New South Wales. These prints were made 19 000 to 23 000 years ago. This puts these people in the Willandra Lakes region during the last Ice Age or the **Pleistocene era**. The video source provides additional information about the discovery of the Willandra Lakes footprints.

QR code

↑ Source 2.4.2
Willandra Lakes
footprints

Pleistocene era (or epoch) a long period of geological time that includes the last glacial period, where temperatures were cooler and sea levels lower (1.6 million to 11 000 years **bp**)

bp 'before present', a timescale used to define events from the past. Mainly used for events that are thousands of years old, these timelines are found through scientific methods like radiocarbon dating

How do Western scientists work out when Aboriginal and Torres Strait Islander Peoples came to the Australian continent?

radiocarbon dating a method to determine the age of organic materials, such as hair, bones or wood, by measuring how much carbon-14 is left

luminescence dating a method to determine how long ago mineral grains were last exposed to sunlight or heat

In this lesson, we will learn about the Deep Time history of humans and the techniques scientists use to investigate this. This provides a scientific understanding for how Aboriginal and Torres Strait Islander Peoples arrived on the Australian continent. For many Aboriginal and Torres Strait Islander people today, the ancestors created this Place and its people, who have been here 'since the beginning'. Respectful historians can recognise and work with both these perspectives on the origins of Aboriginal and Torres Strait Islander Peoples.

What is special about Madjedbebe rock shelter?

As we learnt about in Chapter 1, scientists have worked out that people first arrived on Sahul at least 65000 years ago. By using archaeology, stratigraphy and scientific dating techniques, such as **radiocarbon dating**

and **luminescence dating**, scientists have found physical evidence of human activity on mainland Australia that is more than 65000 years old. This evidence was found in northern Arnhem Land at the Madjedbebe rock shelter in Mirrar Country, in the Northern Territory. The Madjedbebe site is a sandstone rock shelter – an overhanging rock wall that is painted with art knowledge. Working in partnership with the Traditional Custodians of the Mirrar Country, a team of archaeologists led by Professor Chris Clarkson from the University of Queensland has excavated the location. This site contains the oldest evidence of human occupation in Australia. It shows there were people living in this area of mainland Australia during the Pleistocene era. More than 10000 artefacts were found, including wall paintings, charcoal from cooking fires, food remains, and artefacts such as stone axe heads, grinding stones and bone fragments.

FPO

↑ Source 2.4.3 Non-Indigenous archaeologist Chris Clarkson working in 2015 with local Djurrubu rangers at the Madjedbebe excavation site in Mirrar Country, Arnhem Land, Northern Territory. Evidence of human activity 65000 years ago was found here.

We found evidence for the mixing of ochre with reflective powders made from ground mica to make a vibrant paint . . . We also found new forms of stone tools such as edge-ground hatchet heads (and even the grinding stones used to sharpen them). These were useful in cutting bark and wood, shaping wooden tools and extracting difficult-to-obtain foods from trees. The grinding stones from the site indicate a range of fruits, seeds, animals and other plants were ground up for food. These are the oldest known examples of seed-grinding stones found in Australia, if not the world. In ancient fireplaces from the site we also recovered pieces of burnt pandanus nuts, fruit seeds and yams, which give us clues to the earliest plant foods consumed at the site.

↑ Source 2.4.4 Non-Indigenous archaeologist Chris Clarkson writing about the finds at the Madjedbebe site. Extract from Chris Clarkson et al., 'Buried tools and pigments tell a new history of humans in Australia for 65,000 years', *The Conversation*, 20 July 2017. *Which objects might be the oldest-known of their kind in the world? What do you think they were used for?*

Among the charred plant remains are fruit pips, nutshells, peelings and fibrous parts from tubers, and fragments of palm stem. These are the discarded leftovers of meals cooked and shared at the rock shelter tens of thousands of years ago . . . Several of these plant foods would have required processing. This included the peeling and cooking of roots, tubers and palm stems; the pounding of palm pith to separate its edible starch from less digestible fibres; and the laborious extraction of pandanus kernels from their hard drupes.



↑ Source 2.4.6 Axes and grinding stones found in the excavations

↑ Source 2.4.5 Non-Indigenous archaeobotanist Anna Florin and others explain what can be understood from the archaeological finds. Extract from Anna Florin et al., '65,000-year-old plant remains show the earliest Australians spent plenty of time cooking', *The Conversation*, 18 February 2020. *What do you think an archaeobotanist does?*

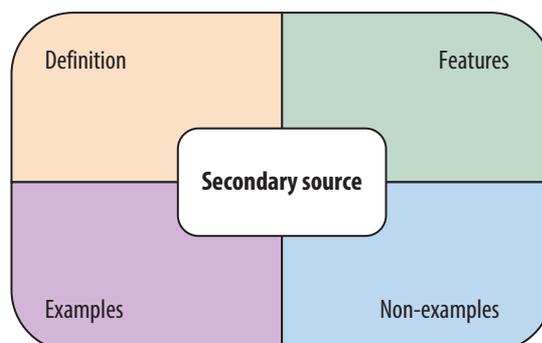
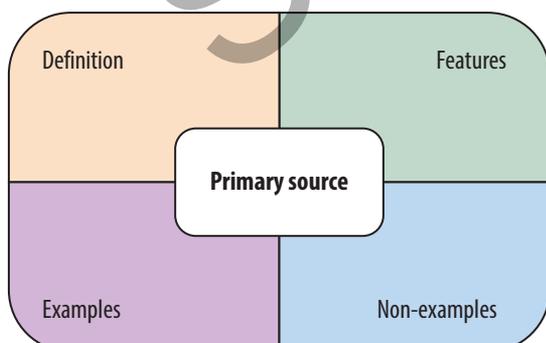
Concepts and skills builder 2.4



Primary and secondary sources

Primary sources are objects that were created at the time of the event or person you are studying. Primary sources include artefacts (like an axe head) or documents (like a diary). **Secondary sources** are things that were created after the event that interpret the event and help us to understand it, such as a textbook or a documentary.

1 Fill in the following graphic organisers to **clarify** your understanding of primary and secondary sources.



primary source
a source of information about the past created in the time being studied

secondary source
a source of information about the past created after the time being studied

- 2 Refer to Sources 2.4.3–2.4.6. Select one of the sources and write 2–3 lines that **identify** whether it is a primary or secondary source and **justify** your answer. Here are some questions to help you:
 - Was it created at the time being studied (Deep Time history of Australia)? = Primary source
 - Was it created after the time being studied (Deep Time history of Australia) to describe, interpret, or explain? = Secondary source
- 3 Using Sources 2.4.3–2.4.6, **suggest** what the evidence from this site reveals about the daily life of Aboriginal and Torres Strait Islander people. **Justify** your claims using evidence from both primary and secondary sources.

Historical concepts and skills: using historical sources, historical significance, continuity and change

How do scientists investigate the migration of Aboriginal and Torres Strait Islander Peoples?

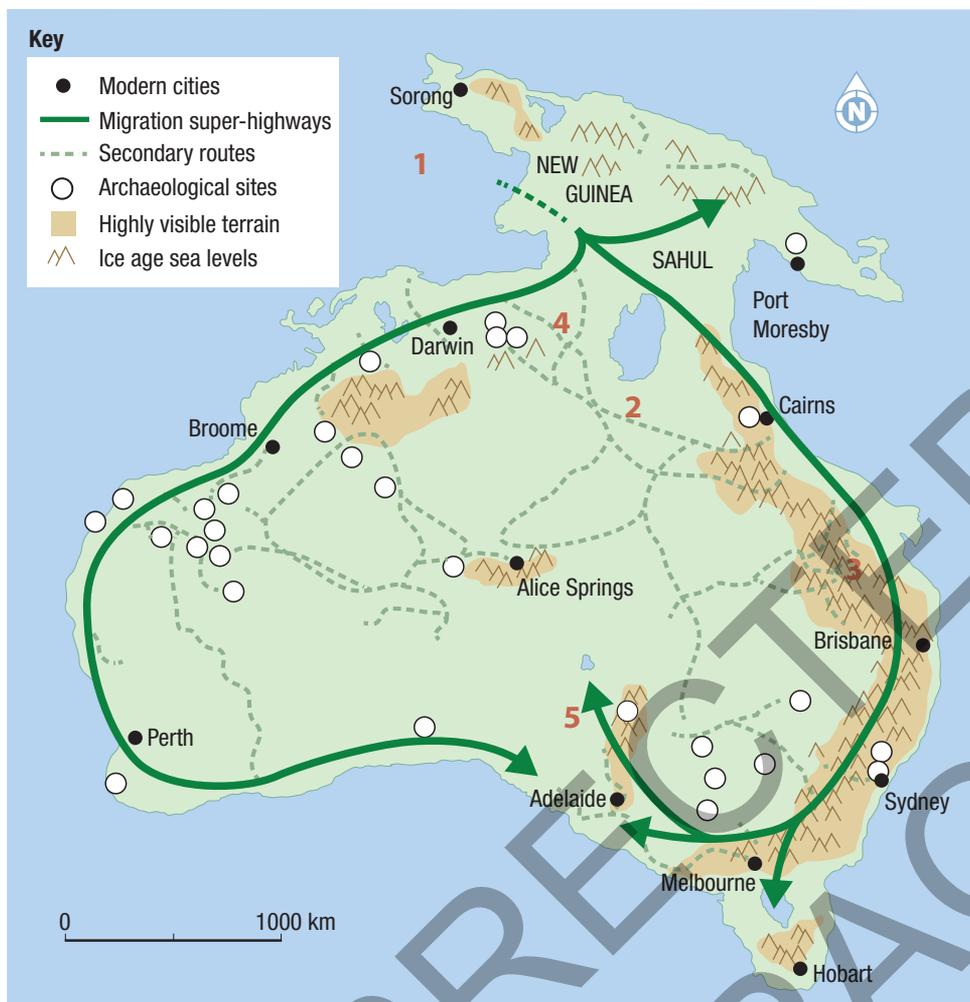
Scientists use a range of techniques to work out how Aboriginal and Torres Strait Islander Peoples migrated across Sahul. By dating evidence at a range of sites, a picture emerges of when people were in certain locations. It is likely that people travelled along waterways and places that had more abundant food sources than across areas such as deserts. Scientists can find evidence of past climates and

ecosystems to figure out the pathways humans travelled.

The following is an important quote from scientists explaining human occupation of Australia, plus a map explaining their findings. We have colour-coded parts of the source and these match the coloured arrows on the map that follows to help you unpack these sources.

Following an initial migration 50 000 years ago [1 on the map, Source 2.4.8], populations spread rapidly around the east and west coasts of Australia . . . [2] The Gulf of Carpentaria was a massive freshwater lake at the time and most likely a very attractive place for the founding population. . . . [T]he first Aboriginal populations swept around the coasts of Australia in two parallel waves. [3] One went clockwise and the other [4] counterclockwise, before meeting somewhere in South Australia. [5] The occupation of the coasts was rapid, perhaps taking no longer than 2000 to 3000 years. But after that . . . populations quickly settled down into specific territory or Country, and have moved very little since . . . [These] people – once settled in a particular landscape – stayed connected within their realms for up to 50 000 years despite huge environmental and climate changes. We should remember that this is about ten times as long as all of the European history we're commonly taught. This pattern is very unusual elsewhere in the world and underlines why there might be such remarkable Aboriginal cultural and spiritual connection to land and Country.

↑ Source 2.4.7 Non-Indigenous scientists Alan Cooper, Ray Tobler and Wolfgang Haak from the University of Adelaide describe the Aboriginal migration into Australia that took place about 50 000 years ago. 'DNA reveals Aboriginal people had a long and settled connection to Country', *The Conversation*, 9 March 2017. *What do the writers say we should remember, and what do they say is 'remarkable' about First Nations Peoples and their cultural practices?*



↑ Source 2.4.8 This image shows the routes scientists think people took to migrate across the land mass of Sahul. *List three things you see on the map. Describe the relationship between pathways and mountains.*

Mapping migration pathways

The following video source provides a range of archaeological evidence discovered across Australia, with dates and locations for human activity across the continent.

The image gallery in the Interactive Textbook provides a range of archaeological evidence discovered across Australia, with dates and locations for human activity across the continent.

Gallery icon

↑ Source 2.4.9 Mapping migration pathways

Lesson 2.4 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

2.4 Review questions

- 1 **Identify** the location of the oldest dated site of physical evidence of human occupation in Australia.
- 2 Using Sources 2.4.8 and 2.4.9, **discuss** what archaeology can tell us about the lives and Deep Time history of Aboriginal and Torres Strait Islander Peoples.
- 3 **Describe** the migration patterns of the First Peoples.
- 4 **Justify** whether oral histories are primary or secondary sources, or **discuss** whether a new category is needed for historians of Australian Deep Time.

How do First Nations Peoples understand how their ancestors came to the Australian continent?



Learning intention

We've looked at the theories Western scientists have about the history of human occupation of Australia. In this lesson, we will look at how First Nations Peoples understand their origins.

Lesson starter



Complete the following activity to kick-start this lesson.

What is the Dreaming?

Aboriginal and Torres Strait Islander Peoples pass on knowledge through storytelling – spoken stories but also Dreaming stories shared through art, dance and song. Telling stories is a powerful way to remember details as well as to explain complex ideas. Each Aboriginal and Torres Strait Islander group has its own body of traditional knowledge and its own belief system, and this knowledge has been passed on for thousands of years. Each language group has its own word to name this traditional set of knowledge and beliefs. Often these names have been translated into English using the word 'Dreaming'. A **Dreaming** about a particular place on **Tagalaka** Country is very generously shared with the permission of Tagalaka knowledge holders.

Ngaarba Dreaming

Near the bottom of these hills is an important waterhole that always has water. All the animals know they can always come for a drink here. There are emus, nuukan and brook (wallabies), waangu and kaani (goannas), zalk (bustards), possums, yarngarddith (turtles), snakes, birds and ngaarba (brolgas). It's a big waterhole and there is enough for everyone. The ngaarba are starting to get worried because they know there is a lot of waal (water) – a flood is coming. They warn everyone, watch out, there's a flood coming! Everyone starts to panic because they realise the ground is flat and there is nowhere to go to escape the water. The ngaarba start building big mounds, like their nests, that rise up out of the ground – the hills you can see. This provides high ground for all the animals to go to when the floods come. This is why this is the Ngaarba Dreaming place; the ngaarba ancestors created this place, and people have travelled here from other Countries in the region to hold the Ngaarba ceremony.

Dreaming/ Knowledge knowledge connected to specific Country, Places, or things, with deepening levels, connected to dance, song, art, ceremony and cultural practices, passed on through kinship

Tagalaka a First Nations group from the Gulf Savannah region of north Queensland

↑ Source 2.5.1 'Ngaarba (brolga) Dreaming' Tagalaka knowledge story, included with the permission of Tagalaka knowledge holders



↑ Source 2.5.2 Tagalaka Country, in far north Queensland

Think, pair, share

- 1 **Think:** Look up the location of Tagalaka Country on the AIATSIS map (Source 2.3.11 or visit the AIATIS website at <http://cambridge.edu.au/redirect/11143>). Why are we lucky to have access to such a Dreaming story?
- 2 **Pair:** Discuss: how important is this particular Place on Country for Tagalaka People?
- 3 **Share:** Prepare to share your ideas with the class.

How do Aboriginal and Torres Strait Islander Peoples understand their origins?

Many Aboriginal and Torres Strait Islander Peoples understand there was a creation time when the ancestors created Country and all living things, including people. This means people have been here ‘always’. Because the land and all living things are here, we are still living in the time of creation. People continue the world the ancestors created by looking after it physically and spiritually.

We have learnt about how scientists understand how Aboriginal and Torres

Strait Islander Peoples arrived on the Australian continent. Some Aboriginal and Torres Strait Islander people do not consider scientific information to be essential in understanding where they came from, while others find it useful. In this lesson, we will investigate a range of views to explore the **diversity** of perspectives of Aboriginal and Torres Strait Islander Peoples.

diversity a range of different people, ideas, or things

everywhen describes the eternal and interconnected nature of time in First Peoples' understandings

linear idea of time often understood as a narrative or story involving events in which one follows another one directly (past, present, future)

Songline describes the features and directions of travel that were included in a song that had to be sung and memorised for the traveller to know the route to their destination. Certain songlines were referred to as 'Dreaming Pathways' because of the tracks forged by Creator Spirits during the Dreaming. These special Songlines have specific ancestral stories attached to them.

Elders knowledge holders respected by Aboriginal and Torres Strait Islander Peoples, often called Aunty or Uncle

How do Aboriginal and Torres Strait Islander Peoples understand time?

Everywhen is a term used by Aboriginal and Torres Strait Islander Peoples to explain their unique concept of time. Unlike the **linear idea of time** (past, present, future), everywhen includes the past, present and future *all at once*. It shows that cultural teachings and events are always relevant – now, then and tomorrow. Words like 'Dreaming', 'Dreamtime', or '**Songlines**' have been used to describe these cultural understandings but are often misunderstood. These are not just myths or stories; they are cultural truths – real events that explain why things are the way they are, offering lessons that are as important as the land itself. Everywhen demonstrates that time is a continuous loop, connecting Aboriginal and Torres

Strait Islander peoples to their Country, their ancestors and their future.

How do Aboriginal and Torres Strait Islander people pass on knowledge?

Stories from the 'Dreaming' are connected to specific Country, specific Places, or specific things in a place. For example, we've now read the Tagalaka People's Ngaarba (broлга) Dreaming that connects to a specific place on their Country. To be a custodian or traditional owner of a place is to also be a custodian of the knowledge of that place and be responsible for passing the traditional knowledge on to the right people. Knowledge custodians are often called **Elders**.

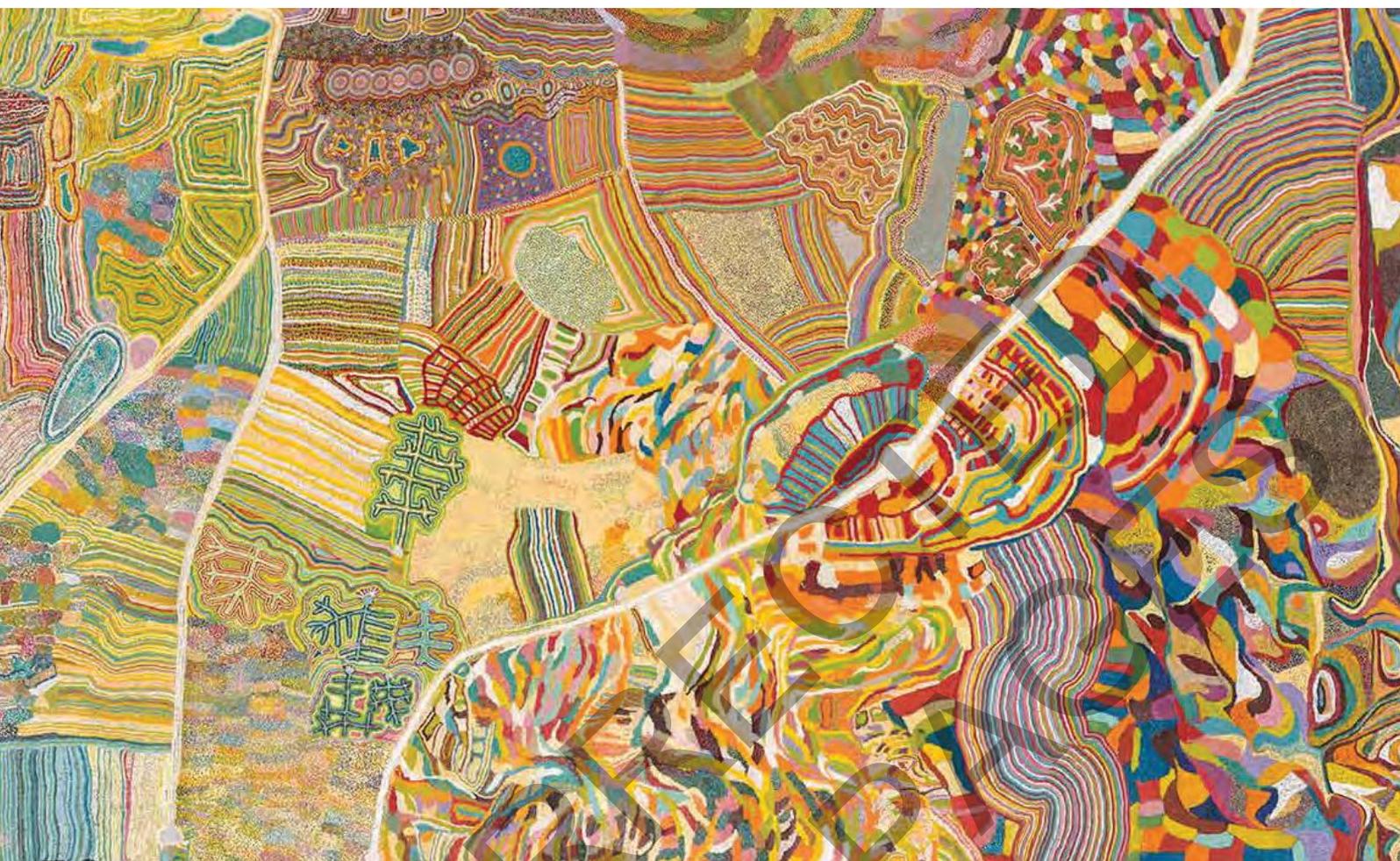
Historians refer to the history-related content of these knowledge stories as 'oral history'; however, the stories involve much more information.

He points to the sky and explains: 'Aboriginal people, according to creation stories, that's where we came from – up there as opposed to walking across the land bridge [from mainland Australia].'

↑ Source 2.5.3 *pakana* man Tony Brown explains his understanding of his people's origins. *Investigate why pakana is written with a lowercase first letter. Does this source help you understand Aboriginal and Torres Strait Islander Peoples' understandings of time and their origins?*

It's an extraordinary thing. We don't find this in other places around the world . . . Say I'm a man from central Australia, my father teaches me stories about my Country. My sister's children, my nephews and nieces, are explicitly tasked with the kin-based responsibility for ensuring I know those stories properly. They take those responsibilities seriously. At any given point in time, my father is telling the stories to me and his grandkids are checking. Three generations are hearing the story at once . . . that's a kind of scaffolding that can keep stories true. When you have three generations constantly in the know, and tasked with checking as a cultural responsibility, that creates the kind of mechanism that could explain why [the First Nations Peoples of Australia] seem to have done something that hasn't been achieved elsewhere in the world: telling stories for 10 000 years.

↑ Source 2.5.4 Non-Indigenous historian Nicholas Reid describes how oral traditions could be accurately passed down in First Nations cultures across 300 generations in a way that does not exist in any other part of the world. *How does this source help you to understand Aboriginal and Torres Strait Islander Peoples' knowledge systems and techniques for sharing knowledge?*



↑ [Source 2.5.5](#) This painting is called *Yarrkalpa* (Hunting Ground) and is by a group of artists called the Martumili Artists. These artists are from the Martu People and they live in central northern Western Australia. This painting tells part of the Dreaming story of the Seven Sisters, a creation and knowledge story that extends across the Western Desert. In this knowledge story, the sisters are pursued across the Country and the land, foods, animals and water are created. The creation and songline can be seen in the landscape and is ever-present. *Is this painting another way of sharing knowledge?*

Concepts and skills builder 2.5



Using historical sources: Aboriginal and Torres Strait Islander Peoples' origins and diverse perspectives

White fellas 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.

↑ [Source 2.5.6](#) Aunty Val Cooms, a Quandamooka Elder, explains her understanding of her origins.

Aboriginal people have always known that we have been on our land since the start of our time, but it is important to have science show that to the rest of the world.

↑ [Source 2.5.7](#) Kurna Elder Lewis O'Brien. Kurna Country is in South Australia.

... according to an Aboriginal sense of time, we have always been here. We came directly out of the Dreamtime of the creative ancestors and lived and cared for Country as it was on the very first day.

↑ Source 2.5.8 Worimi man John Maynard, 'Across "Koori Time" and Space', in A McGrath, L Radmaker and Jakelin Troy (eds), *Everywhen: Australia and the Language of Deep History* (Sydney: New South Publishing: 2023), p. 221

Aboriginal people have, of course, been saying we have always been here.

↑ Source 2.5.9 Bruce Pascoe, *Dark Emu*, Magabala Books, 2014, p. 41

- 1 **Explain** how these sources show the diversity of Aboriginal and Torres Strait Islander Peoples' perspectives.
- 2 **Suggest** why you think there is not one unified perspective for all Aboriginal and Torres Strait Islander people.
- 3 **Compare** the ways the sources explain the origins of the First Peoples.

Historical concepts and skills: using historical sources, historical significance, continuity and change



Go online to access the interactive lesson review and more!

Lesson 2.5 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



2.5 Review questions

- 1 **Outlines** your understanding of what 'Dreaming' might mean.
- 2 **Define** Everywhen in your own words.
- 3 **Discuss** how the sources in this lesson suggest the diversity of Aboriginal and Torres Strait Islander perspectives.
- 4 **Explain** how many Aboriginal and Torres Strait Islander people believe they came to this continent.

What were the key events in the Australian continent's Deep Time history?



Learning intention

We've looked at the way First Nations Peoples understand their origins on the Australian continent. In this lesson, we will look at the significant events in Australia's Deep Time history.

Lesson starter



Complete the following activity to kick-start this lesson.

Think, puzzle, explore

Most people know something about ancient Australia. Use 'think, puzzle, explore' to sum up what you know so far.

- 1 **Think** about the things that you already know about ancient Australia, and **list** them.
- 2 What **puzzles** you about Australia's Deep Time history, and what more would you like to make clear? **List** them.
- 3 What else would you like to **explore** to learn more about ancient Australia? **List** them.

↓ Source 2.6.1 Remains of Lake Mungo



Table 2.6.1 Milestones in Australia's Deep Time history

2.6 million to c.11 650 years ago Pleistocene Epoch (or Era)	2 million years ago		Hominids migrate out of Africa	
	c.160 000 years ago		First anatomically modern humans appear (in Africa)	
	Last glacial period (Ice Age)	c.115 000 – c.11 750 years ago	c.80 000 years ago	Anatomically modern humans migrate out of Africa, to Europe and Asia
			c.74 000	Mt Toba volcanic eruption, Indonesia sent the planet into a severe ice age that nearly caused the extinction of modern humans
		c.65 000 – c.51 000	Migrations from Sunda to Sahul (Australian continent) world's first modern human sea crossing	
		c.50 000 (at least, possibly c.65 000)	Madjedbebe, NT world's first grinding stones and edge ground axes	
		c.45 000	Puritjarra, central Australia settlement of desert regions	
		c.44 000	Parmerpar Meethenar, TAS people first occupy glacial Tasmania	
		c.43 000	Winjana Gorge, WA world's oldest hafted (this means a tool with a handle) stone axe	
		c.42 000	Lake Mungo, NSW world's oldest human remains and oldest cremation	
c.40 000		Jansz and Mandu Mandu, Pilbara coast, WA oldest evidence of marine subsistence in Australia		
c.40 000	Murujuga & Carpenter's Gap, WA oldest evidence of art (petroglyphs and ochre) and world's largest rock art gallery			
c.35 000	Murujuga, WA possibly world's oldest depiction of a human face			
c.30 000	Cooler, sea levels drop, extreme drought in some places Last Glacial Maximum (peak Ice Age) begins			
c.30 000	Mandu Mandu, WA among oldest shell beads in the world			
c.40 000–30 000	Cuddie Springs, NSW co-existence with megafauna			
c.22 000	Willandra Lakes, NSW footprints of people			
c.21 000	Occupation of the emerging coasts			
c.12 000–9000	Climate improving, sea levels rise, coasts flooded, climatic variability; mainland Australia separated from New Guinea and Tasmania			

era (or epoch) a period of geological time

Holocene the period of time beginning at the end of the Pleistocene era (= around 11 000 years ago) that begins at the end of the last glacial period, where global temperatures began to warm and sea levels rose, and continuing to the present

subsistence the state of existing by having just enough resources like food and water to stay alive

megafauna large animals over 40 kg, such as the elephant, rhinoceros and extinct diprotodon

c.11 650 years ago to 1945 CE Holocene Epoch (or Era)	c.10 000	Swamp in south-eastern Australia <i>oldest surviving boomerang</i>
	c.9000	Small blades, spear throwers, composite spears <i>more diverse and innovative tools appear</i>
	c.9000	Rosemary Island, WA <i>stone shelters constructed</i>
	c.6600	Budj Bim, VIC <i>fish traps – some of the world’s oldest aquaculture</i>
	c.5000	New migration of people from South-East Asia <i>dingo arrives on the Australian continent</i>
	c.4000	‘X-ray’ art of Arnhem Land <i>drawings of the physical structure of people and animals</i>
	c.3000	Intense use of coastal resources, sea levels peak, climate drier <i>people become more territorial</i>
	c.2000	Complex social & religious systems develop <i>increasing settlement and site numbers</i>
	c.300 CE	Indonesians visit north coast to fish and trade
	1500s–1700s CE	Portuguese, Dutch, Makassan and British explore the Australian coastline

↑ Source: Adapted from History Teachers’ Association of New South Wales, *Ancient Australia: An Introductory Guide for Teachers and Students*. [© HTANSW, 2024 pp. 9–10]

aquaculture the raising of water animals such as fish for food

Makassan people from the region of Sulawesi in Indonesia

Lesson 2.6 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

2.6 Review questions

- 1 **Outline** the main changes to the Australian continent since the Pleistocene. In your response, try to include key terms such as Sahul, ice age and climate.
- 2 Look at the timeline to work out how old Aboriginal and Torres Strait Islander societies are. Do some quick research online to **compare** this age to the ancient societies of Egypt, China and Greece.
- 3 **Examine** Table 2.6.1. **List** the ‘world’s first’ and ‘world’s oldest’ items. What impression does this give you of the importance of ancient Australia as a part of global history?

How have First Nations Peoples responded to environmental changes from Deep Time?

Part 1: Land and landscape



Learning intention

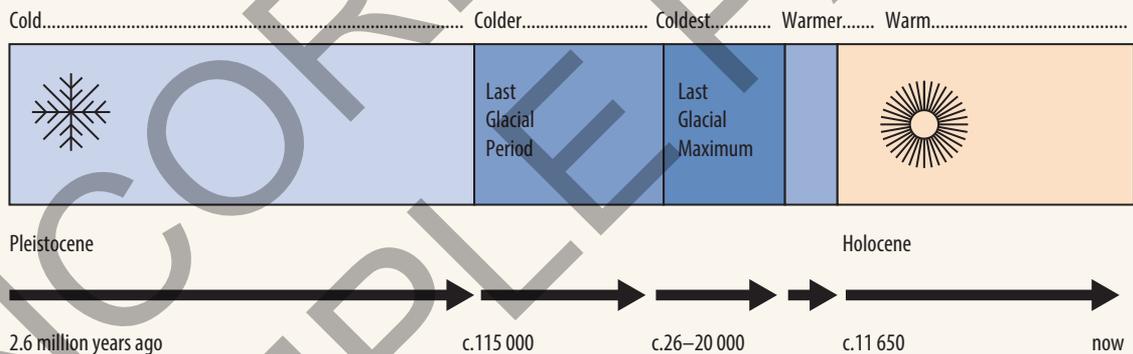
We've looked at the broad events in Australia's Deep Time history. In this lesson, we will look at how Aboriginal and Torres Strait Islander Peoples have responded to changes to the environment since Deep Time.

Lesson starter



Complete the following activity to kick-start this lesson.

Pleistocene to Holocene eras



↑ Source 2.7.1 Pleistocene to Holocene timeline, showing climate changes. Adapted from History Teachers' Association of New South Wales, *Ancient Australia: An Introductory Guide for Teachers and Students*. [© HTANSW, 2024, p. 7]

- 1 Consider Source 2.7.1. What were the main differences between the Pleistocene and the Holocene eras?
- 2 How would these differences have affected the experiences and ways of life of Aboriginal and Torres Strait Islander Peoples in Deep Time history?

How have Aboriginal and Torres Strait Islander Peoples responded to changes in land and landscapes?

When people first came to Sahul and migrated around the continent, the world was in an Ice Age, which was cooler and drier than today. **Climate** changes over the next 60 000 years changed patterns of occupation and food sources, and at times forced people to move to more sheltered areas; however, Aboriginal and Torres Strait Islander people maintained systems of connection to the entire continent that remain today.

How have Aboriginal and Torres Strait Islander Peoples responded to loss of land during Deep Time?

It is important to acknowledge that since 1788, Aboriginal and Torres Strait Islander Peoples have faced massacres, **displacement**, **dispossession** and cultural damage and loss. However, the focus of this lesson is about the Deep Time history of Australia and the loss of land due to changes in climate.

The most dramatic landscape change that Aboriginal and Torres Strait Islander Peoples have lived through was the end of the Ice Age about 11 700 years ago. This marks the beginning of the era scientists call the Holocene era. Sea levels rose and ‘drowned’ one-quarter of the Sahul land mass. Sahul separated into several land masses that today we call the mainland Australian continent, Tasmania, the Torres Strait Islands and Papua New Guinea. Rising sea levels made the gaps between lands larger, and some groups of people were cut off from other groups entirely.

The **inundation** that took place after the Ice Age wasn’t a sudden flood. Sea levels rose only 1–2.5 cm each year.

However, in low-lying coastal areas, this small increase was enough to submerge areas of land hundreds of metres wide in just one year. In a single

lifetime, Aboriginal and Torres Strait Islander Peoples living near the sea may have experienced significant loss of land. Some groups had to move further inland when the seas rose. Others found that their ancestral Country located on peaks of higher ground had, over generations, become transformed into islands.

For thousands of years a land bridge, known as the Bassian Plain, connected mainland Australia to Tasmania, and Aboriginal people could travel back and forth between Victoria and Tasmania. Once sea levels rose, the Aboriginal people of Tasmania remained isolated for around 8000 years, from the end of the Ice Age until European colonisation after 1788.

Dreamings of ancient rising sea levels

Some ancient Aboriginal Dreamings that still exist today hold knowledge passed down through generations about events from a long time ago. As we saw in lesson 2.2, these events are now also supported by scientific evidence. For example, there are 21 different Dreamings from places along Australia’s coast that talk about a time when the sea levels were much lower than they are now. They describe how the seas started to rise, changing the land and forcing people to find new ways of living.

climate the general weather conditions usually found in a specific place

displacement forced removal of people from their ancestral lands, often resulting in loss of culture, connection and livelihood

dispossession the taking of lands and resources without consent

inundation a flood

A note...

Unfortunately, racism has led to many Australians not respecting important parts of Aboriginal and Torres Strait Islander cultures. Things like Lore, spirituality, family connections, totems, and Dreaming stories are sometimes treated as if they’re make-believe. But these are very important parts of the many different Aboriginal and Torres Strait Islander cultures across Australia. They should be respected as real and meaningful parts of these cultures. They’re not the same as myths, fairy tales, or made-up stories. We should talk about them with care and understanding, because they are deeply important truths for the many Aboriginal communities they belong to.

Scientists say that sea levels reached their current height about 7000 years ago, so these stories must have been told long before that.

Researchers Patrick Nunn and Nicholas Reid summarised the following knowledge stories that were shared with them in 2016 (Sources 2.7.2 and 2.7.3).

The principal story concerns two Aboriginal peoples, the Noonuccal of North Stradbroke and the Nughies of Moreton. One version states that a bailer shell [a type of sea snail] kept by the Noonuccal contained power over the winds and was coveted by the Nughies. When the keeper of the bailer discovered this, he summoned the winds and commanded them to blow so hard that the connection between the islands would be severed, something that caused the Nughies to become stranded thereafter on Moreton Island.

↑ Source 2.7.2 A knowledge story about the rising sea levels in the area that separated Moreton and North Stradbroke Island near Brisbane, Queensland

According to Gungganyji informants . . . the barrier reef was the original coast here at a time when a man called Gunya was living here. [After he] consumed a customarily forbidden fish, the [ancestors] caused the sea to rise in order to drown him and his family. He evaded this fate by fleeing to the hills but the sea . . . never returned to its original limits.

↑ Source 2.7.3 A knowledge story about the rising sea levels near Cairns in Queensland

In the Whitsunday Islands . . . the distance became too great, with the mainland over 30 kilometres away . . . the people were left to cope on their own [and] they did so by becoming specialised marine **foragers**. They developed their own artistic traditions and a distinct social and **linguistic** identity. They invented new tools to suit their particular subsistence needs: fishhooks from shellfish and turtle shell, spear points from bone and wood, as well as nets and shell-scraping tools.

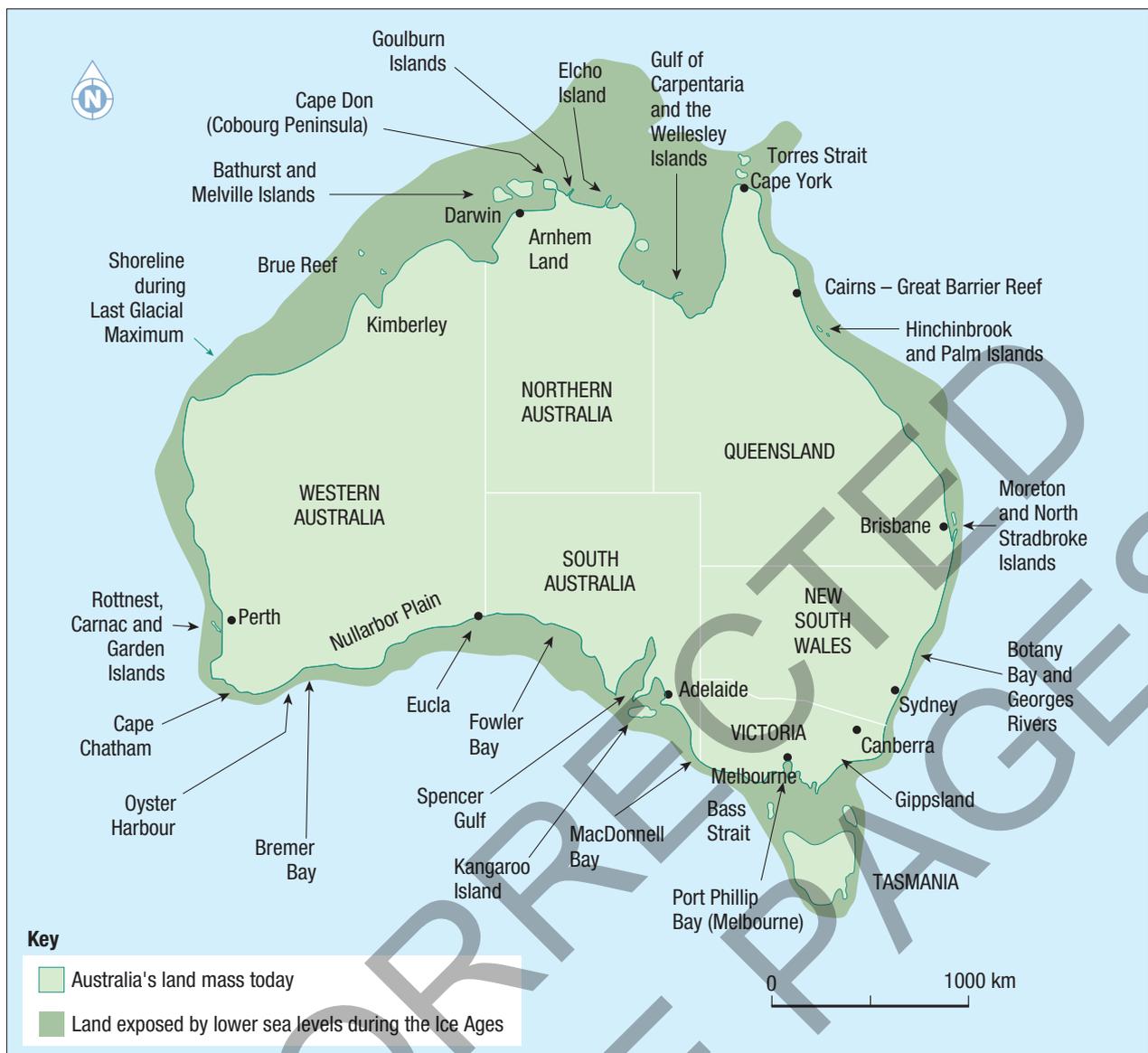
forager a person or animal that goes from place to place in search of things that they can eat or use

linguistic related to language or the study of language

↑ Source 2.7.4 A non-Indigenous archaeologist, Scott Cane, explains the impact of rising sea levels on the Ngaro Country in Queensland's Whitsunday Islands. The Ngaro were skilled seafarers who navigated their three-piece canoes over large distances to trade, fish and hunt small whales. *What made the Ngaro People change their way of life?*

Traditional knowledge passed down by the Boonwurrung elder Benbow, and by countless generations before him, told of the time when Port Phillip Bay – Nerm – was land rather than water, and formed a vast hunting ground where kangaroos abounded, and when the Yarra River emptied into the ocean at Port Phillip Heads. There are different stories about the flooding of Nerm, and what triggered this dramatic and dangerous phenomena; some stories suggest it was because the ancestor spirits were angry and sought vengeance, and the flood came as a punishment. In Boonwurrung tradition it was a time of chaos and upheaval.

↑ Source 2.7.5 A Victorian government website explains the impact of rising sea levels in the area now known as Fishermans Bend for the Boonwurrung and Woiwurrung Peoples of the Kulin nation. *What made the Ngaro People change their way of life?*



↑ Source 2.7.6 A map – developed by non-Indigenous researchers Patrick Nunn (from the University of the Sunshine Coast) and Nicholas Reid (from the University of New England) – showing 21 locations where recorded Aboriginal and Torres Strait Islander Peoples’ knowledge stories tell of rising sea levels.

Concepts and skills builder 2.7



Significance and continuity and change: Rising sea levels during Deep Time

Use Sources 2.7.2–2.7.6 to answer the following questions:

- 1 **Explain** the features of the map.
- 2 **Interpret** the map and write what it conveys in your own words.
- 3 **Empathy** is the ability to share someone else’s feelings or experiences by imagining what it would be like to be in that person’s situation. Developing a sense of empathy for people in the past is one of the great skills you will learn in the History subject. Brainstorm the impacts that rising sea levels may have had on Aboriginal and Torres Strait Islander people.
- 4 Using Source 2.7.4, **suggest** how Aboriginal and Torres Strait Islander Peoples responded to rising sea levels with innovations.

empathy the ability to relate to other people

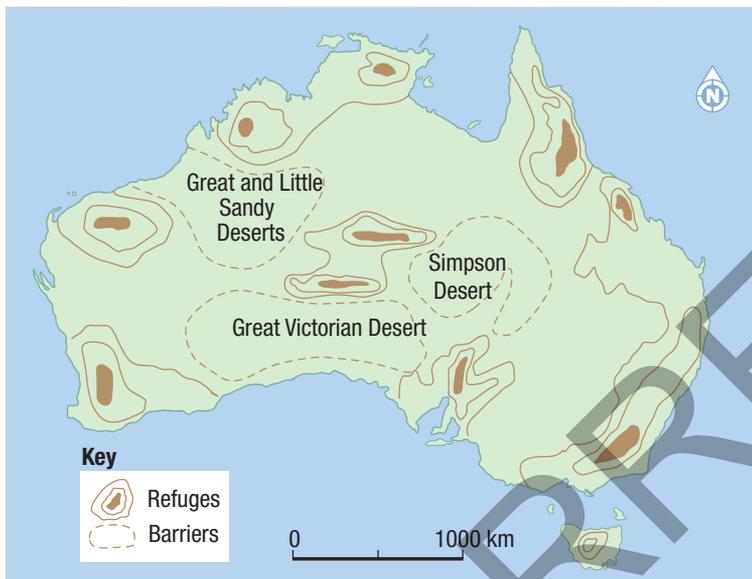
Historical concepts and skills: using historical sources, historical significance, continuity and change

How have Aboriginal and Torres Strait Islander Peoples responded to changes to vegetation?

People arrived on Sahul more than 65 000 years ago; however, the Ice Age reached its coldest point about 20 000 years ago. As the climate changed, across Sahul many forests disappeared, waterways dried and some areas transformed into

deserts. Researchers have discovered that when the climate significantly cooled, the populations of Aboriginal and Torres Strait Islander Peoples sought sanctuary in well-watered areas and population numbers decreased.

These climate changes occurred over many thousands of years. Archaeologists have discovered numerous sites across Australia that show evidence of changes in how Aboriginal and Torres Strait Islander Peoples lived in response to these changes, from changes in food collection to expressions of cultural thought. Allen's Cave, located in the Nullabor in the west of South Australia, was first occupied about 40 000 bp, but was abandoned between 17 500 and 15 000 years ago. This appears to coincide with a period of lower rainfall and when sea levels fell. The new coastline was about 160 km further to the south. The people who lived in the area probably moved to live on the new plain closer to the coastline. At the beginning of the Holocene, sea levels rose again, and we can see that the cave was used more regularly again.



↑ Source 2.7.7 The darker shading shows the well-watered areas where Aboriginal and Torres Strait Islander Peoples congregated during the last Ice Age. Adapted from work by archaeologist Peter Veth



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Lesson 2.7 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



2.7 Review questions

- 1 **Discuss** some of the ways that changes to the climate affected the lives of Aboriginal and Torres Strait Islander Peoples in Deep Time.
- 2 **Explain** the significance of Dreaming stories about sea level rises.
- 3 **Describe** the significance of Allen's Cave in South Australia.
- 4 **Examine** Source 2.7.7.
 - a **Compare** the refuges with where most people live on the continent today. **Identify** similarities and differences.
 - b **Propose** environmental reasons for any differences or similarities.

How have First Nations people responded to environmental changes from Deep Time?

Part 2: Animal extinctions



Learning intention

In this lesson we will continue to look at how Aboriginal and Torres Strait Islander people have responded to changes to the environment since Deep Time.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** What can you spot in the images in Source 2.8.1? Which animals look familiar to you?
- 2 **Think:** What happened to these animals?
- 3 **Wonder:** How did Aboriginal and Torres Strait Islander people interact with megafauna?

FPO



↑ Source 2.8.1 Illustration of some of Australia's megafauna. For at least 20 000 years, Aboriginal and Torres Strait Islander people lived alongside these now-extinct large animals.

How have Aboriginal and Torres Strait Islander people responded to animal extinctions?

Many Aboriginal and Torres Strait Islander Peoples' stories tell of a time of giant animals. The well-known story of the Rainbow Serpent is just one of these stories, and the story of the creation of Gariwerd (the Grampians) is another. Physical evidence of megafauna and representations of these creatures in Aboriginal and Torres Strait Islander Peoples' art have been found in many archaeological sites, including at Madjedbebe.

- Thylacine – sometimes called the 'Tasmanian Tiger', a carnivorous wolf-like animal
- Zygomaturus – a giant marsupial believed to be like a modern hippopotamus
- Diprotodon – a marsupial that is a distant relative of wombats and koalas
- Megalania – a giant goanna that may have fed on the Diprotodon (seen in Source 2.8.1)
- Quinkana – a land-dwelling crocodile (seen in Source 2.8.1)
- Phascolonus – a giant wombat weighing 100–250 kg.

fossil evidence information gathered from the shape of a bone, a shell, or a plant or animal that has been preserved in rock for a very long period

Amazing but true...

Fossil evidence has placed the Thylacine (Tasmanian Tiger) on the Australian mainland, proving Tasmania was once connected to the mainland during the Pleistocene era, when sea levels were lower. Thylacine bones have been found in Victoria and even in Lake Mungo, NSW, alongside other megafauna.

Australia's extinct megafauna included animals such as:

- Macropus – the world's biggest kangaroo (seen in Source 2.8.1)
- Protemnodon – a giant forest wallaby (seen in Source 2.8.1)

FPO

↑ Source 2.8.2 Size comparison of an adult male human with a modern wombat and a phascolonus. These giant wombats lived all around Australia 4 million – 40 000 years ago.



↑ Source 2.8.3 Part of a skeleton of a Diprotodon from Cox's Creek, Tambar Springs, New South Wales (skull and foot bone). Diprotodon was a megafauna marsupial that is a distant relative of wombats and koalas. It lived until about 44 000 years ago.

The following story from First Nations woman Jacinta Koolmatrie could be considered evidence of megafauna being mentioned in oral histories for tens of thousands of years.

Since the beginning of time my ancestors have been telling stories . . . as a young Adnyamathanha kid I was told the story about the Yamuti. The Yamuti was a very large and scary animal that specifically looked to steal little kids. This story was not told in a way that placed it in the past, Yamuti existed in real time. We were always told that if we ever saw the Yamuti we had to run to the nearest tree and climb high, because the Yamuti had one flaw, the Yamuti could not look up . . . one of the striking descriptions of the Yamuti was that he is very big. Bigger than us kids especially.

Thousands of years ago megafauna were abundant on this land. One animal in particular was the Diprotodon, the largest marsupial to have existed. The Diprotodon was incredibly large and thought to have been a browser, eating plants like shrubs. However, it's mostly believed to have been a harmless animal.

Thinking more about the Diprotodon's physical description, it is oddly similar to that of the Yamuti. Interestingly, I was even told that our understanding that a Yamuti could not look up, did show some potential of being present on a Diprotodon's skeleton . . . If the Yamuti and the Diprotodon are the same animal, this shows an incredible depth of knowledge that has flowed through thousands of Adnyamathanha generations [more than 40 000 bp].

Whether or not you believe the Diprotodon is the Yamuti, our stories are derived from the truth. Something happened over 40 000 years ago that made my ancestors tell a story to protect their children.

↑ Source 2.8.4 Jacinta Koolmatrie, an Adnyamathanha and Ngarrindjeri person, shares a story of a Yamuti. *What do you think Koolmatrie's knowledge could tell historians about Deep Time history?*

How have Western scientists understood what happened to Australia's megafauna?

Concepts and skills builder 2.8



Significance and continuity and change: Megafauna

The extinction of Australia's megafauna remains, to this day, the subject of scientific debate. The following sources provide a selection of some **hypotheses** that have been presented to explain the extinction of megafauna in Australia.

hypothesis a theory based on facts

We record high levels of the dung fungus *Sporormiella*, a proxy for herbivore biomass, from 150 000 to 45 000 years ago, then a marked decline indicating megafaunal population collapse, from 45 000 to 43 100 years ago, placing the extinctions within 4000 years of human dispersal across Australia... [our results] rule out extreme aridity and habitat change as causal mechanisms, leaving human agency, specifically imperceptible overkill as the most probable extinction cause.

Climate change, not early humans, was likely responsible for the extinction of Australia's megafauna, according to groundbreaking research that has rewritten the ancient history of our continent.

↑ Source 2.8.5 Extract from van der Kaars, S, Miller, G, Turney, C *et al.* 'Humans rather than climate the primary cause of Pleistocene megafaunal extinction in Australia'. *Nat Commun* 8, 14142 (2017). <https://doi.org/10.1038/ncomms14142>

↑ Source 2.8.6 Extract from Stuart Layt, 'Groundbreaking research rewrites Australia's ancient history', *Brisbane Times*, 18 May 2020

lunette a crescent-shaped chain of dunes bordering a lake bed or valley in arid or semi-arid locations

It is generally thought from the archaeological record that people first arrived in Australia about 50 000 years ago, perhaps as long as 60 000 years back. Many of the megafauna were slow-moving and perhaps easily hunted, but they would also have been vulnerable to changes in their environment. However, there is little evidence to show that early Australian people hunted the big animals.

The earliest signs of people at Willandra Lakes are more than 50 000 years old, and preserved in their campsites are the remains of what they ate. None of the Willandra megafauna have been found in campsites. In the ancient Willandra menu, meat meant mainly shellfish, yabbies, fish and a vast array of small mammals, including hare wallabies, bettongs, bandicoots, bilbies and native rats. These species could be caught in either the lake or in **lunette** burrows. Larger kangaroos are less common in the remains, but perhaps these were caught and eaten away from the lakes. Maybe megafauna too were hunted and eaten on the plains?

↑ Source 2.8.7 Extract from the *Visit Mungo* website, visitmungo.com.au

- Using Sources 2.8.5–2.8.7, **identify** the hypotheses presented by each author regarding the extinction of Australia’s megafauna. Copy and complete the table below to do this. We’ve filled in the first source for you. How did megafauna die out according to the sources?

Human actions (over hunting)	Climate changes	Unknown
Source 2.8.5 Kark Gruber		

- With a partner, **discuss** which hypothesis you think is most convincing regarding Australia’s megafauna extinction. **Justify** your choice with evidence.
- Explain** whose voices are missing from these hypotheses.
- Discuss** what kind of new evidence would contribute to this exploration. How could scientists and historians find new evidence?

Historical concepts and skills: using historical sources, historical significance, continuity and change



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Lesson 2.8 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



2.8 Review questions

- Define** ‘megafauna’ in your own words.
- Refer back to Source 2.8.1.
 - Pick one megafauna animal and **describe** how they differ from the equivalent animal today.
 - Identify** what kinds of scientific evidence would have been used to make the artwork of this megafauna.
- Compare** Jacinta Koolmatrie’s description of the Yamuti with *Diprotodon* (Source 2.8.4).
- Categorise** each source in this lesson as a primary or secondary source and **justify** each choice.

What technological achievements have First Nations people developed?

Part 1: Earth and water



Learning intention

We've looked at how Aboriginal and Torres Strait Islander Peoples responded to changes to the environment since Deep Time. In this lesson, we will look at some of the practices that First Nations Peoples have developed to manage the environment since Deep Time.

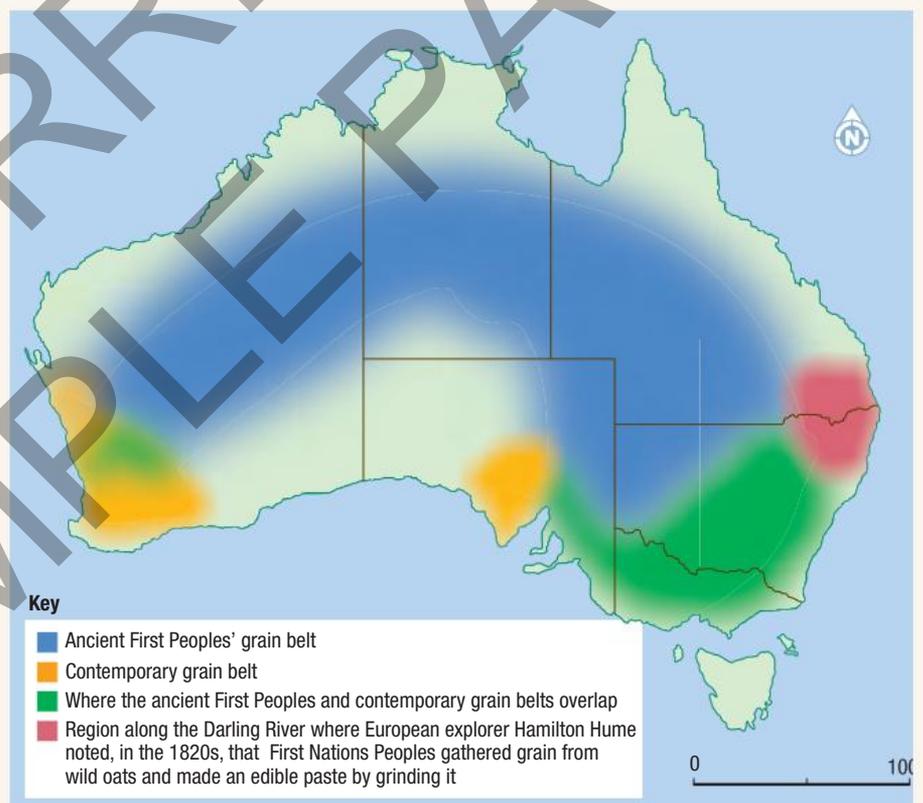
Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- See:?** What does the map in Source 2.9.1 show us?
- Think:** What does this show about how much of the continent Aboriginal and Torres Strait Islander people were able to use for grain cultivation?
- Wonder:** Why has modern agriculture not been possible in central Australia? Can you think of reasons why this is the case? What might this **suggest** about Aboriginal and Torres Strait Islander knowledge of Country?



↑ Source 2.9.1 This diagram shows the traditional Aboriginal grain belt compared to the modern Australian grain belt.

What techniques have Aboriginal and Torres Strait Islander people developed to cultivate food?

What are Aboriginal and Torres Strait Islander Peoples' regenerative food techniques?

Aboriginal and Torres Strait Islander people on Country today continue to actively manage the land in sophisticated ways. They use unique food **cultivation** systems developed by their ancestors shared through the generations, as well as incorporating new techniques. These systematic ways of using the Australian landscape have also been recorded by non-Indigenous people since the earliest times of European contact.

Historian Bruce Pascoe used the original journals of the first European settlers in Australia to examine how different Aboriginal and Torres Strait Islander people farmed. The historic journals that Pascoe quotes from reveal glimpses of what Australia might have been like before the Europeans came, and perhaps what ancient Aboriginal and Torres Strait Islander Peoples' societies

were like. For example, **yam** cultivation was widespread in areas with more rainfall, and different varieties were grown with differing techniques according to location. A European colonist commented there were 'millions of *murnong*' (yams) being grown and harvested by Aboriginal people in south-east Australia. Other Europeans commented on the growing of **grain** crops such as millet in the more arid areas. Source 2.9.1 shows us how widespread the growth of grain crops were. Grain seeds were then ground using grindstones into flour for making bread.

Aboriginal and Torres Strait Islander Peoples' food cultivation works with plants and animals to develop **regenerative** practices that avoid **exploitation**. The Victorian government's Old Treasury Building website summarises the use of the land by Aboriginal and Torres Strait Islander People compared to British and European people who brought their farming practices to Australia after 1788.

cultivation the act of preparing land and growing crops on it

yam a type of root vegetable

grains small, hard, dry seeds from grasslike plants, used as a staple food source, often ground into flour for making bread

regenerative food cultivation a method of farming that creates biodiverse, sustainable and resilient food systems

exploitation the use of something to get an advantage from it



↑ Source 2.9.2 This sketch of First Nations women gathering *murnong* (yam daisy) was created by British settler Henry Godfrey on 11 November 1843.

Compared to those who came later, First Nations people trod lightly on the land. While changing and shaping their environment, survival depended on preserving plants and animals in the long-term, safeguarding the food supply for the future. Low population densities and **sustainable** food practices enabled them to live within the resources of the land.

This balance was upset soon after European **pastoralists** arrived. They laid claim to the rivers immediately, then spread inland at an astonishing rate. By the late 1840s there were more than 15 000 European settlers and six million sheep, already dispersed over millions of acres of grassland. By 1861 there were 123 000 people, and pastoralists held over 41 million acres in **pastoral leases**. Another 70,000 acres were planted with wheat. It was a devastating invasion of a fragile landscape.

↑ Source 2.9.3 'On the Land: Australia Felix', Old Treasury Building website, accessed 2 December 2024. *How does this source explain how Aboriginal and Torres Strait Islander people managed the land before British colonisation? How does this source explain how Aboriginal and Torres Strait Islander people managed the land after British colonisation?*

Stone quarries

Stone was another technique for managing natural resources. It was used to cut animal flesh, direct water, chop wood, skins and fibres, grind seeds, and make ritual items. Hard rock like greenstone or basalt was used for chopping; softer sandstone was used for grinding, and clays and ochres were used for pigments. Victoria had about a dozen large Aboriginal quarries.

At Mount William, or called *Wil-im-ee Moor-ring* by the local Wurundjeri people (which means 'axe place'), near Lancefield in Victoria, there is evidence of a large ancient quarry site. The people

living and travelling there were making stone hatchets and axes made from greenstone volcanic rock, under the leadership of Wurundjeri William Elders such as Billibellari. Pits and waste rock were left behind, giving solid evidence that it was a place where tools could be made ready to trade to other groups or used for themselves. Historian Isabel McBryde has mapped discoveries of these axe heads showing that they were traded by the Wurundjeri with other First Nations groups up to 300 km from the quarry site. Clearly, Mt William was known in Aboriginal society for producing the best stone for axe-heads. McBryde called it 'one of the world's great archaeological quarry sites.'



↑ Source 2.9.4 An example of a stone axe from the Mount William area. Lithograph (print) by T Pratten, 1789, State Library of Victoria

Returning the land

In Victoria there is a place called Tower Hill, just outside Warrnambool, sitting on Gunditjmara Country. Before 1788, this area, as you can see from Eugene von Guérard's painting (Source 2.9.5), was naturally diverse with trees, shrubs, water, animals and bird life. But this all changed when Europeans moved into the area. They pulled out the trees and shrubs and **tilled** the land. The newest settlers to the area were using rich volcanic earth for farming. The area was settled by Scottish and Irish people, some of whom were escaping the **Irish Potato Famine**.

sustainable able to be restored and recycled, ensuring resources do not run out

pastoralists farmers who specialise in sheep and cattle

till to prepare and use land for growing crops

Irish Potato Famine a period of mass starvation and disease in Ireland lasting from 1845 to 1852

On Gunditjmarra Country the soil was rich and moist and perfect for growing crops. The area was also close to safe harbours, so it also became a bustling port ready to trade. It quickly became unrecognisable from the painting below, with land cleared for farming, logging and mining.

Tower Hill was later returned to the people though the Victorian Parks service and it became a Wildlife reserve in 1961. The Traditional Owners of the area worked alongside the Park's service, and they

used Source 2.9.5 to help understand what the area would have looked like and to re-establish the natural environment. Around 1981, they planted over 25 000 trees, local herbs and grasses as part of this program. Over the years, they also took the time to remove any pest plants from the area so Tower Hill wildlife reserve will remain as close to natural as possible for years to come. Thus, regenerating the area to remain a native space for all to enjoy.

Concepts and skills builder 2.9



Using historical sources: Tower Hill, near Warrnambool, Victoria

Examine the following sources and then answer the questions that follow.



← Source 2.9.5 Painting of Tower Hill by Eugene von Guérard 1855. This painting was used to revegetate Tower Hill after it had been destroyed due to agriculture, grazing herds and quarrying.



← Source 2.9.6 The restored natural beauty of Tower Hill today.

- 1 **Examine** Source 2.9.5. What do you notice the painting? What can you see? What can you not see?
- 2 **Examine** Source 2.9.6. What do you notice in the photo? What can you see? What can you not see?
- 3 **Investigate** using this link <http://cambridge.edu.au/redirect/11144> how Traditional Owners returned the land to reflect the painting? Why was it important to return the land to its natural likeness?

Historical concepts and skills: using historical sources, historical questions, historical significance, continuity and change

What techniques have Aboriginal and Torres Strait Islander Peoples developed to catch fish?

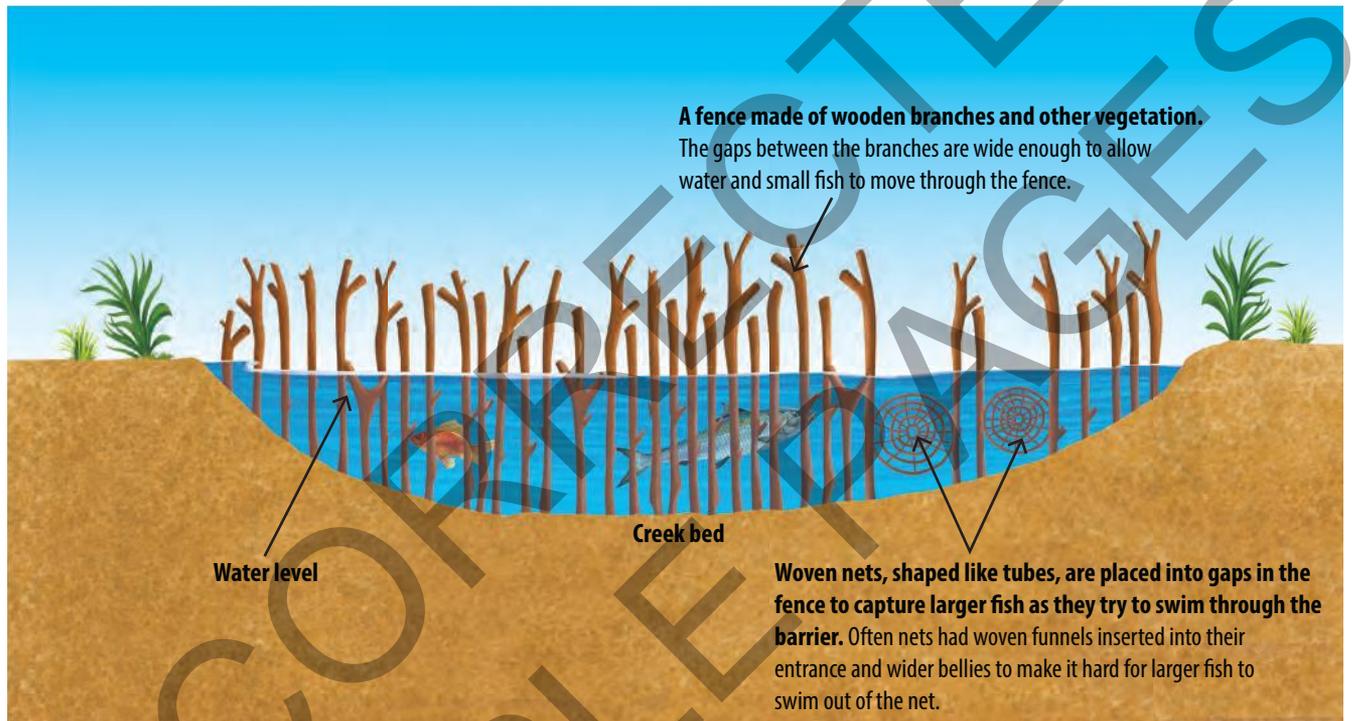
How do Aboriginal and Torres Strait Islander Peoples catch fish in rivers and creeks?

Fish traps and **fish weirs** are quite common throughout northern Australia.

Fish traps and fish weirs were used to catch fish and to farm fish. The Burarra People of Arnhem Land, for example, farmed barramundi in fish traps and fish weirs. Fish traps were built in locations along sandy beaches, near mangrove forests, near rivers and creeks. Each trap is traditionally cared for by the people with custodial connection to it.

fish traps methods for capturing fish in seas, rivers, creeks and streams, such as pools of shallow water against artificially built walls or fences or woven nets or baskets placed in weir and pond systems

fish weir a way of channelling fish into fish traps by using a fence or wall built into the water of a river, creek, or stream; the fence allows the water to freely flow through it



↑ Source 2.9.7 This illustration shows an example of a fish weir. Fish weirs were built across creeks and narrow rivers. Water can continuously flow through the weir. Weirs were built from materials readily available in the landscape, including wood, logs, branches, rock, or coral.



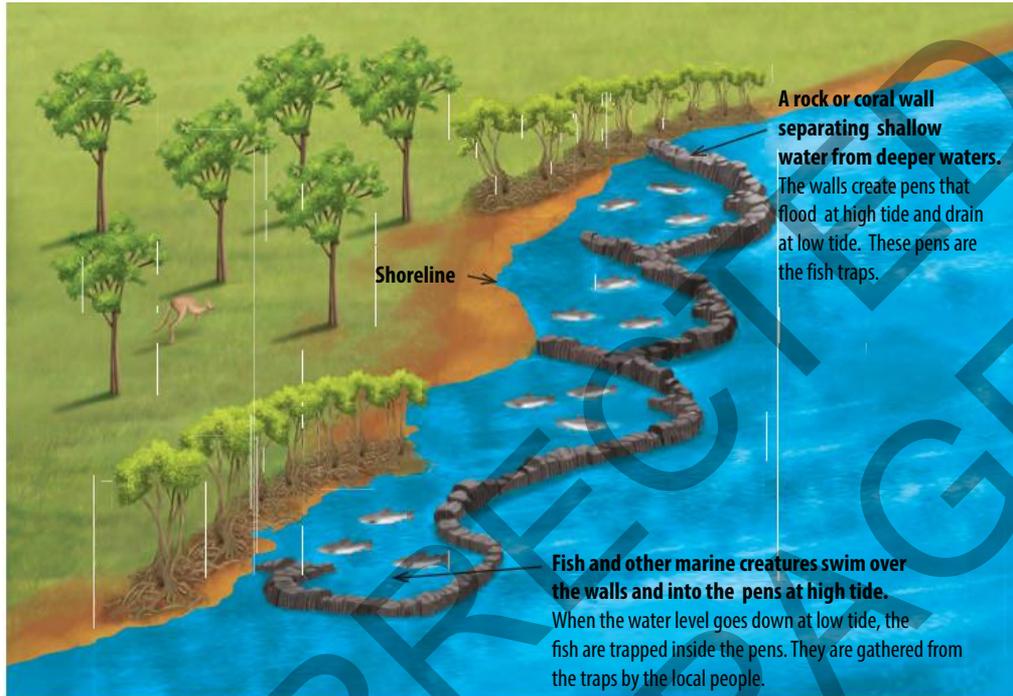
← Source 2.9.8 This illustration shows an example of a fish weir and a fish trap typical of those used in northern Australia. A fish trap is positioned behind a fish weir. A woven funnel is inserted into the mouth of a net. It shows a barramundi fish trap used by the Burarra People of Arnhem Land. Aboriginal and Torres Strait Islander Peoples also used these traps to farm fish.

astronomy the scientific study of the universe and of objects that exist naturally in space, such as the moon, the sun, planets and stars

How have Aboriginal and Torres Strait Islander Peoples caught fish on the coast?

Coastal fish traps rely on making use of the changing tides to trap fish. Aboriginal and Torres Strait Islander

Peoples have detailed and complex knowledge of tidal patterns and the seasons. This knowledge often relied on studying moon cycles and, in some areas, **astronomy**.

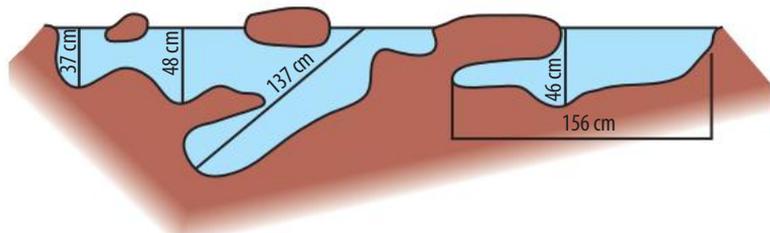
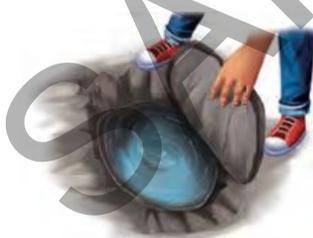


↑ Source 2.9.9 Coastal fish traps. This diagram shows fish traps along a coastline.

What techniques have Aboriginal and Torres Strait Islander Peoples developed to manage water sources?

Water systems vary across the Australian continent, and Aboriginal and Torres Strait Islander Peoples managed their water supplies and resources in different ways depending on where they lived. Aboriginal and Torres Strait Islander communities across many regions of Australia built

systems of rock wells. Some wells collected rainwater. Other wells collected water from underground sources. Since animals also seek fresh water, these precious water reserves often needed to be carefully protected from animal pollution and contamination.



↑ Source 2.9.10 [Left] An illustration of a rock well cover being opened to access fresh water. *What would be the purpose of such a rock cover?* [Right] Cross-section illustration showing the profile of Bull Gully Aboriginal Rock Wells, just outside Maryborough, Victoria. These wells were strategically dug into sandstone to form a natural rainwater catchment. The narrow mouths serve to reduce evaporation and pollution by animals or wind-borne debris (such as dirt). It is possible that the wells were, in the past, covered to further conserve water. The maximum depth of the wells is about 130 cm, for a capacity of approximately 160 litres, which represents a valuable water resource, particularly in dry seasons. Local residents indicated that they don't have any knowledge of the wells ever drying up. *How would these wells have helped to sustain life for thousands of years?*



← Source 2.9.11 Water tanks, known as ‘gnamma’ holes, are natural cavities varying in shape and depth commonly found in hard rock and used by First Nations Peoples. They are replenished from underground stores and rainwater run-off. These **gnamma holes** are on top of Pildappa Rock, a granite outcrop in Eyre Peninsula, South Australia.

gnamma holes naturally forming rock holes used by First Nations people to access fresh water

Lesson 2.9 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

2.9 Review questions

- 1 **Identify** some of the food cultivation practices Bruce Pascoe mentioned in *Dark Emu*.
- 2 **Explain** the purpose of a grindstone.
- 3 **Compare** a fish trap and a fish weir. **Explain** the difference and how they can work together.
- 4 **Explain** how rock wells were used by Aboriginal and Torres Strait Islander people to collect and manage water supplies.
- 5 **Explain** how these sources provide an insight into the way Aboriginal and Torres Strait Islander Peoples managed their environment in a sustainable manner.

What technological achievements have First Nations Peoples developed?

Part 2: Fire and sky



Learning intention

In this lesson we will continue to look at some of the practices that Aboriginal and Torres Strait Islander Peoples have developed to manage the environment since Deep Time.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See: Describe** what you see in Source 2.10.1. Look at the kind of vegetation, how green it is, the direction of the wind and the strength of the fire.
- 2 **Think:** Before starting a fire, the ground is felt for water.
 - **Suggest** why you would do this, and what it would tell you.
 - How would animals respond to this fire?
 - Who could you ask to find out more information?
- 3 **Wonder:** What does this type of burning make you wonder?

↓ Source 2.10.1 George Milpurrurru starts a fire to clean the bush in Arnhem Land, Northern Territory, Australia. Milpurrurru was raised on Ganalbingu land, and was an acclaimed artist known for his bark paintings.



What techniques have Aboriginal and Torres Strait Islander Peoples developed to use fire to care for Country? _____

Fire has practical and spiritual applications for many Aboriginal and Torres Strait Islander People today. The ancestors gave fire to people and showed them how to use it to keep Country clean and strong. The right fire does many things, such as keeping waterways clear where they need to be, encouraging the growth of the right seeds for an area, providing new grass for animals that depend on it, keeping competing undergrowth away from trees that need resources, protecting sacred parts of the landscape, allowing areas to grow without fire, and clearing selected areas. In this way, people are part of Country; Country cannot be strong without Aboriginal and Torres Strait Islander people.

Aboriginal and Torres Strait Islander Peoples pass on the knowledge stories and ceremonies about fire, and when they burn Country they are continuing the ancestors' creation. Fire is used for cooking and warmth, and smoke has important spiritual, ceremonial and communication purposes. Fire has been used to crack rocks and to shape tools. Aboriginal and Torres Strait Islander people use fire in ceremonies such as a **smoking ceremony**. This involves smouldering particular plants on embers to produce a steamy smoke that is considered to have spiritually cleansing and healing properties. Many First Nations people have this knowledge passed on from previous generations, and researchers have found evidence of these practices through Deep Time. This knowledge and these practices continue today.

What is cultural burning?

Cultural burning, sometimes called fire-stick farming, has been used by Aboriginal and Torres Strait Islander Peoples for

tens of thousands of years. It is still used today, although it is difficult in many areas for Aboriginal and Torres Strait Islander people to access Country to do cultural burning. Doing the right fire involves knowing Country in detail. The right fire is generally small and contained. Not all Country is burnt with cultural burning. Deep gullies and rainforests, for example, are usually avoided, as are areas that contain bush foods and bush medicines. The tops of trees are also spared. This allows safe havens for birds, animals, insects, seeds and fruits. The best time to light a fire is carefully selected so it only burns what needs to be burnt. 'Cool fires' burn slowly, 'trickling' through the landscape, and can be easily put out. David Claudie, a custodian of the north Kaanju homelands of Cape York, describes the use of fire as 'Indigenous science'. Non-Indigenous historian Bill Gammage has argued that fire-stick farming made resources 'abundant, convenient and predictable' for Aboriginal and Torres Strait Islander Peoples.

Fire is really important. It has its own dreaming. There are people and families who are responsible for the fire dreaming. They know the songs and the ceremony . . .

My grandfather used to talk with the other men about the best time and place to burn. They would wait for the right wind and pick the right grass.

They were careful not to burn Country belonging to other people.

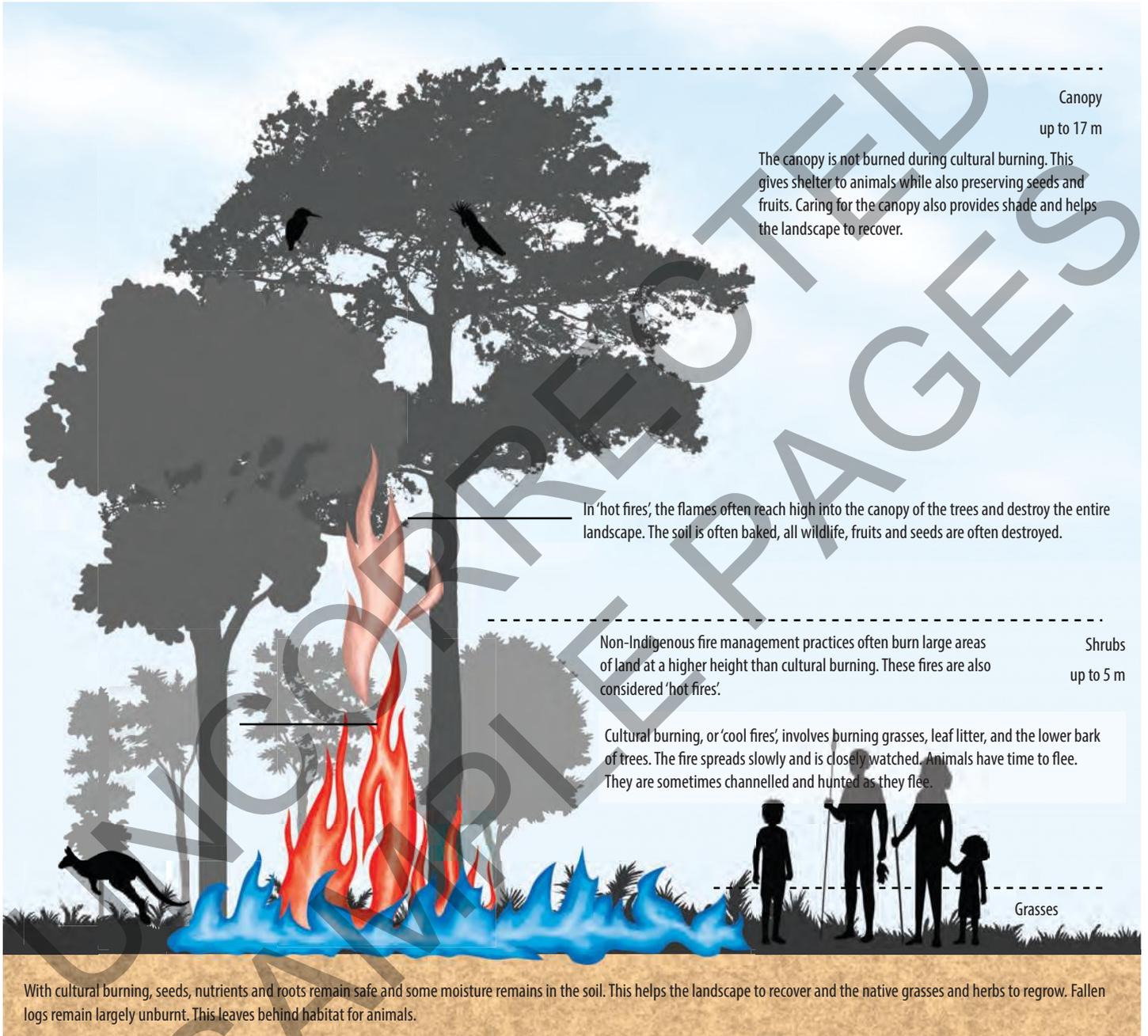
↑ Source 2.10.2 Veronica Dobson – a skilled educator and Arrente woman – describes the traditional importance of fire.

smoking ceremony smoking by burning leaves is an important part of Aboriginal and Torres Strait Islander ceremonies and can also be performed as its own ceremony

cultural burning (also known as cool burning) is a traditional Aboriginal land management practice that has been used for over 60 000 years to reduce fire hazards, encourage new growth of culturally significant species, and protect native wildlife already living on Country

Cultural fire means everything. It means healing Country and when you heal Country, you heal people.

↑ Source 2.10.3 Wurundjeri Elder Dave Wandin, 'Cool burns: Key to Aboriginal fire management', *Creative Spirits* website, accessed 8 December 2024



↑ Source 2.10.4 This diagram shows an example of Aboriginal and Torres Strait Islander Peoples' cultural burning practices.



↑ Source 2.10.5 This watercolour was painted by Joseph Lycett (c. 1817). It is titled, *Aborigines using fire to hunt kangaroos*. This painting was created about 30 years after the arrival of the First Fleet. Note: 'Aboriginies' is no longer considered to be an acceptable term but is used here in historical context.

Fire, grass, kangaroos, and human inhabitants, seem all dependent on each other for existence in Australia. For any one of these being wanting, the others could no longer continue. Fire is necessary to burn the grass, and form those open forests, in which we find large forest-kangaroo; the **native** [sic] applies that fire to the grass at certain seasons, in order that young green crop may subsequently spring up, and so attract and enable him to kill or take the kangaroo with nets. In summer, the burning of the long grass also discloses vermin, birds' nests etc., on which the females and the children, who chiefly burn the grass, feed.

natives a colonial word for Aboriginal and Torres Strait Islander people that is no longer used as it has derogatory meanings

↑ Source 2.10.6 This is an account, in 1848, by the Scottish explorer Thomas Mitchell, describing the fire management practices he observed being used by the First Nations peoples he encountered. Extract from T. Mitchell, *Three Expeditions into the Interior of Eastern Australia; with Descriptions of Recently Explored Region of Australia Felix, and of the Present Colony of New South Wales*, 1848, pp. 412–13

Concepts and skills builder 2.10



Using historical sources and analysing perspectives: Fire

Refer to Sources 2.10.2–2.10.6. Each of the sources was produced at a different time and contains different perspectives.

- 1 Categorise the painting in Source 2.10.5 as either a primary source or a secondary source if you are investigating the practices of:
 - a Europeans recording the hunting practices of Aboriginal and Torres Strait Islander Peoples
 - b The hunting practices of Aboriginal and Torres Strait Islander Peoples in the early 1800s
 - c The hunting practices of Aboriginal and Torres Strait Islander Peoples in the Deep Time history of Australia.

Justify your answers.

- 2 **Describe** what each source tells you about the relationship between fire and Aboriginal and Torres Strait Islander Peoples.
- 3 **Compare** how each source understands the purpose of the burning practices and what this tells you about their perspective.

Historical concepts and skills: using historical sources, historical significance, continuity and change

How do Aboriginal and Torres Strait Islander Peoples use seasons and patterns in the landscape and sky? _____

How do Aboriginal and Torres Strait Islander Peoples read seasonal indicators?

Careful custodianship of Country means being able to read the **seasonal indicators** – that is, identify, understand and respond to the expected changes in the environment. This knowledge was refined over tens of thousands of years and forms the living culture of Aboriginal and Torres Strait Islander people.

What happens in Sky Country?

Just as we are standing on Country, the world above is ‘Sky Country’ and it has its own seasonal relationships and indicators. For many Aboriginal and Torres Strait Islander people, Sky Country is where people came from or will go to; it is the home of many ancestors. Aboriginal and Torres Strait Islander people see **constellations** in the night sky, know the phases of the moon and movement of planets, and can use this information as indicators, to monitor passing seasons, to navigate and to be connected to other people and knowledge. For some Torres Strait Islander People, a shark constellation, Baidam, was used to help navigate boats on long voyages, to predict the seasons for growing fruits and vegetables, and to indicate shark mating season – a dangerous time to be in the water! Europeans know this constellation as the ‘Pleiades cluster’.

In many parts of mainland Australia, the stars of the Pleiades were thought to be ancestor women travelling across the landscape. On the east coast of Australia, this constellation was used as an indicator of whale migrations. The Milky Way galaxy is known by most Aboriginal and Torres Strait Islander people and often represents a **celestial** river or stream. Several Aboriginal and Torres Strait Islander communities, including the Kamilaroi and Euahlayi Peoples of New South Wales, watch an emu in the sky as an indicator of seasonal change and action.

This is not a constellation but a dark space in the night sky. When the emu first appears in the sky in mid-autumn, it marks the beginning of the emu breeding season. By mid-winter, the emu has changed direction and indicates the emus are sitting on their eggs. Eggs can be sustainably collected for food. By late winter, the emu appears as two circles in the night sky. This indicates that it’s time for sacred ceremonies to begin at the Kamilaroi and Euahlayi circular-shaped **bora** grounds. Through spring, the emu sits at a waterhole, indicating that waterholes are full in Kamilaroi and Euahlayi Country. In late summer, the emu dips below the horizon, indicating that the waterholes are drying and that it is time to move on to new areas. The emu does not appear in the sky again until the breeding season.

seasonal indicators events, such as a tree flowering, that indicate other known events will happen

constellation a group of stars that appear to form a recognisable pattern in the night sky

celestial a celestial, or astronomical, object is a natural thing existing outside Earth’s atmosphere

bora a location where sacred rituals are held; there are different words in different languages



↑ Source 2.10.7 The emu in the sky as seen from Kuringai National Park. [Credit: Barnaby Norris/Ray Norris]

Lesson 2.10 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

2.10 Review questions

- 1 **Describe** the purpose of smoking ceremonies.
- 2 **Define** 'cultural burning' in your own words.
- 3 **Explain** what was meant in the text by the following: 'Careful custodianship of Country means being able to read the seasonal indicators.'
- 4 **Explain** the importance of Sky Country to Aboriginal and Torres Strait Islander Peoples.

What are the significant cultural protocols for maintaining and preserving ancestral remains?



Learning intention

We've looked at how Aboriginal and Torres Strait Islander Peoples managed the environment since Deep Time. In this lesson, we will look at cultural protocols that Aboriginal and Torres Strait Islander Peoples use to respectfully manage human remains.

Note

In Aboriginal and Torres Strait Islander cultures, it is important to show respect for people who have passed away. One way respect is shown is by avoiding mentioning names or displaying images, as this can cause sadness or distress to their family and community. Aboriginal and Torres Strait Islander peoples should be aware that this lesson contains images and names of People who have passed away.

Lesson starter



Complete the following activity to kick-start this lesson.

Read the quote from Stan Grant and discuss the significance of Jim Bowler's discovery of Mungo Man for:

- Grant as a Wiradjuri man
- the history of Australia
- the history of Australia in a global context.

On 26 February 1974 a rainstorm lashed the lake. It was just enough to loosen the hard packed soil. Jim Bowler, a young geologist, spotted a skull poking just above the surface. He cleared the loose sand and what he found altered our entire view of the continent. Lying there was an intact skeleton, buried in this ground for 40 000 years. It wasn't his first discovery. Years earlier Bowler had uncovered the remains of a female. Together they are known as Mungo Man and Woman, named after the lake where they lived. These findings doubled the known length of time my people had lived in this land.

turning point the point at which significant change takes place, directly or indirectly caused by a specific event and representing enduring change

↑ Source 2.11.1 Stan Grant, journalist (Wiradjuri man), *Talking to My Country* [Sydney: Harper Collins, 2017, p. 11].
Was this discovery a turning point in Australia's history?

What funerary customs have Aboriginal and Torres Strait Islander Peoples practised?

What is 'Sorry Business'?

Peoples all over the world have important cultural practices that guide what to do when someone passes away. For many Aboriginal and Torres Strait Islander People, the death of a family member and period of mourning is known as 'Sorry Business' in Aboriginal English. It is a significant time, and various protocols, ceremonies and rituals can be practised in which people are expected to participate. There is cultural diversity in how Sorry Business takes place across the Australian continent, however.

For many Aboriginal and Torres Strait Islander Peoples, if Sorry Business is not completed properly a deceased person's spirit cannot find its way home to the ancestors and will be restless and unhappy. It is an important cultural obligation to ensure deceased spirits are taken care of and returned to their ancestral home. For example, the Yolngu Peoples of Arnhem Land used log coffins, or hollow logs, in which to hold the bones of those who have died. Today, these log coffins are valued as works of art.

Hollow logs made for a burial ceremony are large. Smaller hollow logs may be made to keep the bones of the deceased at the home of the family for a period of time. The hollow logs can also represent the deceased person – the designs on the log are the same as the designs painted on the body during the burial rites. Many of the hollow logs have a small aperture [a small opening or hole] either carved or painted towards the top. Yolngu believe that this provides the soul of the deceased with a viewing hole to look through and survey the land.

↑ Source 2.11.2 The NGA's description of why hollow logs were made. *Reflect on your own cultural practices around funerary customs. What would it feel like if these were not completed properly?*

In Torres Strait Islander communities, Sorry Business includes 'tombstone unveiling ceremonies' or a 'tombstone opening'. This ceremony refers to the ritual of a decorated headstone being unveiled for the family and community to remember a loved one. This reinforces the connections between the living and those who have gone, and marks the completion of an extensively decorated tombstone and the family's final goodbye. The entire family is involved with the ceremony, which lasts a whole day and ends with feasting and dancing.

Sorry Business a term used to describe a period of mourning and activities related to mourning a loved one for Aboriginal and Torres Strait Islander Peoples protocol system of rules and acceptable behaviour used at official ceremonies and occasions



← Source 2.11.3 Aboriginal Memorial, an artwork at the National Gallery of Australia (NGA) in Canberra, was created in the style of Yolngu log coffins.

How can Aboriginal and Torres Strait Islander Peoples,, historians and scientists work together respectfully? _____

Since 1788, some settlers have shown interest in the funerary practices of Aboriginal and Torres Strait Islander Peoples but generally the approach has been disrespectful. Many funeral grounds or markers have been destroyed and remains of deceased people have been disturbed or destroyed, often deliberately. Scientists have also often disregarded Aboriginal and Torres Strait Islander Peoples' funerary customs and associated understandings, believing that their interest in the science of human remains is more important than Aboriginal and Torres Strait Islander Peoples' relatives receiving proper funerary rites. These circumstances have led to mistrust and difficult relationships.

Respecting Aboriginal and Torres Strait Islander Peoples' funerary traditions: The story of Mungo Man

Lake Mungo, in the Willandra Lakes region in south-west New South Wales, is home to the Paakantyi, Mutthi Mutthi and Ngiyampaa Peoples. Each has their own understanding of their origins. Today, Lake Mungo is a semi-arid desert environment,

but thousands of years ago this was a lush area surrounding a lake filled with water. Scientists have determined that the lake has been dry for about 10 000 years.

As Stan Grant suggested at the start of this lesson, Lake Mungo is one of the most significant archaeological sites in Australia. When researchers – led by Jim Bowler – began to study the area in the late 1960s and early 1970s, they found evidence of the traditions of Aboriginal and Torres Strait Islander people in the area. This included evidence of funeral practices in which bodies were washed with ochre and cremated. Australian archaeologists excavated the remains of 'Mungo Man' and removed the bones from the area. Over the years, research teams took many other bones and artefacts that they found in that area 'out of Country' for study. This was not an uncommon practice at the time around the world. The researchers made many important scientific discoveries about the length of human occupation of Australia and about ancient customs and practices – especially those regarding funeral practices.



↑ Source 2.11.4 On 17 November 2017, Mungo Man and the remains of other people who lived about 40 000 years ago were carried in a casket made from 5000-year-old red gum to their ancestral lands, with Aboriginal Elders leading a ceremony at Lake Mungo, New South Wales.

Amazing but true...

Ochre has ongoing importance to many Aboriginal Peoples; it has religious significance and is used in ceremonies, healing practices and art. It has been used in rituals for at least 42 000 years; when the Aboriginal man known as 'Mungo Man' was buried he was covered in ochre, as part of a ritual burial.

The excavations, however, came to be widely criticised. Paakantyi, Mutthi Mutthi and Ngiyampaa Peoples actively campaigned to have the remains **repatriated** or returned. In

November 2017, 'Mungo Man' and the ancestral remains of 104 other people were returned to Elders and reburied according to traditional custom, on Country, at Lake Mungo.

repatriate the act of bringing someone back to the Country that they came from

Concepts and skills builder 2.11



Causes and consequences: The Mungo Man debate

Read the following sources regarding the debate over Mungo Man and other remains found at Lake Mungo.

There has been agreement among traditional owners, pastoralists and scientists for more than two decades that the ancestral remains should be repatriated to the Willandra ... A National Congress of Australia's First Peoples said in 2018 a permanent 'keeping place', rather than reburial, should be provided with a monument to mark their importance.

The traditional owner groups have been seeking a keeping place since the 1990s, and in 2000 passed a resolution seeking support from government for its establishment.

But following a series of workshops a plan for reburial (rather than a keeping place) was approved in 2018 by a group representing Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa Peoples. These workshops didn't include experts in palaeoanthropology or biological anthropology.

↑ Source 2.11.5 From 'Mungo ancestral remains reburial proposal disrespects the Elders' original vision', *The Conversation*, 4 August 2021. *Why do you think the voices of the Barkindji/Paakantji, Mutthi Mutthi and Ngiyampaa Peoples were heard over that of the scientific community in regards to the plans for reburial.*

The recovery and management of the remains of ancestors is an issue of great sensitivity to Aboriginal people. This sensitivity comes from both cultural beliefs and the treatment of Aboriginal people by governments, scientists and others in the recent past. Many ancestral remains and other remains, both ancient and modern, were taken and studied without permission. Some were scattered, sent overseas and kept in collections. This is still a controversial issue today and not all remains have been returned to their Country and their people.

↑ Source 2.11.6 An extract from the *Visit Mungo* website, written by the Willandra Lakes Traditional Tribal Groups Elders Council and New South Wales National Parks and Wildlife Service, 2021



↑ Source 2.11.7 In November 2017, the remains of 'Mungo Man' and 104 other ancestors were returned to their Country at Lake Mungo. Proper ceremonies were conducted.

reconciliation
 Reconciliation Australia describes this as 'strengthening relationships between Aboriginal and Torres Strait Islander peoples and non-Indigenous Peoples, for the benefit of all Australians'

A 42 000-year-old man finally goes home

Traditional owners say the return of the remains of the historic Mungo Man, who was removed by scientists from his resting place more than 40 years ago, will provide closure and is a step toward **reconciliation**. More than four decades ago anthropologists removed the ancient skeleton of an Aboriginal man – the discovery of which rewrote Australian history.

Now he has been returned home to his descendants, travelling for days in a hearse from Canberra ...

Traditional owners hosted a welcome home ceremony attended by hundreds to celebrate the historic return of the 42 000-year-old remains of Mungo Man to his original resting place. 'Today is one of those catalytic moments that we need to enhance Australian society, and bring empathy into, understanding the Aboriginal culture,' said Paakantyi man Michael Young, who is also a member of the Aboriginal Advisory Group for Mungo Man's return ...

It was some of the earliest uncovered evidence of ritualistic burial in the world, and proved that early Aboriginal Australians had a robust belief and burial system – around the same time as Neanderthals were roaming Europe. After his remains were uncovered he was moved to Australian National University in Canberra where he was kept for about 40 years. Geologist Jim Bowler found Mungo Man and said the profound scientific discoveries could not have taken place if he was not moved ... 'The Aboriginal people voiced their objection, we were intruding into their history, not our history.' ...

While many are celebrating the historic return of Mungo Man, there are major concerns there is still no final resting place for him ... Mr Bowler said state and federal governments should do more to create a respectful final place of rest ... 'He needs a major memorial, a major identification of his iconic status. In the pages of earliest Australian history his name stands out, and we have failed to make a final resting place for a historic remains.'

↑ Source 2.11.8 Extracts from Torres Strait Islander journalist Isabella Higgins, 'Mungo Man returned to ancestral home where he died 40,000 years ago', ABC website, 17 November 2017

Watch the video and answer the questions that follow.

Refer to Sources 2.11.5–2.11.9:

- 1 **Discuss:** Why do you think non-Indigenous scientists felt they could take the remains of buried Aboriginal and Torres Strait Islander people in the 1970s?
- 2 **Reflect:** If you were a scientist interested in the Deep Time history of Australia, how would you have acted in this situation?
- 3 **Identify:** What does respectful Deep Time history research look like?
- 4 Watch Source 2.11.9. Why was the 2022 reburial of Mungo Man, Mungo Lady and 106 other human remains controversial? How does this **compare** to Jim Bowler's 2017 comments (Source 2.11.8) about needing a Mungo Man memorial?

QR code

↑ Source 2.11.9
Mungo remains reburied in 2022 controversy.

Historical concepts and skills: using historical sources, historical significance, causes and consequences

Amazing but true...

Mungo Man and Mungo Lady lived at the same time as megafauna!

Lesson 2.11 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

2.11 Review questions

- 1 **Define** Sorry Business in your own words.
- 2 **Discuss** why the practices involved in Sorry Business vary for different Aboriginal and Torres Strait Islander communities.
- 3 **Describe** the Mungo Man controversy and its outcome.
- 4 **Propose** ways that historians and scientists could build trust with Aboriginal and Torres Strait Islander People.

What is the significance of the Mithaka Indigenous-led archaeology dig?



Learning intention

We've looked at cultural protocols that Aboriginal and Torres Strait Islander Peoples use to respectfully manage human remains. In this lesson, we will look at a collaboration between Traditional Owners and researchers to conserve a significant cultural site.

Note

Please note that this lesson contains an illustration of a deceased Aboriginal person.

Lesson starter



Complete the following activity to kick-start this lesson.

Think, pair, share

Archaeology opens the doors to information and knowledge that people like myself [Indigenous Australians] have unfortunately missed out on. To me, it brightens the light in my head . . . The archaeological record can be used to address racist assumptions or misconceptions . . . Today, we have the documented evidence that has been collected by archaeology and anthropology, so when you come across people who say something ignorant, you can say 'That's not right'.

↑ Source 2.12.1 Vince Copley Senior (Ngadjuri elder) quoted in K. Pollard, C. Smith, J. Willika, V. Copley Snr, C. Wilson, E. Poelina-Hunter and J. Ah Quee, 'Indigenous views on the future of public archaeology in Australia', *Archaeologica Publica: Online Journal in Public Archaeology*, 10 (2020): 35

- 1 **Think:** Read the quote in Source 2.12.1. **List** some different ways that Ngadjuri Elder Vince Copley Senior values archaeology.
- 2 **Pair: Compare** your lists and discuss how Traditional Owners and researchers could work together in respectful partnerships.
- 3 **Share: Discuss** your conclusions with the class.

This chapter has been about the Deep Time history of Australia, though we know that since 1788, Aboriginal and Torres Strait Islander Peoples have faced many significant and ongoing challenges due to colonisation, such as the dispossession of land. Scientific investigations are one way

for Aboriginal and Torres Strait Islander Peoples to reclaim their cultural heritage. This means that scientists, historians and Aboriginal and Torres Strait Islander Peoples today must find respectful ways to work together.

Research debates and ethics

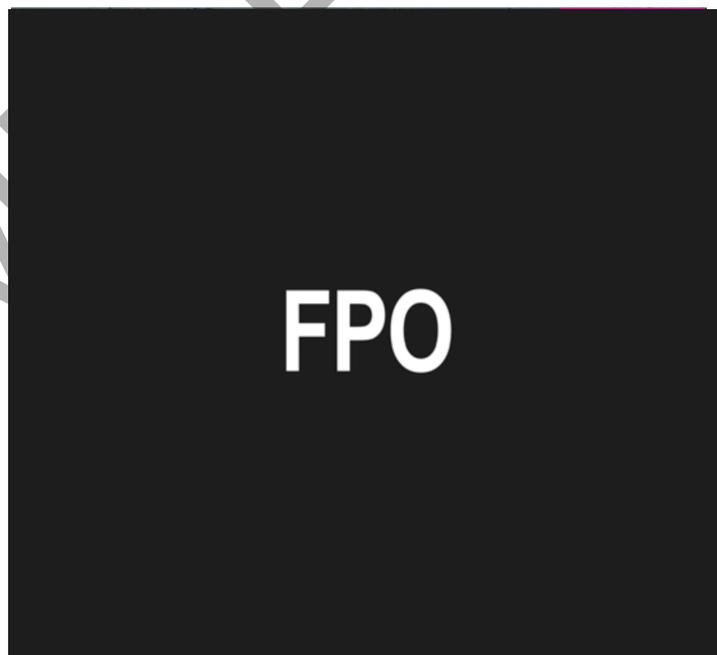
Traditionally, Aboriginal Peoples shared oral histories rather than written histories. This meant that the first written histories of First Nations people were by Europeans. In the past, non-Indigenous people have also researched First Nations communities without working respectfully with these communities. This happened a lot with European colonisers, ethnographers and even Australian archaeologists in the eighteenth to twentieth centuries. Local Elders or other Aboriginal and Torres Strait Islander people often provided vital information. But this was not always voluntarily. They were also

almost never acknowledged or paid for this contribution. This lack of recognition is an ongoing issue. It has also created a level of mistrust between Indigenous communities and researchers.

Indigenous communities across the world, however, are now leading projects on their cultural heritage. This research highlights their continuing connections to cultures and Places. The following example shows a recent partnership between Traditional Owners and non-Indigenous researchers. It shows how they can work together to best conserve important sites.

Mithaka: Indigenous-led archaeology

Mithaka Country is in west Queensland. The Traditional Custodians were awarded **Native Title** on 27 October 2015. In 2017, the Mithaka Aboriginal community joined with a team of archaeologists to learn more about their history. The Mithaka People were able to guide the archaeologists to important sites. Together they discovered **quarries**, dwellings and burial sites.



↑ Source 2.12.2 Map showing the Mithaka Native Title Area in brown (55 000 square km) and the larger Channel Country region in green (approx. 300 000 square km). Inset photographs also show the Channel Country landscape. [Map: N.J. Wright, 2022]

Native Title as set out by the *Native Title Act 1993* (Cth), the recognition that Aboriginal and Torres Strait Islander Peoples have rights and interests to lands and waters according to traditional cultural practices and customs

quarry a spot on the landscape where a particular raw material is retrieved for cultural use, such as a type of stone for the creation of stone tools

flake stone chips produced by striking the edge of a stone with another hard material

core the stone from which one or more flakes have been removed

tula a stone tool used for wood working (e.g. scraping) and butchery

grindstone a stone tool used to process (grind and crush) plant foods and other materials

hunter-gatherer people who consistently move across the landscape and rely on the hunting of animals and the foraging and collecting of plants and other resources

gunyah a type of Aboriginal hut or shelter

sedentary the practice of living in one place for an extended period of time

nomadic the practice of staying on the move and living in multiple places

Quarries

Quarries were, and still are, important natural resources for Indigenous communities. Several quarries, mostly of sandstone, have been identified on Mithaka Country. This was unexpected, as it wasn't known that there was mining and use of sandstone during this time. The research team used satellite images to find 179 potential quarry locations in

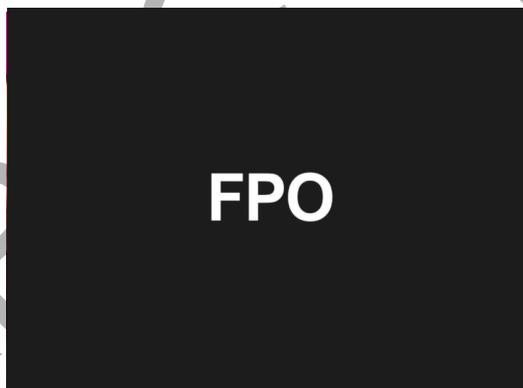
the area. By mining a lot of sandstone, the Mithaka could make stone tools to use themselves as well as to trade with other Aboriginal groups. Stone tools discovered include knives, **flakes**, **cores**, **tulas** and **grindstones**. These quarries highlight the technological capabilities of the Mithaka People to create these tools. Evidence of these tools being used in trade also gives insight into Mithaka economic practices.

Concepts and skills builder 2.12

Using historical sources: discoveries on Mithaka Country



↑ Source 2.12.3 Several stone knives found on Mithaka Country



↑ Source 2.12.4 Grindstone fragment found on Mithaka Country. [Photographs by NJ Wright]

- 1 Consider Sources 2.12.3–2.12.4 and check out some three-dimensional stone-tool models from Australia at the Museum of Stone Tools website (<http://cambridge.edu.au/redirect/11146>).
- 2 **Evaluate** the usefulness of these sources in challenging the traditional Western understanding of Aboriginal technological achievements.

Historical concepts and skills: using historical sources, historical significance

Dwellings

Mithaka Country also showed evidence of Indigenous villages. This goes against the stereotype of Aboriginal Peoples being **hunter-gatherers**. It is difficult to find evidence of these past villages because the homes were often made of wood. Wood breaks down and decays more easily than stone. The archaeological team investigated a location that in 1871 was reported to have had 103 hut structures, but they didn't find any huts remaining.

But there is evidence for **gunyah** stone foundations in northern Mithaka Country. The team also excavated a site of previously recorded standing gunyahs and did a special test known as a magnetic gradiometry survey. This is a process that detects when humans create fire. The survey indicated that there were multiple campfires used over a long period of time. This suggests a **sedentary** rather than a **nomadic** lifestyle.

Burial sites

The Mithaka Aboriginal Corporation requested the archaeological team excavate a known burial site. This gave insight into Mithaka funerary customs. Analysis of the remains was also able to tell us something about the individual's life. It suggested that they had done strenuous labour. This labour could have been from grinding seeds with stones to make flour for bread. This was a documented activity for women in Mithaka Country; however, recent research found proteins that indicated this person was male. Is it possible that in the more ancient past men undertook seed grinding also?

Preservation and conservation

The preservation of Mithaka Country is the proud responsibility of the Mithaka People. The community shares its knowledge across generations so that current and future members learn about their culture and keep it alive. This includes creating a museum exhibition that over 6000 people have visited.

Often in ancient history, the culture we learn about is no longer practised.



← Source 2.12.5
Illustrated drawing of the burial of a young Aboriginal man at the Eight Mile site [Drawn by R. Stanley and included with permission from Mithaka Aboriginal Corporation] *How does this sketch compare to the photos of Mungo Man's remains we have seen (Source 2.11.9)?*

However, for several Indigenous communities today, including those in North America, Canada, New Zealand and Australia, a thread of continuity connects them with their ancestors. This collaborative research undertaking is important as it represents a strong partnership between an Indigenous community and academic researchers.

The Mithaka research project is a successful example of Indigenous-led research that works with non-Indigenous archaeologists and scholars. The Mithaka People have prioritised the discovery and preservation of cultural knowledge for the benefit of their community. By sharing this knowledge with non-Indigenous communities, everyone can also further understand the richness of Aboriginal cultural heritage. The project is still ongoing.

Lesson 2.12 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

2.12 Review questions

- 1 **Explain** the significance of evidence of gnyahs on Mithaka Country.
- 2 **Describe** whether the Mithaka research project is a success for the Traditional Owners of Country.
- 3 **Identify** the First Nations Peoples in other countries mentioned in the text, who share a 'thread of continuity' with the past, like Aboriginal and Torres Strait Islander Peoples.
- 4 **Explain** how the Mithaka case study is an example of ways that scientific research can help Aboriginal and Torres Strait Islander Peoples reclaim their 'cultural heritage'.

How have Western interpretations of First Nations Peoples as the world's oldest continuous cultures changed over time?



Learning intention

We've looked at a collaboration between Traditional Owners and researchers to conserve a significant cultural site. In this lesson, we will look at the ways that opinions by historians on Aboriginal and Torres Strait Islander Peoples and their significance has changed over time.

Lesson starter



Complete the following activity to kick-start this lesson.

Think, pair, share

Bunurong, Kulin nation and Yuin historian Bruce Pascoe's 2014 book *Dark Emu* caused a storm when it was published. Pascoe's **interpretation** of historical evidence suggested that Aboriginal and Torres Strait Islander Peoples were the world's first farmers. *Dark Emu* was extraordinarily successful as a history book, selling many thousands of copies and winning many awards. It also caused a range of people to be outraged, who argued that Pascoe was rewriting history. Gomerioi researcher Heidi Norman had the following opinion;

Through his writing and speaking appearances, Pascoe has made the deep ancient past and the present intelligible and imaginable for a wide audience.

↑ Source 2.13.1 Heidi Norman, 'How the Dark Emu debate limits representation of Aboriginal People in Australia', *The Conversation*, 8 July 2021.

- 1 Why does Heidi Norman think *Dark Emu* was an important history book?
- 2 Why do you think some people can get upset about Australian history?

interpretations
in History, an
interpretation is
an explanation of
the past

Aboriginal and Torres Strait Islander Peoples and history

Until recently, the **perspectives** of Aboriginal and Torres Strait Islander Peoples were not included in written histories of Australia. The western study of history came to this continent with the First Fleet in 1788. When settlers wrote about Australia's history, the term 'pre-history' was often used to convey that meaningful human history had not started yet. **Settler** historians focused on their own activities from their point of view, starting from 1788. They were sometimes **biased** against Aboriginal and Torres Strait Islander Peoples due to racist ideas, promoted by famous British **evolutionary biologist** Charles Darwin. Australian governments and even school curriculums celebrated the achievements of James Cook and other figures from the British colonisation of Australia, and ignored the history of First Nations people.

Recognition as the world's oldest continuing cultures

Today, there is increasing recognition of the extraordinary achievements of Aboriginal and Torres Strait Islander Peoples, demonstrated in the longevity of their cultures and the sustainable nurturing of landscapes. Australia is undergoing a process of truth-telling and more people than ever before want to learn more about the First Nations Peoples of this continent from Deep Time to the present day. The Victorian government, through the Victorian Curriculum, expects that you will

learn about this in Year 7 History, through this investigation. For all of these reasons we need to deliberately include the activities and perspectives of Aboriginal and Torres Strait Islander Peoples in Australia's history.

The human presence here [in Australia] has been revealed to be more ancient than that of Europe . . . and the Australian landscape, far from being **terra nullius** is now recognised to be cultural as much as natural, imprinted with stories and law and shaped by the hands and firesticks of thousands of generations of Indigenous men and women.

↑ Source 2.13.2 Non-Indigenous historian Billy Griffiths in his book *Deep Time Dreaming: Uncovering Ancient Australia*, 2018, p. 2. *How does historian Billy Griffiths challenge outdated understandings about Australian history?*

Recent interpretations on Aboriginal and Torres Strait Islander history

As we saw in Chapter 1 in Table 1.3.1, recent **historical interpretations** on the importance of Aboriginal and Torres Strait Islander history have focused on the use of land. The following two tables of information from the History Teachers' Association of New South Wales gives a good summary of the broad types of interpretation historians have regarding Aboriginal and Torres Strait Islander Peoples' histories.

perspective the way we see something, a point of view or attitude to something

settlers a person who arrives, especially from another country, in a new place in order to live there and use the land

bias supporting or opposing a particular person or thing in an unfair way, because of allowing personal opinions to influence your judgement

evolutionary biologist a scientist who studies how species change over time

terra nullius a Latin term that means 'nobody's land'. In Australia, *terra nullius* was the legal principle used by the British government to justify the colonisation of the continent

Concepts and skills builder 2.13



Analysing historical interpretations

Table 2.13.1 A summary of the broad types of interpretation historians have regarding the ways First Nations people lived before 1788

Type of interpretation	Summary of historians' views about the ways First Nations Peoples lived before 1788
Agriculturalists	Some historians think that the First Nations People's way of getting food was a form of 'agriculture'. Some lived in temporary villages and changed the land to help gather food, but their way of life wasn't exactly like farming as we usually think of it, with organised crop fields and large farms.
Farmers	Some historians say that First Nations Peoples were good at farming. They grew crops, used special ways to water their plants, stored food, raised animals, built permanent homes and even made bread.
Complex hunter-gatherers	Many historians believe the First Nations Peoples were skilled hunters and gatherers. They didn't live in one place like villagers in other ancient societies but moved around. They carefully gathered food, changed the land to help with hunting and gathering, and sometimes spread seeds on purpose. However, they didn't farm like European farmers, with animals or watered crops.

Source: Adapted from History Teachers' Association of New South Wales, *Ancient Australia: An Introductory Guide for Teachers and Students* [© HTANSW, 2024 p. 55]

Table 2.13.2 A summary of some of the key conclusions by historians about the ways First Nations Peoples lived before 1788

Food & lifestyle activities	Peter Sutton & Keryn Walshe	Bill Gammage	Bruce Pascoe
Hunting animals & fishing	✓	✓	✓
Collecting plant foods & shellfish	✓	✓	
Travelling long distances to food sources	✓	✓	✓
Nomadic/mobile – no fixed settlements	✓	✓	
Controlled use of fire	✓	✓	✓
Semi-sedentary – temporary habitations		✓	✓
Permanent habitations and settlements			✓
Trapping fish/eel using natural river formations	✓		
Trapping fish/eel with rocks/channels		✓	
Yam harvesting and replanting	✓	✓	✓
Seed storage		✓	
Scattering/broadcasting seeds	✓	✓	
Cultivating crops – irrigation, harvesting		✓	✓
Food storage to build up surplus		✓	✓
Breeding and raising domesticated animals			✓
Large populations sustained by farmed food			✓
Bread making			✓

Source: Adapted from History Teachers' Association of New South Wales, *Ancient Australia: An Introductory Guide for Teachers and Students*. [© HTANSW, 2024, p. 57]

FPO

↑ Source 2.13.3 The aquaculture system at Budj Bim in south-west Victoria was added to the World Heritage List in 2019 because of its cultural significance to the Gunditjmara People. The weir, channels and ponds are at least 6000 years old. Pictured is a demonstration of how a woven eel trap works.

Examine Table 2.13.1.

- 1 **Identify** the type of interpretation many historians use.
- 2 **Discuss** which type of interpretation sounds the most convincing based on your investigation this chapter. Why?

Examine Table 2.13.2.

- 3 **Identify** any food & lifestyle activities that surprise you. Why?
- 4 **Identify** the food & lifestyle activities the historians agree on.
- 5 **Explain** which of the historians has the most 'interesting' views, in your opinion, and why their view helps us understand the significance of Aboriginal and Torres Strait Islander Peoples as custodians/members of the oldest continuing cultures in the world.
- 6 **Describe** how Source 2.13.3 might be used as evidence by the historians to support their arguments.

Historical skills and concepts: using historical sources, communication

Lesson 2.13 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



Go online to
access the
interactive
lesson review
and more!

2.13 Review questions

- 1 **Define** 'bias' in your own words.
- 2 **Identify** some reasons why Aboriginal and Torres Strait Islander Peoples' perspectives were missing from history books for a long time.
- 3 **Describe** how important Aboriginal and Torres Strait Islander Peoples were to Australia's historical record during British colonisation.
- 4 **Explain** which of the broad historical interpretations has the most support from historians.

End of investigation review: How have First Nations Peoples maintained their significant connections to Country from Deep Time to today?



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorcher timed competitive quiz.

Brain dump



What have you learnt about Aboriginal and Torres Strait Islander People's knowledge and understandings and using historical evidence? For this activity, copy the diagram and fill out by explaining your understanding. Aim for two points per topic.

Terms	What I have learned
Country	
Deep Time	
Sahul	
Dreaming	
Everywhen	
Continuity	
Custodianship	
Seasonal indicators	
Western science	
Hypothesis	
Turning point	
Interpretations	

Making thinking visible



This exercise in visible thinking asks you to track the difference between what you knew about Australia before, and what new understandings you have acquired since reading this chapter.

Using the stem sentences here, write a paragraph **explaining** what you previously knew about the topic. Then write another paragraph **explaining** what you now understand about the topic.

- 1 I used to think that Australia was ...
- 2 Now I think that Australia was ...
- 3 I used to think that archaeologists ...
- 4 Now I think that archaeologists ...
- 5 A simple explanation for why Aboriginal and Torres Strait Islander knowledge was significant is ...
- 6 A better explanation for why Aboriginal and Torres Strait Islander knowledge still is significant is ...

Practice questions



- 1 **Identify** the difference between the way Aboriginal and Torres Strait Islander Peoples understand the concept of time compare to the way Western science does.
- 2 Consider the differences in perspectives in Sources 2.4.7 (Western science) and 2.5.8 (Worimi man John Maynard) and **explain** why there are 'contested knowledges' about the origins of people on the continent.
- 3 **Explain** the cause and consequences of key events in Australian history, by matching the cause on the left with its correct consequence on the right:

Hypothesis

Australia's interior dries up

Aboriginal people trade

Highly developed aquaculture

Evidence of permanent living

Oral history was passed down and traded

Aboriginal Peoples had developed spiritual rituals

First Nations cultures are still ongoing

Consequences

Greenstone tools use in areas without natural deposits of stone.

Creation tales cover large areas of Australia that cross nations

Differing burial types with ceremony use of ochre and fire.

The last ice age starts

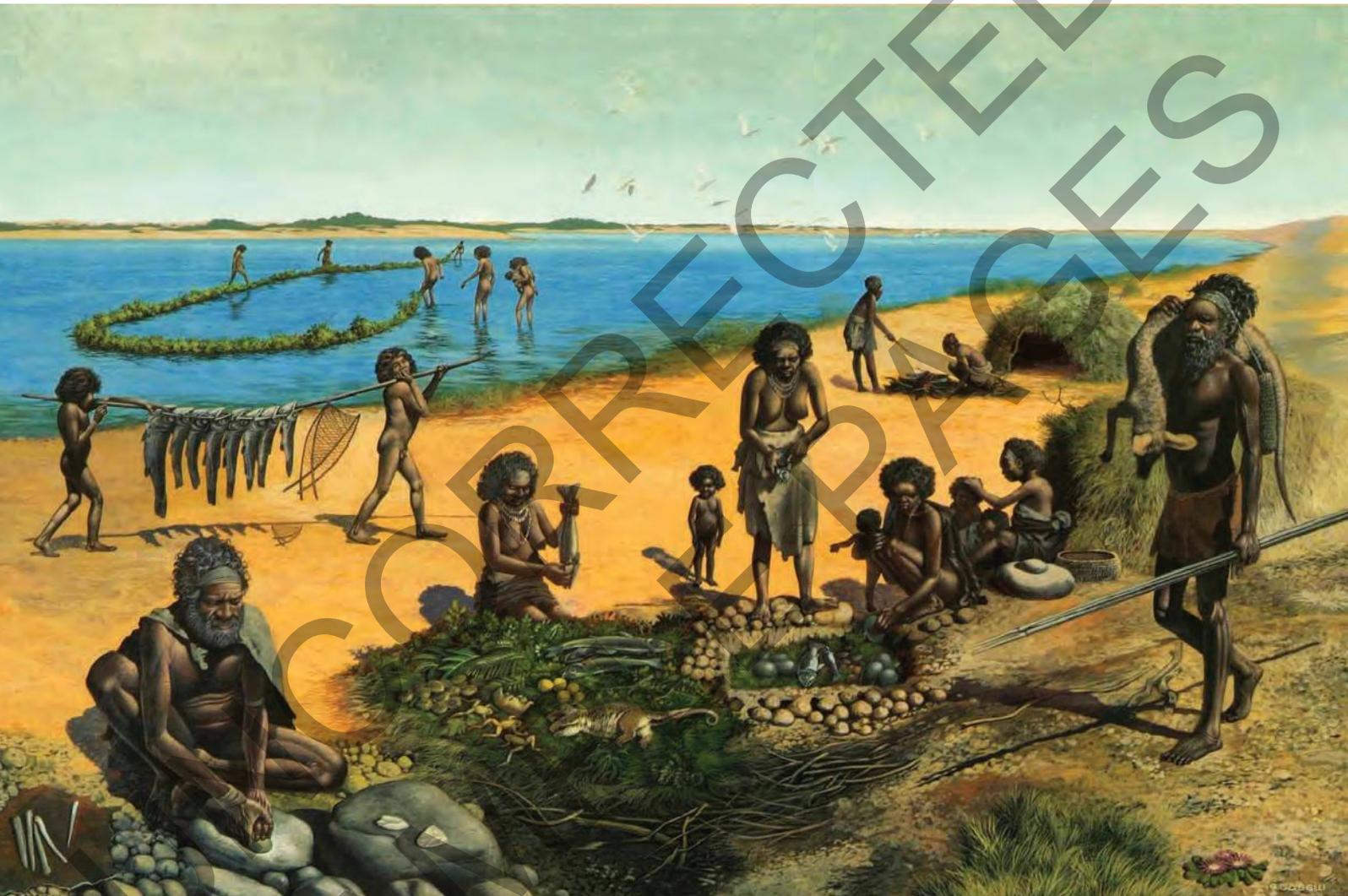
Written and oral evidence of continued land ownership

Freshwater and coastal fish traps

Gunyahs were built to house people

- 4 **Apply** your understanding of causes and consequences by explaining why it was that the landscape changed in Australia due to the last ice age and what impact this had on the animals and people living in Australia at the time.

- 5 **Examine** the following painting (Source 2.14.1) as a historical source, then answer the questions below.
- a When was the painting created?
 - b **List** the items you can see that the people at Lake Mungo are using in day-to-day life.
 - c What food types can be found in this image?
 - d **Describe** the archaeological evidence that has been found that helped create this image.



↑ Source 2.14.1 Painting by Italian Giovanni Caselli, *Lake Mungo and Aboriginal people*, created in 1974. Caselli used archaeological evidence found at Lake Mungo to create this painting. All the items found in this painting have been found at Lake Mungo including the people.

- 7 **Evaluate** the impact of skeletal remains (human or animal) on understanding Deep Time. Did finding these fossils change the way we view Australia? (Hint: look at Source 2.11.1 for evidence.)
- 8 Imagine you have been asked to give a speech to the Australian Senate in Canberra. You must **explain** to the elected men and women the significance of Aboriginal and Torres Strait Islander knowledge and understandings. You could think about:
- How culture continues through Deep Time to the modern era.
 - Use of land through agriculture and aquaculture (earth, water, fire, sky)
 - Trade of items and knowledge
 - Modern representations of culture.

Create a plan for your speech, and be sure to include the evidence you would use, based on the sources included in this chapter.

- 9 Keeping culture alive today: There are a number of annual events around Victoria and Australia to celebrate or commemorate Aboriginal and Torres Strait Islander history and culture since colonisation.

February 13 – Anniversary of the National Apology

March 21 – National Close the Gap day

April 5 – *Bringing them home* report Anniversary

May 26 – June 3 National Reconciliation Week

May 26 – National Sorry Day

May 27 – 1967 Referendum Anniversary

June 3 – Mabo Day

June 10 – Myall Creek Massacre Anniversary

July 1 – Coming of the Light Festival – Torres Strait

July 4 – July 11 NAIDOC Week

August 23 – Wave Hill walk-off Anniversary

October 26 – Uluru hand-back Anniversary

Do some research into one event of your choice and **explain**:

- The purpose of the day
- The reasons for the event
- Is this event celebratory or commemorative? Why?

Response to chapter inquiry question:
How have First Nations People maintained their significant connections to Country from Deep Time to today?



Write a paragraph in response to the question using all the key terms listed:

- Country
- Deep Time
- culture
- custodianship
- archaeology.

INVESTIGATION 2

Ancient societies (10 000 BCE – 600 CE)

OVERVIEW

[In this topic you will] ... explore the rise and fall of ancient societies of Europe, Asia and Africa, their social and political organisation, significant individuals and groups, political and cultural ideas and their legacies.

Source: VCAA, Victorian Curriculum V2.0, 'History', 'Band description – Levels 7 and 8'

TOPIC OPTIONS

For this Investigation you must choose at least one of:

- Chapter 3 – China
- Chapter 4 – Egypt
- Chapter 5 – Greece
- Chapter 6 – India
- Chapter 7 – Rome

CURRICULUM GOALS

- How do we know about the past?
- Why do societies change?
- What makes a society?
- What factors influence where societies are established?
- How do people understand their world?
- What were the consequences of contact between societies?
- Why are there different interpretations of the past?

Source: VCAA, Victorian Curriculum V2.0, 'History', 'Band description – Levels 7 and 8'

CHAPTER 3

How did the people of ancient China create a strong and lasting civilisation?



LESSON	TITLE
--------	-------

- | | |
|------|--|
| 3.1 | Setting the scene: How did an engineer become a king? |
| 3.2 | What were the key events of ancient China? |
| 3.3 | How and where did ancient Chinese societies first develop? |
| 3.4 | What was life like during the early dynasties of ancient China? |
| 3.5 | How was the social structure and government of ancient China formed? |
| 3.6 | What were the Warring States and how did they establish the empire? |
| 3.7 | What did the people of ancient China believe and how did they honour their dead? |
| 3.8 | How did the significant beliefs, values and practices of the ancient Chinese change and develop? |
| 3.9 | How did contact and conflict with other societies change ancient China? |
| 3.10 | Who was Fu Hao and why was she a significant individual in ancient China? |
| 3.11 | End of investigation review: How did the people of ancient China create a strong and lasting civilisation? |
-



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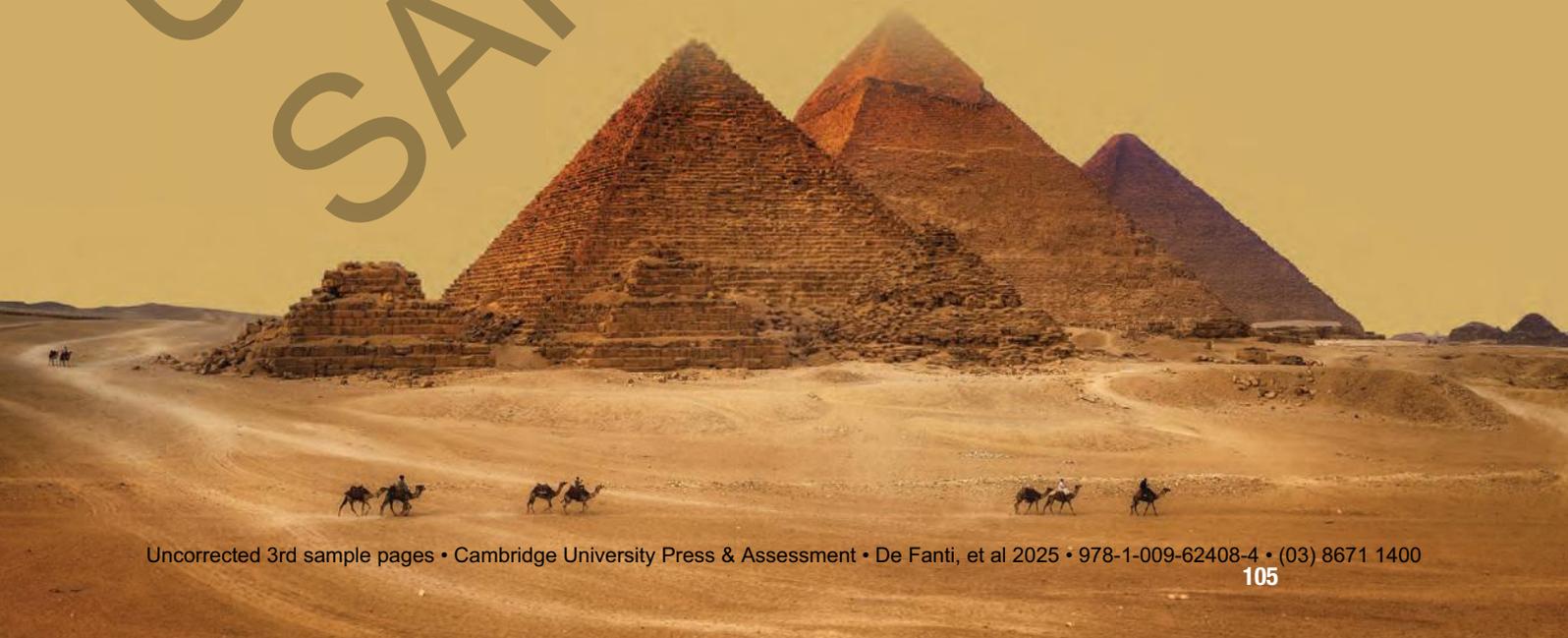
CHAPTER 4

How did Egypt develop into a powerful ancient society?



LESSON TITLES

- 4.1 Setting the scene: Meet Tjeby, your guide to ancient Egypt
- 4.2 What were the key events in ancient Egypt?
- 4.3 How did the environment influence the development of ancient Egyptian society?
- 4.4 What do we know about the earliest Egyptians?
- 4.5 How was ancient Egypt governed?
- 4.6 Why was Ramesses II one of Egypt's greatest pharaohs?
- 4.7 How did ancient Egypt benefit from conflict with other societies?
- 4.8 How did ancient Egypt benefit from trade with other societies?
- 4.9 What was life like for workers in ancient Egypt?
- 4.10 What was life like for women in ancient Egypt?
- 4.11 What were the religious beliefs of ancient Egyptians?
- 4.12 What were Egyptian preparations for the afterlife?
- 4.13 How did Egyptians develop the science of mummification?
- 4.14 End of investigation review: How did Egypt develop into a powerful ancient society?



Setting the scene: Meet Tjeby, your guide to ancient Egypt



Learning intention

In this lesson, we will learn how clues can be pieced together to help us learn about one of the greatest civilisations of the world, ancient Egypt.

Human remains

tomb a space for burying the remains of the dead, often underground

mummified preserved with chemicals and wrapped in cloth bandages

Did you know that the remains of a man who lived 4000 years ago are kept in the collection of the Melbourne Museum? His body was discovered 100 years ago in a **tomb** in northern Egypt and shipped to Australia. You might already know that the Egyptians' most famous and magnificent tombs were massive

stone pyramids built for kings. This man's burial place was much humbler, but because his body was **mummified**, it has lasted. In fact, his human remains are like a 'time capsule' of clues – about how ancient Egyptians lived, what they ate, and what illnesses they may have suffered.

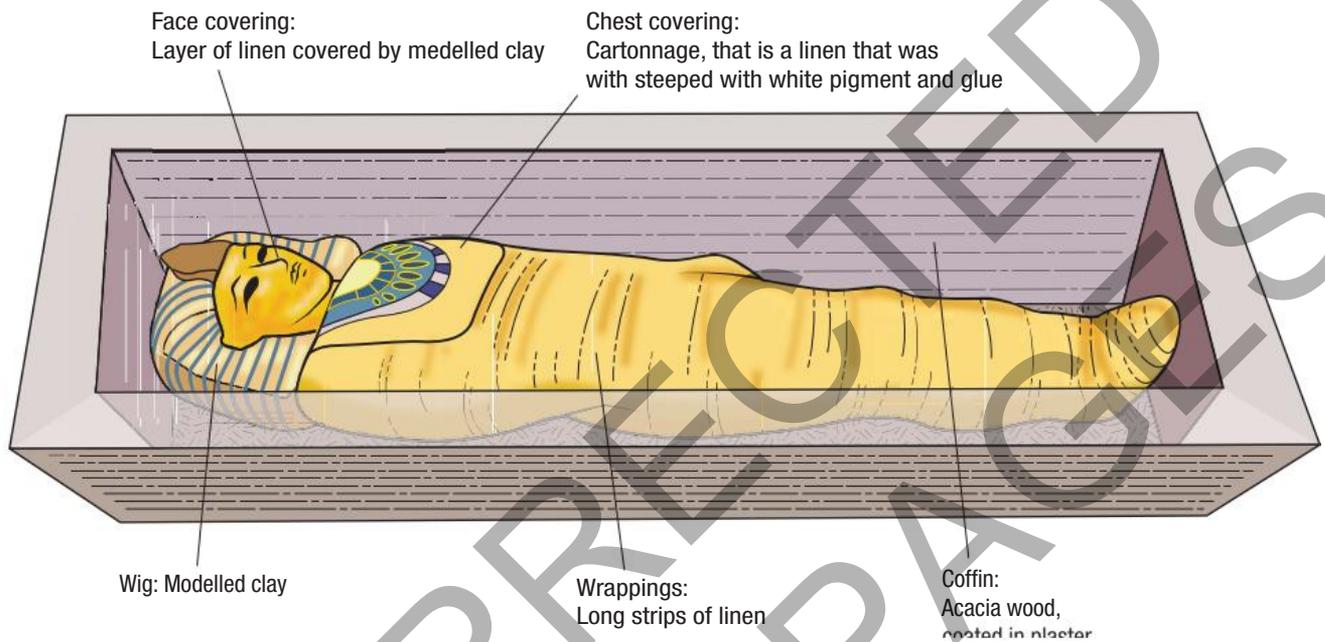
↓ Source 4.1.1 Australian scientists examine an Egyptian mummy, using the same CT scan technology that medical doctors use to assess the health of their living patients' bones and internal organs today. *What do you think the scientists are trying to find out?*

Xpress 5k



While museum staff have known for many years from the writing on the coffin that the mummy in Melbourne was called 'Tjeby', in recent years they have developed new methods to study his human remains for more clues about

Egypt's highly advanced society. We know, for example, that he was taller than the average Egyptian – over 175 cm, lived until he was 35–40 years old, and suffered from tooth disease.



↑ Source 4.1.2 A diagram by the Museum of Victoria shows the many different techniques used on Tjeby's body. *How is the body like a time capsule?*

A mummy as a guide

Scientists and historians use great care and precise methods when examining mummified human remains, to ask questions about how the person lived. Imagine if we could go back in time and talk directly to the living person instead! What would it be like to have a mummy as our guide to ancient Egypt?



→ Source 4.1.3 An artist's impression of what Tjeby probably looked like, based on an analysis of his skull. *What does it feel like to look into the face of an ancient Egyptian?*

Imagine Tjeby welcoming us to ancient Egypt ...

Welcome to the wonderful land of the Nile River Valley! My name is Tjeby. I live on the east bank of the great Nile, in the place you would know in your time as Egypt. Follow me, and I will show you the miracles we have achieved across the country that we call 'Kemet' (the black land, for its rich soil) or Ta-mery (the loved land).

We are surrounded by the burning sands of the desert, but it is green and rich here, along the shores of our mighty Nile River. The Nile is everything to us: it brings the richness of water and good soil, which allows us to grow food and to live comfortably. You must try a voyage on a 'felucca', and see how we use the river as a highway and to transport materials to build our awesome cities and monuments.

I am proud to work for the government, and I work hard, although I am not nearly as well paid as some others! I can barely begin to describe how rich and powerful the king and his high officials are. You will be interested to learn about our complex religion too, how we have achieved the world's biggest building projects, and our sophisticated art. Did you know that we have also developed the all-important skills of reading and writing? You might find our 'hieroglyphics' hard to understand, so I'll help you translate them.

If you visit my home in the Shemau, or Upper Land, of Egypt, you will see that ordinary men and women can live a good life here. Our food is tasty too – our flatbread is delicious, and you must try the dates! Sadly for me, my teeth have been worn right down, making it difficult to eat properly. It hurts! I have been trying to heal myself by rubbing powdered stone and ochre onto my damaged teeth. No luck so far.

We Egyptians think a lot about death, and the 'afterlife'. I have saved enough of my wages to plan a dignified burial at Naga ed-Deir, which is close to where I live. After my death, we believe that I will appear before the gods, who will judge whether I have been a good person by weighing my heart on scales against a feather representing Truth. If I have lived well, I will enter the afterlife; if not, my soul will be devoured by a monster called The Devourer.

Here comes our felucca now – let's explore ancient Egypt!

↑ Source 4.1.4 An imagined introduction to ancient Egypt, by Tjeby (c.1956–1870 BCE)

↓ Source 4.1.5 Feluccas are still used to sail the Nile today. *What does that show us about Egyptian history?*



The history of ancient Egypt covers a very lengthy time span. As you learn about it, you will see references to the Old Kingdom, the Middle Kingdom and the New Kingdom. Between these three stages, when Egypt was unified and ruled by one king, are three so-called 'intermediate periods' of transition from one kingdom to another.

- Old Kingdom = about 2686 to 2181 **BCE**
- Middle Kingdom = about 2055 to 1650 **BCE**
- New Kingdom = about 1550 to 1069 **BCE**

BCE Before the Common Era. Previously, historians had used **BC**, meaning Before Christ, but then they realised that this was not appropriate for many people who are not Christians

Lesson 4.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

4.1 Review questions

- 1 **Define** 'mummified'.
- 2 Museum staff know that the mummy in the coffin was called 'Tjebty'. **Recall** what else they have learned about him.
- 3 **Recall** the names of the three stages, or Kingdoms, in Ancient Egypt's history.
- 4 **Explain** why the Nile was important to Ancient Egypt.

↓ Source 4.1.6 The banks of the Nile River have always been fertile and rich in resources

What were the key events in ancient Egypt?



Learning intention

In the previous lesson, you met Tjeby, and in this lesson we will look at the significant events that took place in what we now call ancient Egypt.

Lesson starter



Complete the following activity to kick-start this lesson.

Based on what you have read so far, brainstorm a list of questions about ancient Egypt. You can use some of these question stems to help you:

- Who ...?
- Why ...?
- When ...?
- How many ...?
- What if ...?

Come back to these questions as you finish each section of the chapter. Which questions can you answer now? Would you update questions based on your new knowledge?



↑ Source 4.2.2 Are these people bathing in the River Nile like the ancient Egyptians did?



← Source 4.2.1 Hieroglyphic script from a wall in the Teti pyramid in Giza

Early dynastic period

c. 3000 BCE
Hieroglyphic script is developed

c. 3100 BCE

King Narmer becomes the first pharaoh when he unites Upper Egypt and Lower Egypt

Unification period

Old Kingdom period

c. 2613–2181 BCE
The great pyramids at Giza are built

c. 2670 BCE

The first stone pyramid is built at Saqqara

Early dynastic period



← Source 4.2.3 The step pyramid of Djoser is the oldest Egyptian pyramid and the world's oldest stone building.

New Kingdom period

c. 1336 BCE
Tutankhamun becomes pharaoh of Egypt

c. 2040–1640 BCE
The high point of ancient Egyptian art and architecture

Middle Kingdom period



New Kingdom period

Lesson 4.2 review

<p>Online quiz</p>	<p>Review questions</p>	<p>Research task</p>	<p>Teachers can assign tasks and track results</p>
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Go online to access the interactive lesson review and more!

4.2 Review questions

- 1 Use the timeline to **list** some of the well-known individuals who lived in ancient Egypt. What did these people do?
- 2 Research and write about one of the significant events shown on the timeline. **Describe** the causes of this event (why it took place) as well as its consequences (what changed because of this event).

How did the environment influence the development of ancient Egyptian society?



Learning intention

In this lesson, we will learn about the geography and climate of Egypt, and how they helped support the development of one of the world's greatest early civilisations.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 4.3.1. How does the river valley change shape as it flows to the Mediterranean Sea?
- 2 **Think:** What does this image make you think about the landscape and geography Egypt?
- 3 **Wonder:** How might this river valley influenced where cities were built?

↓ Source 4.3.1 A satellite photograph of the region around Egypt today, with the Nile Valley in green



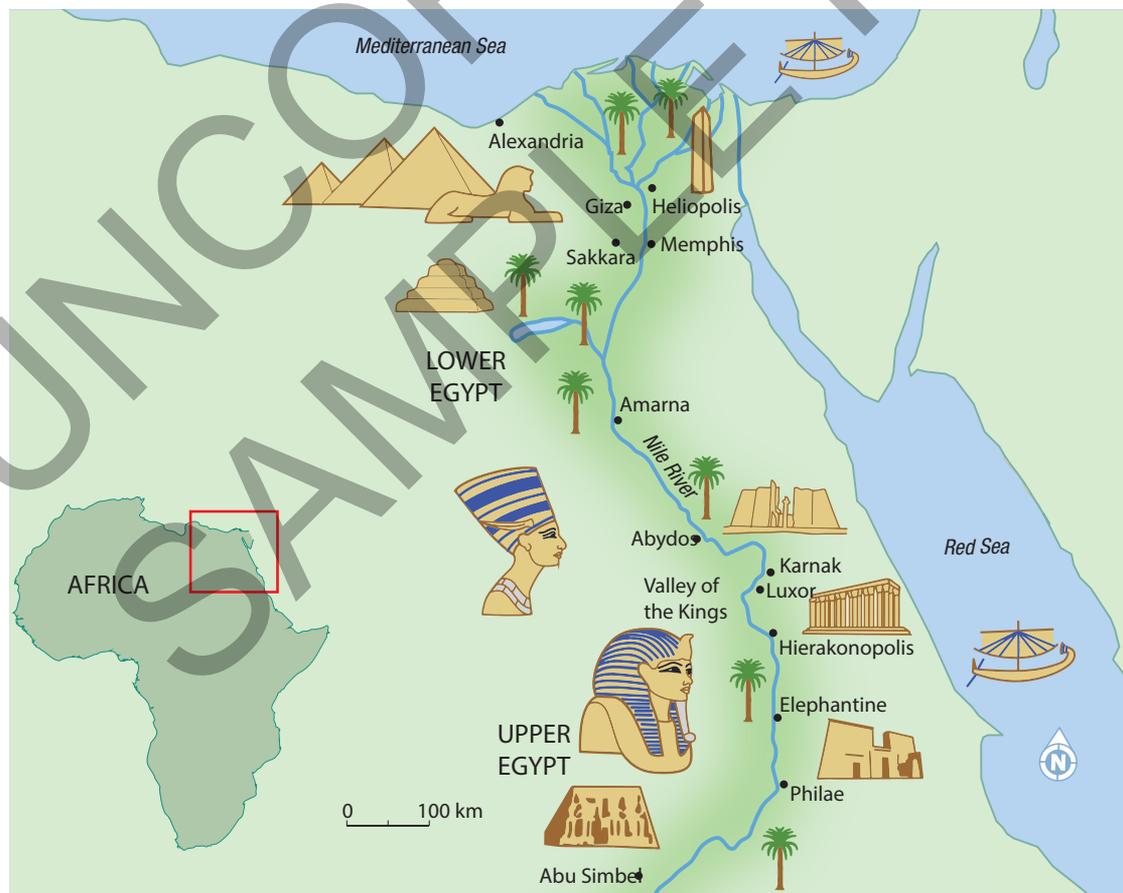
A rich land

Around 5000 BCE, climate change dried out much of the land around what is now Egypt, turning it into a hot desert. The people became what we would call today 'climate refugees' and had to move to the fertile green land on the banks of the Nile River. The Nile is the longest river in Africa, flowing for over 6800 km. Close to the river there was good soil and enough water to allow farming to grow food. Farmers planted fruit trees (figs, dates and grapes) and vegetable patches, and grew rich crops of wheat and barley. They also kept herds of cattle and goats and caught fish – being careful of the crocodiles and hippopotamuses in the river!

As the Nile approaches the flatter land near the Mediterranean Sea, the river slows down and spreads out into a triangular area covering about 15000 square km and known as the Delta, or Lower Egypt. The very rich land of the

delta supported large areas of crops and herds of cattle. The river was like a highway, with small boats known as 'feluccas' transporting people and heavy items across the country. Houses and larger buildings could be built from Nile mud bricks, and so villages sprang up, then cities developed, and one of the world's greatest civilisations could flourish.

The Egyptians referred to the dry deserts around them as 'The Red Land'. Although few people could live there, the deserts were not useless: they too provided many resources the Egyptians needed. They mined important metals like copper and gold. Equally important were precious stones, such as amethyst, used for Egyptian luxury jewellery. The deserts also offered a variety of salts, the most important being natron, which was important to dry a dead body in the process of mummification.



↑ Source 4.3.2 A map of ancient sites in the Nile Valley. *What do you notice about the locations of cities, town and temples in relation to the river?*

Concepts and skills builder 4.3



Using historical sources



- 1 **Identify** where the greatest area of cultivation was (farming of crops). Why is it there?
- 2 **Identify** where most of the land for pasture (grazing of animals) was.
- 3 Gold was used in Egypt's trade and fine arts. **Examine** the importance of the locations of where gold could be found.
- 4 Rocks, including granite, limestone and basalt, were used to develop great buildings in the north of Egypt, such as the pyramids. Based on the map, **suggest** how the rocks were transported to the building sites.

← Source 4.3.3 A map of the resources of ancient Egypt

inundation
flooding, when a river overflows its usual banks

Historical concepts and skills: historical perspectives and interpretations, using historical sources



↑ Source 4.3.4 A tomb painting from around 1400 BCE showing Egyptians fishing and growing food along the Nile. **How many different types of food can you find in the painting? What does this tell us about Ancient Egypt and the Nile?**

The gift of the Nile

The Egyptians themselves were in no doubt that they owed everything to the mighty River Nile. Their country, they said, was 'the gift of the Nile'.

In most places, including Australia, a flood is usually considered a natural disaster. In Egypt, flooding was welcomed: the annual Nile flooding or '**inundation**' was completely predictable, bringing water and nutrients safely to the river valley every August and September, except in rare years when the flood was too strong or too weak. The flooding was so important that the Egyptian calendar was set by it. Egyptians recognised three seasons: the Time of Flood, the Rising of the Seed and the Time of Heat and Harvest. They also measured how much water was brought by each year's flood, using measuring devices known as a 'Nilometer'.

Ancient Egyptians worshipped Hapi, the god of the Nile inundation. They sang hymns to the god for nourishing their lands, and if the floods failed, they said that Hapi was too slow that year, and people would become sick and perish. Statues showed Hapi as a fat man to represent the river's power, with large breasts like a nursing mother, to represent how the river gave life. The ancient Egyptians also worshipped several other river gods.

As Egypt's population grew, its people developed their own ways of making the gift of the Nile waters go further, through **irrigation**. They developed the technique of basin irrigation, using networks of canals to pour water across the valley. Farmers built thousands of *shadufs* (bucket cranes), to lift water from the river or canal and tip it into an irrigation ditch to water their plants.

In 1850 BCE, king Amenemhet II changed the course of a branch of the Nile into a canal 15 km long. He even built



↑ Source 4.3.5 A *shaduf*, or hand-operated bucket crane. This scene is from an ancient tomb in Thebes. *Can you tell how the machine saved the farmer energy?*

irrigation the human-controlled supply of water to help grow crops

a whole artificial lake in the Fayum region, transforming it into a green paradise and a major source of Egypt's grain for making bread.

Lesson 4.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

4.3 Review questions

- 1 **Describe** the environment in which ancient Egypt was developed.
- 2 **Identify** three key resources that made the development of ancient Egypt possible, and what they were used for.
- 3 **Explain** how the annual Nile inundation affected Egyptian life by completing the following sentences:
 - a People welcomed the annual flooding of the Nile, *because* ...
 - b People welcomed the annual flooding of the Nile, *but* ...
 - c People welcomed the annual flooding of the Nile, *so* ...
- 4 **Explain** the techniques that the Egyptians used to direct water to where they needed it.

What do we know about the earliest Egyptians?



Learning intention

Having learned how the Nile and its environment made a civilisation possible in Egypt, we will now study the earliest history of the people of Egypt, including the beginnings of civilised society.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 4.4.1. Have you ever seen a statue like this before?
- 2 **Think:** What questions do you have about this statue?
- 3 **Wonder:** What does this statue make you wonder about the first peoples of Egypt?



← Source 4.4.1 This small statue (less than 10 cm tall) is one of the earliest images of the first peoples of Egypt. It was carved out of crocodile bone and placed in a grave around 4400 BCE. Now it can be seen in the Louvre Museum, Paris.

From the Stone Age to warriors

The first people to live in the Nile valley, from about 100 000 years ago, were a **Stone Age** people, using simple weapons made from wood, stone and bone to hunt animals. This gave them their food supply, as well as furs for clothing. They had not yet learned the farming skills of keeping animals or growing crops. They were also **nomadic**, so they tended not to build houses or villages.

When the climate of Egypt became hotter and drier, people migrated to live close to the Nile River. They were a series of tribes, who began to build villages. While they still hunted animals, they also discovered how to grow crops, such as wheat (to make bread) and barley (to make beer). They had become farmers,

and understood how to plant seeds in the thick, rich soil brought down by the flooding of the Nile River.

The various tribes competed for the best land, and often fought bloody wars with each other. They did not have an overall ruler or king, and therefore their period is known as **pre-dynastic** Egypt.

Warfare is usually destructive, but in Egypt it had one effect that would change the world: the Egyptians realised that they could avoid conflicts by creating a set of rules that everybody respected and accepted. They had, in fact, invented the very idea of law, a set of rules for people to live by. Later, the art of writing would be developed, partly to put these laws into written form.

Stone Age the early period in human history when people made tools and weapons primarily out of stone

nomadic moving from one place to another rather than living in one place all the time

pre-dynastic the period before the recognised dynasties of kings started in ancient Egypt



↑ Source 4.4.2 Painted wood model of ploughman and oxen, found in the Middle Kingdom

Concepts and skills builder 4.4



Interpreting a primary source

A primary source is any document or object created by people during the period of history we are studying. It can be a written document, an artwork such as a painting, or a building such as a pyramid. These sources are valuable because they are direct links with the people we are studying. We can ask who created the source, and why.

Examine the following primary source and then answer the questions that follow.



↑ Source 4.4.3 A hunters' palette showing pre-dynastic Egyptians warriors and hunters. Carved on mudstone around 3100 BCE.

- 1 **Identify** the types of weapons you can see the warriors and hunters carrying.
- 2 This work of art is a palette, which would usually be used to mix cosmetics. **Describe** how you think the object could have been used to mix cosmetics.
- 3 There are two lions and other wild animals. **Explain** what this shows about life near the Nile.
- 4 Warriors are carrying symbols representing different tribes. **Explain** what this shows about warfare at the time.
- 5 **Discuss** what this primary source shows us about life in pre-dynastic Egypt.

Historical concepts and skills: contestability, perspectives, using historical sources

The first kings

In time, the early Egyptians accepted the idea of having one king who would unite and rule their country. Their name for king was **pharaoh**.

For some time, the only information historians had about the early kings was in stories. There were no pictures of what they looked like or how they presented themselves to their people. However, in 1897 archaeologists made a

breathhtaking discovery: a carved piece of stone made about 3000 years BCE, showing what the first king of united Egypt looked like. He was called King Narmer, or Menes. He was pictured wearing two crowns: on one side, Narmer wears the white crown of Upper Egypt (in the south), and on the other side he is also shown wearing the red crown of Lower Egypt (in the north).

pharaoh the ancient Egyptian word for king, first used during the New Kingdom, but now used to refer to all Egyptian kings

This work of art is one of the oldest historical documents in the world and is a 'snapshot' of the moment of birth of a single, powerful country. Like the hunters' palette, it was designed like a palette, but it is far too big and heavy for one person to hold and to mix cosmetics – it is over 60 cm high – so it seems likely that Narmer

ordered this item as **propaganda**, to show off his royal power; he then donated the palette to a temple at Nekhen.

Ever since the Narmer palette, it has been common for kings and mighty leaders to be pictured in strong poses like Narmer, wearing crowns to symbolise their authority, and defeating enemies.

propaganda information, including images, designed to impress people, promote a person or idea, or to frighten enemies



On this side, we see Narmer killing an enemy using a hammer called a mace, in a 'smiting pose'. He is wearing the white crown of Upper Egypt. The god Horus, represented by a falcon, blesses the king.

On this side, King Narmer (top left) wears the red crown of Lower Egypt as he conquers more land. Beheaded enemies are lined up (right). Narmer is also represented as a bull breaking through city walls.

↑ Source 4.4.4 The Narmer palette, carved on siltstone around 3100 BCE.

Lesson 4.4 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



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4.4 Review questions

- 1 **Explain** how the pre-dynastic period led to the idea of kingship in ancient Egypt.
- 2 **Describe** how the early pharaohs used art to impress their people with their power and wealth.
- 3 **Identify** the key symbols that were used in propaganda to represent royal authority.
- 4 **Explain** who King Narmer was, and his main achievement.

How was ancient Egypt governed?



Learning intention

Having learned how the first pharaohs emerged to unite Upper and Lower Egypt, we will now study how power and authority was organised to govern ancient Egypt.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Describe what you see in this image (Source 4.5.1)
- 2 **Think:** Why would a drawing like this be in a temple?
- 3 **Wonder:** Would this be an accurate depiction of the battle?



↑ Source 4.5.1 In this nineteenth-century drawing based on a painting in an ancient temple, the mighty pharaoh Ramesses II is shown riding a chariot and personally killing his enemies. Some historians question whether the pharaoh would actually have taken the risk of going into battle in person.

Power and authority

Egypt became a great civilisation after its powerful kings developed a very well-organised government. The pharaoh was all-powerful, with titles such as The Lord of the Two Lands and the King of Upper and Lower Egypt. Later, during the New Kingdom, they had the title of pharaoh, from the word *per aa*, which meant The Great House (or Palace).

The Egyptians believed that their king was the son of the god Horus, and that he was a god himself. This meant that he could talk to the gods and ask them to protect Egypt. The Egyptians held the king responsible for everything, even the seasons.

In the temples, paintings and statues showed the king making **offerings** to the gods, to ensure the safety and prosperity of his country. In special festivals known as *heb-sed*, the pharaoh was said to have used magic to renew his mighty powers so he could remain a strong ruler. A pharaoh had several wives. When he died, the pharaoh became Osiris in the **afterlife** and his title passed directly to the son of his main wife, or to the son of a lesser wife if that was the oldest boy.

Egyptian ideas about their leaders were shaped by the many paintings and statues made of pharaohs, showing symbols of power and authority. He was often pictured holding a shepherd's crook in one hand, symbolising the pharaoh's duty to guide his people along the right path, and a flail, or whip, in the other hand, to punish his people if they did wrong. Sometimes the pharaoh was shown with a mace as a weapon, and a cobra snake on his head, both of which could kill enemies.

Amazing but true...

Sometimes, a pharaoh was married to his sister, half-sister, or even daughter!

offering a gift or sacrifice presented to a very important person or a god

afterlife life after death; Egyptians believed that a person's soul continues after their body dies



↑ Source 4.5.2 The pharaoh Tutankhamun shown on his coffin, made in c.1325 BCE

Concepts and skills builder 4.5



Analysing a primary source

Historians were excited when they discovered a text in which we could hear a pharaoh describing his duties to his son. He wrote this advice just after the Old Kingdom, in the first Intermediate period. His name is still not known, but it is advice given to his son Merikare, who would succeed him when he died. **Examine** Source 4.5.3 and then answer the questions that follow.

Do justice that you may live long on earth. Calm the weeper, do not oppress the widow; do not **oust** a man from his father's property.

... Beware of punishing wrongfully; do not kill, for it will not profit you, but punish with beatings and imprisonment, for thus this land will be set in order.

... Guard your frontier and **marshal** your fortresses, for troops are profitable to their master.

Construct fine monuments to god, for it means the **perpetuation** of the name of whoever does it.

oust to throw out a person

marshal gather up, organise

perpetuation making permanent, lasting forever

↑ Source 4.5.3 A pharaoh's advice to his son, from Dianne Hennessy, *Studies in Ancient Egypt* (Melbourne: Thomas Nelson, 1993), pp. 35–36

- 1 **List** the main duties of a pharaoh as this king understood them.
- 2 **Explain** which duties would show the pharaoh's power and which duties would show responsibility to his people.
- 3 **Describe** one of the reasons the father gives to his son for doing these duties.
- 4 **Discuss** what impression you form about the character of this pharaoh from this source.

Historical concepts and skills: empathy, historical perspectives and interpretations, using historical sources

Government and taxes

vizier the most powerful official in ancient Egypt, supporting the pharaoh

Each pharaoh relied on his highest official, called the **vizier**, to organise the practical work of government, like a modern prime minister. He (or occasionally she) was called 'Superintendent of all works of the King'. The vizier was powerful – second only to the pharaoh himself – and very

rich, with a grand office in the pharaoh's palace. Their tasks included supervising lower officials, making sure that there was enough food produced for the people, and managing big projects, such as building the tomb of the king.

Importantly, the vizier supervised taxes across Egypt. The king needed people to pay taxes so that he could equip and pay his soldiers and officials, build great temples, and make offerings to the gods. In the First Dynasty, Egypt was divided into 42 **nomes**, or provinces, to organise this huge effort. Each *nome* had its own governor, called a **nomarch**, who was responsible for local law and order, their section of the network of irrigation canals, and to collect taxes. Different people paid tax in different ways: farmers paid with some of their crops and livestock, labourers did unpaid work, and craftsmen handed over some of the goods they produced.



↑ Source 4.5.5 This Nilometer still exists on Roda Island, near Cairo. *If the flood failed to raise the water as high as the levels of previous years, what would happen to Egypt's levels of tax?*

A problem was that the people could not always afford to pay the same amounts of tax: in good years, with good flooding, the people could afford to pay more, but in bad years, they could pay less. How could the government make taxes fair? The solution was the invention of the Nilometer, a vertical stone column like a ruler to measure how much water arose in any given year. They then used mathematical calculations to predict how much people could pay that year: high water meant better crops and more wealth, so taxes could be increased.

nomes the name for a region or province in ancient Egypt

nomarch the name for the ruler of a region or province in ancient Egypt



↑ Source 4.5.4 This painting shows a vizier named Rekhmire receiving offerings. *How could this be used as evidence that Egyptians paid their taxes in food?*

Lesson 4.5 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

4.5 Review questions

- 1 **Identify** the symbols that showed a pharaoh's power and authority, and what they represented.
- 2 **Explain** what tasks the vizier did to help his pharaoh.
- 3 **Explain** how the form of taxes that people paid related to the work they did.
- 4 **Discuss** how the level of taxes to be paid were calculated, and how fair you think the system sounds.

Why was Ramesses II one of Egypt's greatest pharaohs?



Learning intention

We have learned how pharaohs showed their power and authority and organised their government. Now we will study one of the most powerful pharaohs, who had a very strong influence on the development of ancient Egypt: Ramesses II.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** What can you see in the temple (Source 4.6.1)?
- 2 **Think:** Why might the pharaoh choose to be depicted as Osiris? What does this say about the pharaohs place in Egyptian society?
- 3 **Wonder:** What other monuments did Ramesses II have built?

↓ Source 4.6.1 The Great Temple of Ramesses II, Abu Simbel, which the pharaoh ordered to be built. Each of the eight enormous statues shows the pharaoh as Osiris, the god of the underworld, death and the Nile floods that brought Egypt fertility.



Colossal buildings

Ramesses II impressed his people by organising ambitious building projects across Egypt, beyond the scale of other pharaohs. As well as great temples for the worship of Egyptian gods, he built massive monuments to himself so that the people would revere him, and even a whole new capital city. Was he obsessed with his own power, or helping all Egyptians to have pride in their nation?

At Abu Simbel in southern Egypt, Ramesses built a colossal temple to be a memorial to himself after he died. It is so big that it took some 20 years to complete. The temple was carved into the rock face of the mountainside, with four *colossi* (huge statues) on the stone front, all showing Ramesses. Smaller figures represent some of his wives (he had over 100 wives), and daughters (he fathered over 100 children, more than any other pharaoh). Twice a year, at the exact time of the equinox, a brilliant ray of sunlight shines through the entry and travels 55 metres through the pitch-black sections of the temple to light up the special sanctuary holding sacred statues.

Ramesses also built a separate temple nearby for his queen, Nefertari. Queens in ancient Egypt commonly had tombs and even pyramids of their own, but few had their own temple.



↑ Source 4.6.2 The Great Temple of Ramesses II, Abu Simbel. *What impression might ordinary Egyptians have developed of their pharaoh when they looked up at the 20-metre-tall statues?*

Nefertari's official title was the First of the Great Royal Wives. She was unusual because she could read and write hieroglyphs. With this skill, she assisted Ramesses by writing letters to foreign rulers, becoming Ramesses' main expert in diplomacy.

Amazing but true...

The Great Temple of Ramesses II was buried by desert sand for over 2000 years, until an Italian explorer found it in the nineteenth century. Then in the 1960s, to save it from the rising waters of a new dam, the whole temple was cut into blocks and reassembled on higher ground.

Amazing but true...

Ramesses had many wives. Nefertari was his first, and after she died, he had several others including Isetnofret and then three of his own daughters. He also had many children, and actually fathered around 50 sons and 50 daughters in his lifetime!

How do historians judge the legacy of Ramesses II? _____

Concepts and skills builder 4.6



Responding to a secondary source

Examine Source 4.6.3 and then answer the questions that follow.

What was it about Ramesses II that made him different, special, and noteworthy in the long line of pharaohs?

... several factors come to the fore. First was the age in which he lived. The period known to Egyptologists as the New Kingdom (1539–1069 BC) marked the peak of ancient Egypt's power and prosperity. ... Under Ramesses, Egypt was richer and more powerful than it had ever been before, or would ever be again. As a consequence, Ramesses had access to greater resources than any of his predecessors or successors.

... In addition, Ramesses acted on a scale that few other pharaohs, before or after, could match. His monuments were more impressive.

... Finally, in every aspect of his reign, Ramesses seems to have been obsessed with his legitimacy and his legacy.

↑ Source 4.6.3 Toby Wilkinson, *Ramesses the Great: Egypt's King of Kings*, Yale University Press, 2023, pp. 2–3

- 1 **Identify** in your own words three reasons that the historian gives for Ramesses being a great pharaoh.
- 2 **Explain** why, according to the historian, the age in which Ramesses lived helped his greatness.
- 3 **Explain** what Ramesses did more than other pharaohs.
- 4 Ramesses's family was not originally royal – his grandfather was a commoner. Consider this, and **define** the word 'legitimacy', to answer the question: What does Ramesses seem to have been obsessed about?

Historical concepts and skills: historical perspectives and interpretations, continuity and change

War and peace

Hittites a great ancient empire to the north of Egypt centred on the land today known as Türkiye, 1650–1180 BCE

Ramesses led an army of over 100 000 soldiers in 15 military campaigns, with many victories for Egypt, and no setbacks. Some battles, however, including his most famous battle against the **Hittites** at Kadesh (which we will learn more about in the next lesson),

resulted in a stalemate: neither side won. Still, the wall carvings in his temple depict him as a heroic leader who smashed enemies. Like other pharaohs, his propaganda shows him personally killing enemies with a mace, and firing arrows from a chariot.



↑ Source 4.6.4 A modern copy of one of Ramesses' great propaganda paintings, showing him personally leading his army to capture the Hittites' fortress at Dapur.



↑ Source 4.6.5 A carving showing Ramesses holding prisoners of war, at Abu Simbel. *Do you recognise his smiting pose (remember how the first king Narmer was depicted)?*

Ramesses also produced the world's first known written peace treaty. Other kings had made peace agreements before, but Ramesses was the first to put a peace deal between two great empires into writing, between Egypt and the Hittites.

Another way that Ramesses changed the face of Egypt was to build a new capital city, in the far north of the country, where the Nile Delta is. The location was closer to the Hittite Empire, and the city may have been 6 km long and 3 km wide! He called it Pi-Ramesses, meaning 'House of Ramesses'.

Lesson 4.6 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

4.6 Review questions

- 1 **Explain** what impression Ramesses' buildings were designed to have on ordinary Egyptian people.
- 2 **Discuss** how propaganda depicted Ramesses during wars.
- 3 **Justify** why Ramesses's peace treaty with the Hittites was significant.
- 4 Scientists have used evidence from the mummified remains of Ramesses II to reconstruct his actual appearance. **Discuss** whether he looks like you imagined.



↑ Source 4.6.6 Special software was used to determine what pharaoh Ramesses II would have looked like in his prime, at about the age of about 45. [Image credit: John Moores, University Face Lab, Liverpool]

How did ancient Egypt benefit from conflict with other societies?



Learning intention

We have learned about one of the most powerful pharaohs, Ramesses II. This lesson explores how ancient Egypt grew through contact and conflict with other societies.

Lesson starter



Complete the following activity to kick-start this lesson.

Think, pair, share



- 1 Think: Compare** ancient Egypt's territory in the Old Kingdom with the territory it controlled in the New Kingdom (Source 4.7.1). Describe what differences you notice.
- 2 Pair: Discuss** with a partner which foreign kingdoms Egypt may have encountered and successfully overtaken.
- 3 Share: Suggest** to the class what you believe this expansion indicates about ancient Egypt's military strength in comparison with that of its neighbours.

↑ Source 4.7.1 This map illustrates the expansion of Egypt's borders from the Old Kingdom to the New Kingdom.

In what ways did warfare and military expansion play a role in the success of ancient Egyptian civilisation? _____

From the Old Kingdom to the New Kingdom, ancient Egypt greatly increased its territorial extent. Pharaohs took pride in Egypt's military prowess and celebrated their victories by displaying them prominently on temple walls. They also enhanced trade connections and fortified Egypt's borders through peace treaties. As you explore the following information, think about how land conquests, trade expansion and peace agreements contributed to the prosperity and growth of ancient Egypt.

Egypt's military might and its relationship with its neighbours

According to historian Donald P. Ryan (in a book where he imagines he is a time-travelling tour guide, giving a fellow time-traveller a tour of ancient Egypt):

Egypt's power and wealth are physically sustained by an advanced military that protects the homeland from foreign incursions and extends the long arm of Kemet's might wherever the pharaoh desires. Egypt maintains a series of frontier forts in the south, west and east to protect against intrusions by the 'vile' and 'wretched' Nubians, Libyans and various Asiatic peoples.

↑ Source 4.7.2 Historian Donald P. Ryan on the military might of ancient Egypt under pharaoh Ramesses II. [*Ancient Egypt on Five Deben a Day*, London: Thames & Hudson, 2024, p. 67] *What do the number of forts and the different directions around Egypt's borders suggest about how often Egypt was at war with its neighbours?*

As Ryan explains, the army of ancient Egypt during the reign of pharaoh Ramesses II consisted of around 20 000 troops plus many support staff. The military would have been ready to go into battle at short notice for their pharaoh. Soldiers marched long distances or were transported up and down the Nile by naval vessels. Ryan explains that soldiers were highly skilled in the use of a variety of weapons such as the bow and arrow or javelin to attack enemies from a distance, and bronze axes, spears, swords and daggers for fighting up close. Soldiers did not wear body armour but were able to defend themselves with shields made from stretched cowhides. The elite military unit in ancient Egypt was the chariot, which consisted of a driver, a bowman and a shield-bearer to protect the driver.



↑ Source 4.7.3 Model soldiers from the tomb of an 18th dynasty pharaoh, ancient Egyptian, 16th–13th century BCE. *How are these soldiers armed, and armoured? Why would this model have been placed in a pharaoh's tomb?*

Amazing but true...

Pharaohs like Ramesses II wanted to know that their soldiers were successful in battle against Egypt's enemies. Pharaohs wanted an accurate assessment of the number of dead enemies, and had their soldiers lop off body parts such as hands – one body part was counted as one dead enemy. Big piles of these were created to show off the fearsome power of Egypt's pharaoh and their military.

An example of military success: the Battle of Kadesh

The Battle of Kadesh occurred in 1274 BCE, during the rule of Pharaoh Ramesses II. Egypt and the Hittite Empire had been enemies for a long time. The crisis started when King Mursili III of the Hittites was overthrown by his uncle. Mursili fled to Egypt to save his life. The new Hittite king demanded that Mursili be returned to his country, but Ramesses claimed – perhaps truthfully – that he did not know where he was. The situation turned into a crisis, and another war was threatening. Ramesses II marched to Kadesh with more than 20 000 soldiers, including 2000 chariots. While he successfully defeated the Hittite army in battle, he was unable to take the city of Kadesh. Subsequently, Ramesses turned to **diplomacy** to negotiate peace with the Hittites. Interestingly, both factions claimed a decisive victory! Although the Egyptians managed to endure a

diplomacy the work or skill of managing relations between countries or empires



↑ Source 4.7.4 A *khopesh* sword from the time of Ramesses II. This fierce weapon was used by Egyptian foot soldiers in the heat of battle. This example is currently housed in the Department of Egyptian Antiquities of the Louvre, Paris, France. *Why do you think these swords were shaped this way?*

challenging situation at Kadesh, it wasn't the glorious triumph Ramesses aimed to depict; rather, it was a stalemate, with heavy losses on both sides.

Amazing but true...

Historians have found that the two languages on the Treaty of Kadesh are not quite identical: the Egyptian version blames the Hittites, while the Hittite version blames the Egyptians.

Effects of the Battle of Kadesh

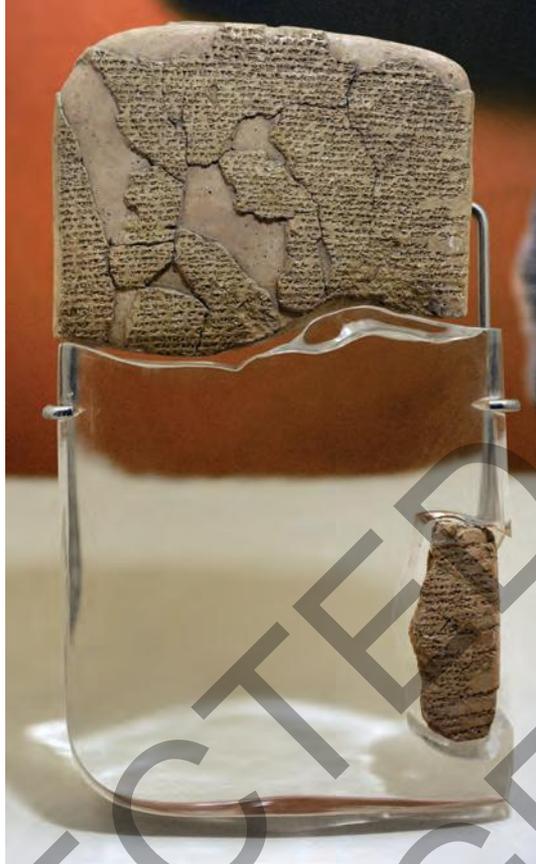
After forcing the enemy to retreat, Ramesses II returned to Egypt to proclaim his victory in battle. This reinforced his power, as the people viewed him as a strong leader. He had numerous depictions of his 'victory' carved into temple walls, ensuring that every Egyptian was aware of how he had 'defeated' the Hittites.

Peace treaty with the Hittites

Another noteworthy outcome of the Battle of Kadesh was the eventual peace treaty

between Ramesses II and the Hittites. This treaty established 90 years of peace between the two civilisations, facilitating increased trade and the exchange of technological innovations. It is regarded as the world's first peace treaty. Nine years after the treaty was signed, the alliance was further strengthened by a diplomatic marriage between Ramesses II and Maathorneferure, the eldest daughter of Hattusili III, the Hittite king. This ended a long conflict between the Hittite Empire and the Egyptians, who had battled for over two centuries for dominance over the eastern Mediterranean territories.

The treaty, known as the Treaty of Kadesh, was inscribed on a clay tablet in 1258 BCE in both ancient Egyptian and Hittite languages. Both powers pledged not to invade each other's territories. A second clause strengthened the alliance by promising assistance, likely in the form of military support, if either side was attacked by a third party or faced internal rebellion. Should the treaty be violated, the oath-breaker would be cursed by the gods, who would 'destroy his house, his land, and his servants'. Conversely, if he upheld his promises, he would be rewarded by the gods, who would 'grant him health and long life'.



↑ Source 4.7.5 Replica of the clay tablet treaty, dated 1269 BCE, signed by Hattusili III, King of the Hittites, and Ramesses, Pharaoh of Egypt. This Kadesh Peace Treaty is a copper replica of the original, housed at a museum in Istanbul, Türkiye. A similar replica is held in the United Nations building in New York, USA. *Why would the United Nations value this artifact enough to put it on display?*

Concepts and skills builder 4.7



Perspectives in primary sources

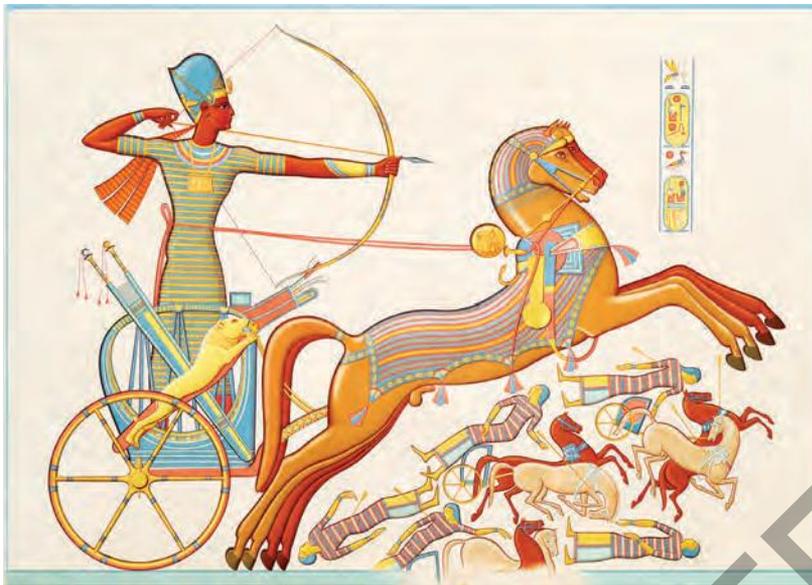
Examine the following sources and then answer the questions that follow. The following is an account of the Battle of Kadesh, attributed to pharaoh Ramesses II himself:

The King says:

Not one of my princes, not one of my captains of the chariot, not one of my chief men, not one of my knights was there. My warriors and my chariots had abandoned me. Not one of them was there to take part in the battle.

I had met two thousand five hundred pairs of horses. I was in the midst of the charioteers, but they were dashed in pieces before my horses. Not one of them raised his hand to fight. Their courage was sunken in their breasts, their limbs gave out, they could not hurl the dart, nor had they the courage to thrust with the spear. I made them fall into the water just as the crocodiles fall in. They tumbled down on their face one after another. I killed them at my pleasure, so that not one looked back behind him, nor did another turn around. I killed them; no one escaped me.

↑ Source 4.7.6 An extract from the Poem of Pentaur describing Ramesses II charge against the Hittite chariotry.



← Source 4.7.7 This coloured engraving of a bas-relief comes from the walls of the Abu Simbel temple. It portrays Ramesses II at the Battle of Kadesh, shooting a bow and arrow from a chariot. The image was created in the late nineteenth century, based on copies of drawings of the inscriptions on the temple walls (19th dynasty, c.1275 BCE).

- 1 **Summarise** the outcomes of the Battle of Kadesh.
- 2 **Describe** how Ramesses II is depicted in Source 4.7.6.
- 3 **Compare** the depictions of Ramesses II in Sources 4.7.6 and 4.7.7. What similarities and/or differences are there between how he is represented in the two sources?
- 4 Sources 4.7.6 and 4.7.7 were located on the exterior walls of Ramesses II's temple at Abu Simbel. **Suggest** who the audience might have been and why Ramesses II wanted these carved onto his temple walls.
- 5 How realistic do you think the depictions of Ramesses II are in these sources? **Describe** how these sources might be useful to historians.
- 6 **Analyse** the significance of the battle in a paragraph that answers the question, 'Should the Battle of Kadesh be seen as a great moment in ancient Egyptian history?'

Historical concepts and skills: historical perspectives and interpretations, continuity and change



Go online to access the interactive lesson review and more!

Lesson 4.7 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



4.7 Review questions

- 1 **Explain** how Egypt's borders changed between the Old and New Kingdoms.
- 2 **Describe** Egypt's military strength under Ramesses II.
- 3 **Explain** how Ramesses's peace treaty with the Hittites worked.
- 4 **Describe** how the Treaty of Kadesh helped trade between Egypt and the Hittites.

How did ancient Egypt benefit from trade with other societies?



Learning intention

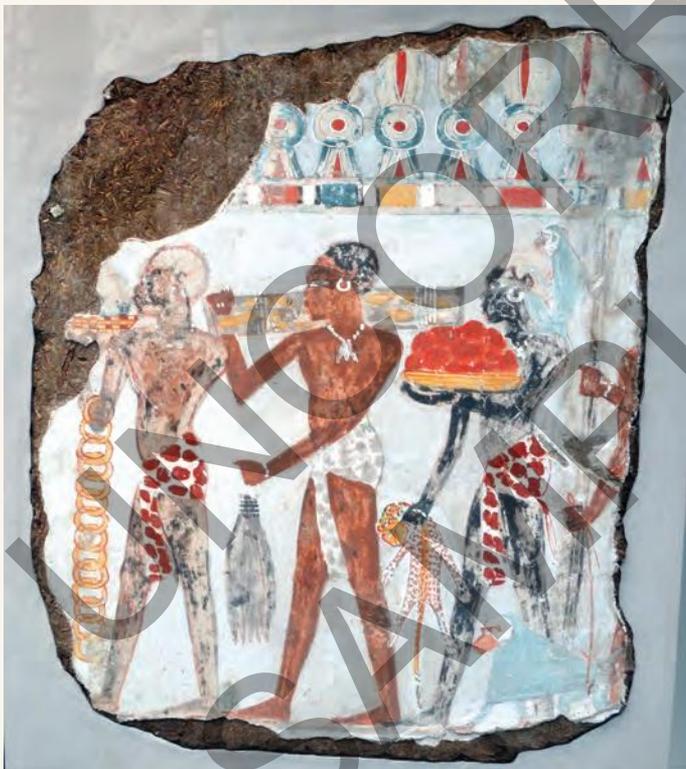
We have learned about how ancient Egypt grew through conflict with other societies. This lesson will look at one of the key benefits of signing peace treaties with former enemies; trade.

Lesson starter



Complete the following activity to kick-start this lesson.

See, wonder, connect



↑ Source 4.8.1 This wall-painting shows the people of Kush carrying goods.

- See:** What do you see these traders doing?
- Wonder:** Consider Source 4.8.1 What questions do you have?
- Connect:** How could this historical object connect to other subjects you study in school?

Explaining Source 4.8.1

The Egyptians particularly valued gold – for use in luxury jewellery – which is being carried by the first trader. They also made extensive use of elephant ivory, which is being carried on the shoulder of the middle figure. The last figure brings some exotic fruit on a gold platter, and a luxurious leopard fur. They also traded live, exotic animals, such as the baboon shown in the right-hand corner. *Does any of this surprise you? Why? Why not?*

How did ancient Egypt benefit from trade with foreign nations?

Ancient Egypt was rich in many natural resources, but it still had to get others by means of trade with neighbouring countries. It was well placed to conduct trade, with access to the whole African continent and to the rich civilisations of the Mediterranean area. It began to build its trade networks very early, during the pre-dynastic period, and continued to be active throughout its long history. As early as 3500 BCE, trade

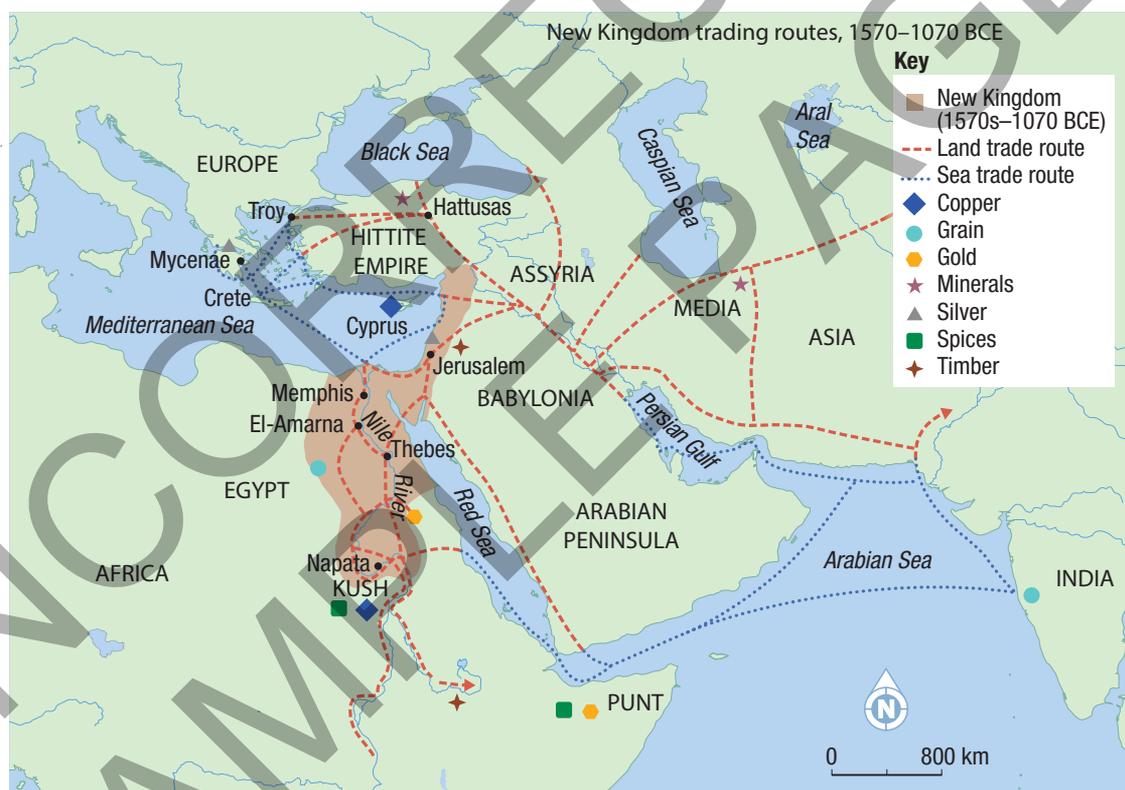
began, initially just between upper and lower Egypt, then, during the First Dynasty, with surrounding countries. Much of Egypt's rich culture depended on a steady supply of luxury materials from foreign countries. Trade was so important that it became one of the main responsibilities of a pharaoh's government. Egypt relied heavily on goods from countries such as Libya, Nubia, Syria and Lebanon.

Concepts and skills builder 4.8



Analysing maps to determine causes and consequences and historical significance

Examine Source 4.8.2 and then answer the questions that follow.



↑ Source 4.8.2 This map shows the New Kingdom's trade routes, trading partners and some of the goods that were traded during 1570–1070 BCE. *What types of goods came by land, and which came by sea?*

- 1 **Identify** the main goods that Egypt exported.
- 2 **Identify** the main goods that Egypt imported. Why might ancient Egypt have needed to import these goods?
- 3 In the period between the Old Kingdom and the New Kingdom, ancient Egypt conquered the region of Kush (Nubia). **Identify** what Egypt's motivation might have been to gain control over this region.
- 4 In the previous lesson, you read about how Ramesses II wanted to gain control of the region around Kadesh, which is south of the Hittite empire. **Summarise** what might have been his objective in gaining control over this region.

Historical concepts and skills: cause and consequences, historical significance

Amazing but true...

Men and women across all levels of society wore jewellery in ancient Egypt. Jewellery was often linked to religious beliefs, but the natural world also inspired many designs, such as this example.



↑ Source 4.8.3 New Kingdom, 18th dynasty. A 9-cm necklace pendant made of gold in shape of a fly. Found in the tomb of Queen Ahhotep in Thebes. *From where do you think Egyptian craftsmen would have sourced the gold required to make this necklace?*

Trade by water

As we know, Egypt's population was heavily reliant on the Nile River in various ways, and Egypt is also located near the Mediterranean, Red and Arabian Seas. Therefore, one of the most important materials the Egyptians needed was good quality wood for shipbuilding: for a river valley civilisation, boats were of critical importance. The Egyptians therefore imported high-quality cedar from Lebanon to build their fleets.

The Egyptians did not use money. They paid taxes in the form of goods.

All trade was barter, which means swapping one kind of goods for another. Wood from Lebanon was paid for in corn and wine, for instance.

Boats of all kinds crowded the Nile. People crossed the river by ferry, while barges carried heavy cargoes. Stones for the pyramids were transported on giant rafts, which could carry 500 tons. Boats going north were helped by the current. Going south, they usually had the wind behind them. The Egyptians could make small boats for local use out of the reeds that grew beside the Nile River, but large trading ships were built out of wood, which had to be imported. These vessels had to be strong enough to carry large, heavy loads and to survive the dangerous conditions on the Red Sea. The ships only had a small amount of decking, front and back; the cargo was simply loaded into the hull of the vessel.

deben currency in ancient Egypt



↑ Source 4.8.4 A typical merchant ship from ancient Egypt

Amazing but true...

To become efficient in international trade, the Egyptians eventually invented their own form of currency called a '*deben*', a form of token or weight, which allowed them to state the value of a particular good. For example, a pair of sandals cost one *deben*.

The mysterious land of Punt

One of the mysteries of Egyptian trade was the land they referred to as Punt. Egyptian trade documents often mention the land of Pwenet, or Punt, as an important source of valuable materials. It was crucial for a number of goods they needed, especially gold for jewellery, as well as precious materials such as ebony, ivory and exotic animals.

Queen Hatshepsut, in particular, saw the value of this rich land, and sent an expedition to Punt. Historians are still debating where exactly this land might have been. One suggestion, shown in the earlier map (Source 4.8.2), is that it might have been just south-east of Egypt; others suggest that it might have been in modern-day Ethiopia or Somalia. The debate continues.



↑ Source 4.8.5 This wall painting shows Queen Hatshepsut's soldiers on a major expedition to explore Punt. They described this distant place as 'the Land of the Gods, a region far to the east in the direction of the sunrise, blessed with products for religious purposes.'

Go online to access the interactive lesson review and more!

Lesson 4.8 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



4.8 Review questions

- 1 **Describe** how peace treaties could have opened up opportunities for trade for ancient Egypt.
- 2 **List** some of the things Egypt traded with other civilisations.
- 3 **Describe** the importance of trade with other ancient civilisations for Egypt.
- 4 **Explain** the importance of the land of Punt to ancient Egypt.

What was life like for workers in ancient Egypt?



Learning intention

We know how rich and powerful pharaohs shaped ancient Egypt, because they created things that last, and recorded information about their lives. However, rich and powerful men were not typical. Most people had to work hard to survive. In this lesson, we explore what is known about the lives of common Egyptians.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- See:** What did a servant wear? What work did she do?
- Think:** Why might a figure like the one on the left be buried with the body of a rich master?
- Wonder:** What other workers do you expect to be a part of Egyptian society?



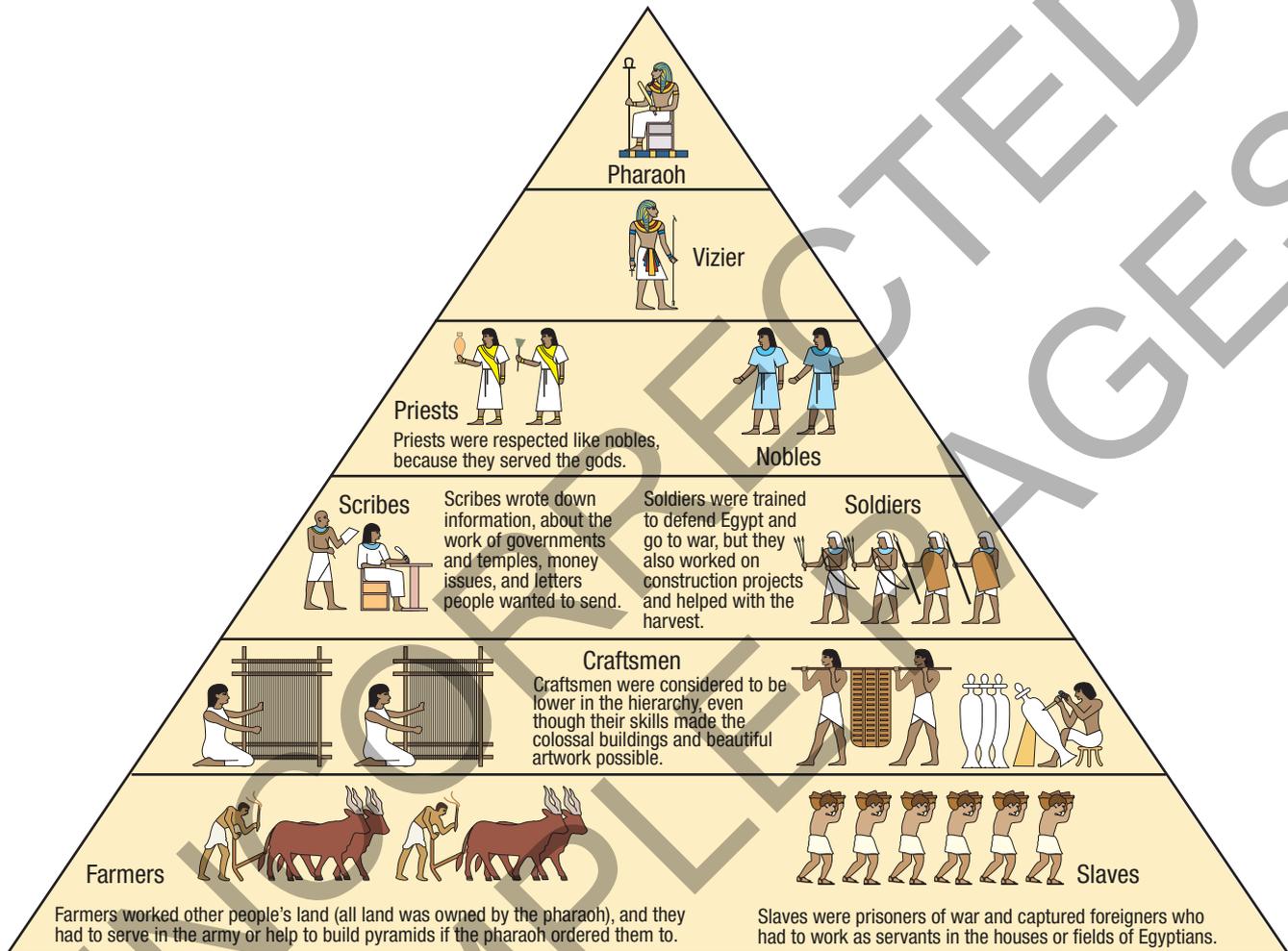
↑ **Source 4.9.1** On the left is a painted wooden statue of a female servant, c. 2020–1773 BCE. The statue was buried with the body of a rich master. It is now in the National Gallery of Victoria. The image on the right displays more wooden figurines, this one of carpenters in a workshop, also found in a tomb.

Workers in the hierarchy

hierarchy a way of showing the structure of a society, with people ranked above, below, or at the same level as each other

Egyptian society is often shown as layers of people in a **hierarchy**, fittingly arranged in a pyramid: rich and powerful people are shown at the top of the social order, with many more people in the lower layers.

Power and authority were in the hands of the pharaohs and their viziers; the nobles were people born into wealthy and important families; while other people's level was determined by what they did for work.



↑ Source 4.9.2 Ancient Egypt's social hierarchy. *Of the people who work with their hands, who was in the higher social class?*

A hierarchy can be misleading. Even though farmers were looked down on for working with the soil, they were valued for feeding Egypt by growing wheat, barley, and fruit and vegetables, tending animals, and harvesting useful materials such as flax and papyrus. Egyptian craftsmen ranged from highly skilled sculptors, goldsmiths and rock cutters, whose work was admired and well paid, to unskilled workers who had a much harder life, doing heavy and low-paid work. As for slaves, some were locked up in chains, but others

lived quite freely among the community like farmers and craftsmen.

Usually, it is very difficult to find out how workers lived. There are few records: most Egyptians could not read or write. However, sometimes clues remain. Graves containing the bodies of pyramid builders have been found, which show that many workers had injuries and broken bones, and were underfed. A typical worker was already an old man by age 20. The majesty of the pharaohs was at the cost of their workers' suffering.

The first workers' strike

One hundred years ago, on the western side of the Nile, archaeologists discovered the remains of a workers' village from the New Kingdom (about 1550 to 1069 BCE), buried under desert sand. Deir el-Medina was like a 'housing estate' in the desert: inside a high wall, a main street was flanked by two-storey houses for 70 skilled workers and their families, close to the Valleys of the Kings and Queens, where they were building grand tombs.

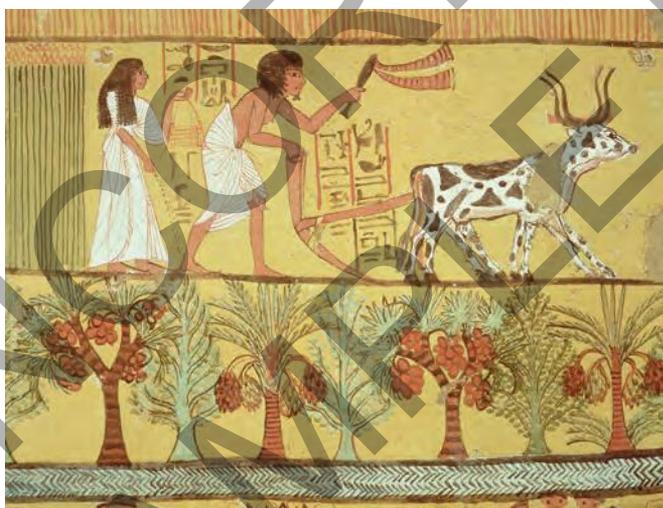
At Deir el-Medina, officials kept records of workers' attendance and any reasons for their absence – such as illness, injury, or family duties. If the builders were unhappy with their conditions, they went on strike to protest. This is the earliest known example in history of workers refusing to work until they received more pay, in this case, in the form of grain.

We are exceedingly impoverished. All supplies for us that are [from] the treasury, that are from the granary, and that are [from] the storehouse have been allowed to be exhausted.

Not light is a load of *dn*-stone. Six *oipe* [an Egyptian unit of measurement, roughly 76kg] of grain have been taken away from us besides to be given to us as six *oipe* of dirt.

Let our lord make for us a means for keeping alive. Indeed we are dying besides. We do not live at all. It [i.e. the means of keeping alive] is not given to us in [the form of] anything whatsoever.

↑ Source 4.9.5 Protest letter from the workers building a temple in the Valley of Kings, to the vizier of Pharaoh Ramesses III, written by the scribe Neferhotep in c.1165 BCE. Ezzamel, Mahmoud (2012), *Accounting and Order*, Routledge, 300–302.



← Source 4.9.6 A painting in a tomb at Deir El-Medina shows a man named Sennedjem and his wife Ineferti, in the afterlife. Why would workers think of heaven as a field, where a couple could happily farm their land?

Go online to access the interactive lesson review and more!

Lesson 4.9 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



4.9 Review questions

- 1 **Identify** the levels/classes of ancient Egyptian society, by drawing a diagram of the social hierarchy.
- 2 **Explain** which workers were considered higher or more respected than others.
- 3 **Outline** why workers at Deir el-Medina went on strike.

What was life like for women in ancient Egypt?



Learning intention

For centuries, historians seemed to ignore the fact that half the people in Egypt were women. In this lesson, we explore what is known about the lives of female Egyptians.

Lesson starter



Complete the following activity to kick-start this lesson.

Think, pair, share

Since Cleopatra was pharaoh (51 to 30 BCE), there has been a fascination with her. How is her power and her beauty shown in this image from a famous 1963 film?

- 1 **Think:** In the image, how is Cleopatra shown to have both beauty and power?
- 2 **Pair: Compare** notes with a partner. Do they have any suggestions?
- 3 **Share:** Each partner should be ready to **explain** something the other person noticed to the class.

↓ [Source 4.10.1](#) Actress Elizabeth Taylor as Cleopatra in the Hollywood film of the same name from 1963



Unrecorded?

Like workers, the lives of women in ancient Egypt mostly went unrecorded. Egypt was typically dominated by men, and there are records of discriminatory attitudes towards women. However, some women could, and did, achieve independence. Historians have found ways to explore aspects of women's experiences, such as marriage and divorce, childbirth and their authority within the home.

A key restriction on the lives of women was that they were expected to marry, have children and stay home as 'lady of the house'. Girls could become wives from the age of 12. The marriage was often arranged between her future husband's family and her parents. In the early centuries of ancient Egypt, the husband paid the girl's family as part of the deal – about the same amount as it cost to buy a slave. In later times, a girl's family may have paid the future husband, to cover her living expenses. It is difficult to tell how many partnerships were loving, although paintings and statues show happy couples.

misogyny contempt for or prejudice towards women or girls (sexism)

Ancient Egyptians do not seem to have had a word for 'divorce', but documents do talk of women 'departing' or being 'expelled' from a home. A man could divorce a woman for three reasons: if she could not produce children, if she had a love affair with another man, or because he had become rich and wanted a new partner from a higher social class. The first record of a woman divorcing her husband dates to 500 BCE, probably because the man had a love affair.

Women were allowed to own property, made important family decisions, and were treated as equals with men if they went to court. One reason workers gave for being absent was to stay home if their wife was sick, so women's household jobs must have been valued. However, historians have found evidence of **misogyny** towards women in the advice that was given to boys. Young men were warned to beware that a beautiful woman might trap them into a relationship.

progeny a descendant or descendants

Concepts and skills builder 4.10



Examine Source 4.10.2 and then answer the questions that follow.

Take a wife while you're young, that she make a son for you; she should bear for you while you're youthful; it is proper to make people. Happy the man whose people are many, he is saluted on account of his **progeny**.

... Beware of a woman who is a stranger, one not known in her town; don't stare at her when she goes by, do not know her [physically]. A deep water whose course is unknown, such is a woman away from her husband. 'I am pretty,' she tells you daily when she has no witnesses; she is ready to ensnare you, a great deadly crime when it is heard.

↑ Source 4.10.2 A wealthy father's advice to his son, known as *The Instruction of Ani*, c.1500 BCE

- 1 **Describe** when a man should take a wife, according to this father.
- 2 **Identify** the sort of woman the father warned his son to beware of.
- 3 Look at the definition of misogyny and **explain** how this advice is an example of misogyny.
- 4 Considering the origin of this source – by a man, to a man – develop questions for further research into the position of women in Egypt.

Historical concepts and skills: historical perspectives and interpretations, contestability, questioning and researching

Beauty and power

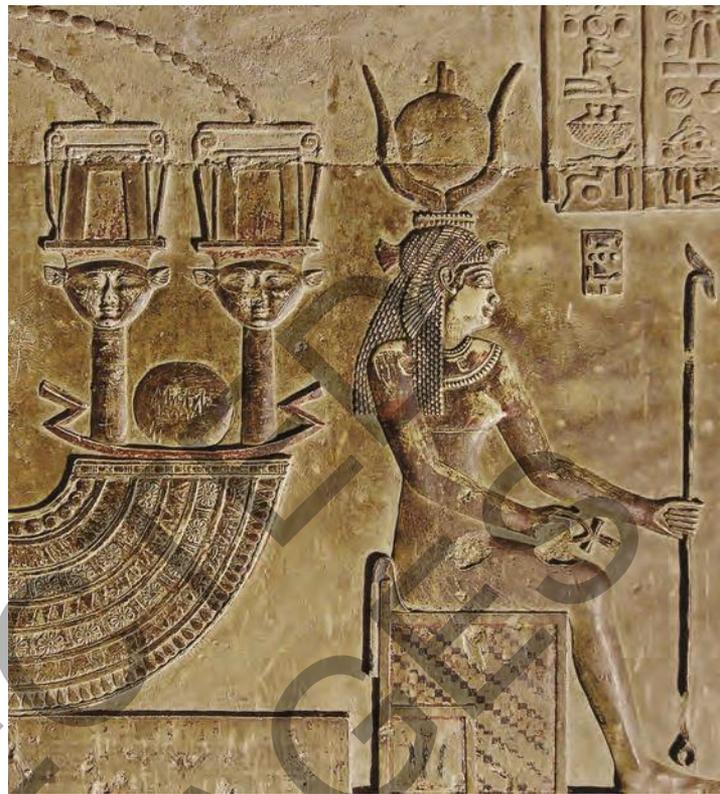
Images of ancient Egyptian women show that they used cosmetics to beautify their appearance. On their lips and cheeks, they used rouge (red powder from clay), they coloured their nails with henna (brown paste from dried leaves), and applied kohl (black powder from rock) as eyeliner. However, many men wore makeup too, and cosmetics had the extra benefit of protecting people's skin from the sun and insects. Egyptians also used scented oils to clean their skin and as a deodorant.

Some women held senior positions in government, and of the 170 pharaohs who ruled during the 3000 years of ancient Egypt, at least seven were women. For example, around 1479 BCE, the pharaoh died, leaving only a three-year-old son. The boy's stepmother Hatshepsut became pharaoh. Hatshepsut showed that a pharaoh could achieve peace through trade with neighbouring countries rather than war, and made Egypt stronger and safer during her 21-year reign.



↑ Source 4.10.3 A painting in the tomb of Queen Nefertari, showing her making offerings to Hathor, the goddess of love, fertility and childbirth, c.1298–1235 BCE

Cleopatra, who ruled from 51 to 30 BCE, was the last pharaoh of ancient Egypt, famous for her intelligence, beauty and strong leadership. She ruled during a time when Egypt was facing challenges from powerful enemies, like Rome. Cleopatra is well-known for her relationships with important Roman leaders, including Julius Caesar and Mark Antony, which helped her try to protect her kingdom. She is often remembered in stories and movies as a powerful woman who played a key role in the history of ancient Egypt.



↑ Source 4.10.4 A relief of the pharaoh Cleopatra (70–30 BCE), dressed as the goddess Hathor, c. 30 BCE. *Why might she have been depicted as that goddess?*

Amazing but true...

Historians took a long time to realise that there were women pharaohs, because their statues showed them wearing false beards!



Go online to access the interactive lesson review and more!

Lesson 4.10 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



4.10 Review questions

- 1 **Explain** what Egyptian girls were expected to do in life.
- 2 **Describe** how cosmetics showed beauty standards of the time.
- 3 **Discuss** how misogyny may have affected women in ancient Egypt.

What were the religious beliefs of ancient Egyptians?



Learning intention

Having learned how pharaohs built temples for worship and depicted themselves as close to their gods, in this lesson we will explore the religious beliefs of ancient Egyptians.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder



↑ Source 4.11.1 Six key ancient Egyptian gods

- 1 **See:** What aspects of Egypt were drawn on to create the images of the gods?
- 2 **Think:** Have you heard of any of these gods or goddesses before?
- 3 **Wonder:** What could each of these gods represent?

A pantheon of gods

Egyptians believed that their land was ruled by gods for 10 000 years before humans arrived. They spent much of their time worshipping their gods and preparing for their afterlife. They regarded their king as belonging both to the human world and the world of gods. The king's task was to keep the gods happy enough to allow humans to live in peace and order.

Egyptians did not have one god, but they worshipped a whole *pantheon* (group) of gods – perhaps over 2000 separate gods – and each one had a special function. Some gods' functions changed over the centuries. While many gods were linked with creation stories, some were responsible for particular towns, some for the environment, including the all-important floods and crops, while others were linked to the afterlife.

↓Source 4.11.2 Some of the best-known ancient Egyptian gods

God / Goddess	Appearance	Role / Responsibility
Anubis	A man with the head of a jackal	mummification and burials
Amun-Ra	A blue-skinned man with two feathers as a headdress	protector of the royal family (Amun), combined with the sun god (Ra)
Osiris	A mummified man with green skin	the afterlife and fertility (new life)
Isis	A woman with a throne for a crown	protection, motherhood and magic
Thoth	A man with the head of either a baboon or ibis	intelligence and learning
Seth	A man with a head combining a jackal, donkey and aardvark	a villain: chaos, the desert, storms, violence and foreign people
Hapi	A man with a large belly, carrying food and drink	controlling the Nile River's flood
Hathor	A woman with the head or horns of a cow	fertility and love
Horus	A man with the head of a falcon	sky, war and hunting

Egyptians believed a range of different creation stories. One popular belief was that a sun god created a goddess of the sky and a god of earth, who in turn had children, two of whom were put in charge of Egypt: Osiris to look after the Black Land of the Nile valley, and Seth to look after the outer areas, which became the Red Land, or desert.

Osiris was seen as the first king of Egypt, who brought civilisation to the

land in pre-dynastic times, before the first pharaohs. However, he was later killed by his jealous brother Seth, who cut up his body and threw the parts away. The parts were collected and bandaged together by Osiris's wife Isis, who therefore created the first mummy. Osiris began a new life as the ruler of the underworld, where souls went after death.

Concepts and skills builder 4.11



Examine the following source and then answer the questions that follow.

Whenever you hear the traditional tales which the Egyptians tell about the gods . . . you must not think that any of these tales actually happened in the manner in which they are related. . . . [But you should] listen to the stories about the gods in this way, accepting them from those who interpret the story [respectfully].

. . . One of the first acts related of Osiris in his reign was to deliver the Egyptians from their destitute [poor] and brutish [wild] way of living.

This he did by showing them the fruits of cultivation [farming], by giving them laws, and by teaching them to honour the gods.

↑ Source 4.11.3 'Isis and Osiris', written by the Greek historian Plutarch in the first-century CE. Plutarch visited Egypt once and read many histories. [Vol. V of the Loeb Classical Library edition, 1936]

- 1 **Explain** the advice that this Greek source gives about how to regard the tales of Egyptian gods.
- 2 **Identify** what the Egyptians said they were given and taught by Osiris.
- 3 **Discuss** whether this should be regarded as a primary source of what ancient Egyptians believed.

Historical concepts and skills: contestability, historical perspectives and interpretations

Temples of worship

The ancient Egyptians believed that their gods would only protect them and their land if they were respectfully worshipped. They built impressive temples, which they called 'God's House'. Each temple contained a **shrine** with a statue of one of the gods, and the Egyptians believed that the god actually lived inside the statue. The first temples were small and simple, built with mud bricks. Later, temples were built on a massive scale, from stone, with towers and entry halls with enormous, decorated columns. Some of them are still standing today.

The inside of the temple was considered so holy that only the pharaoh and priests could enter it. The high priest of a temple often wore a robe made of leopard skin, and they cared for the god,

by leaving gifts and draping the statue in beautiful cloths.

If you were a member of the general public, you were not allowed to enter this sacred space. You could, however, donate luxury fabrics, perfumes and meals for the priests to carry inside, to win the favour of the god or goddess. You could stand in the courtyard in front of the temple and say prayers, and on holy days, you could see the god's statue when it was carried out for a procession through the streets.

If you were a priest, you were very important to Egyptian society. You would be trained to read and write, so that you could make copies of holy texts. Your main responsibility was to sing hymns to the god in a temple.

shrine an object or building that is considered to be holy because it is connected with a sacred person or thing



↑ Source 4.11.4 The temple dedicated to Isis at Philae, today. *Was the temple designed to make people feel proud of their beliefs, or humble in front of the great goddess?*



↑ Source 4.11.5 The temple dedicated to Horus at Edfu, today. *On the outside, do you recognise the king's pose and remember what that shows? Inside, can you see where the god's statue would be placed for worship?*

Around your temple would be many administrative buildings, often the size of a small town. Priests also collected taxes on behalf of the government and paid the salaries of government officials. In return, the king would give you some land on which you could grow and sell food. He also allowed priests to keep some

of the offerings that people donated for the gods.

Many historians had assumed that all priests were male, but evidence has been found on ancient scrolls of female priests conducting ceremonies in temples. Sometimes assumptions are wrong!



Go online to access the interactive lesson review and more!

Lesson 4.11 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



4.11 Review questions

- 1 Identify** three Egyptian gods that people might have asked to help them in their daily lives, and why.
- 2 Explain** why the worship of the gods was so important to the ancient Egyptians by completing the following sentences:
 - a** People worshipped the gods, *because* ...
 - b** People worshipped the gods, *but* ...
 - c** People worshipped the gods, *so* ...
- 3 Identify** who was, and was not, able to enter the temple.
- 4 Discuss** how the gods related to the pharaohs.

What were Egyptian preparations for the afterlife?



Learning intention

Having learned about Egyptian religious beliefs, in this lesson we will explore tombs that were not only burials for the human body, but 'warehouses' to contain all the objects that a person might need in the afterlife.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 4.12.1. What do you observe about the scale of the pyramids?
- 2 **Think:** What are questions you have about how, why and when the pyramids were built. Share them with a friend.
- 3 **Wonder:** How might pyramids as huge as these have been built?

↓ Source 4.12.1 The Great Pyramid of Giza was built from over 2.3 million stone blocks. At 146 metres, it remained the tallest structure in the world for over 3600 years. The pharaoh Cheops (Khufu) ordered Egyptians to build these pyramids to bury his body and his wives, to prepare them for the afterlife.



Pyramids

Like most civilisations, the Egyptians believed in an afterlife, or the continued life of the soul after death. In the same way that they saw the sun go down every evening and rise the next morning, they believed that human life followed a cycle: birth, death, rebirth. After a person's body was mummified, their soul began a journey known as *duat*, during which they would meet gods who judged their character, pass through 12 gates guarded by monsters, and face a final test in which their heart was weighed. If successful, their soul would rest forever in *Aaru*, the endless fields. For these reasons, they gave enormous care to preparing a tomb that would transport them to the afterlife.

The most famous tombs, indeed the best-known achievement of ancient Egypt, are the pyramids. These colossal structures, with four triangular sides built on a straight-sided base, required massive labour and cost, and were reserved for kings. In all, there are some 80 pyramids in Egypt, most of them built during the Old Kingdom and the Middle Kingdom.

The first pyramid was actually six flat limestone tombs of decreasing size, layered on top of each other. It was designed by the pharaoh Djoser's main official, called Imhotep, some

2650 years BCE. He invented what became known as a 'step' pyramid. Egypt had never seen such an impressive monument.

Later pyramid builders developed straight-sided structures, with their 'steps' filled in and encased in limestone. The biggest and most impressive of these buildings is the Great Pyramid at Giza, built to be the tomb of Pharaoh Khufu (Cheops) in about 2570 BCE. The four sides of the Great Pyramid face exactly north, south, east and west, and are almost perfectly balanced with a variation of no more than a few centimetres. It many have taken 100 000 builders to move over 2 million blocks of stone weighing more than two tons each to the site, and so high above ground. How they achieved this, to create a perfect architectural structure without any modern technology, remains a mystery.

The Great Pyramid did not stand alone. The complex of buildings included a temple near the edge of the River Nile, where the king's body could be handed over to the priests to prepare the body, and a temple near the pyramid, where people could donate gifts to help the king in his journey to the afterlife. Two other pyramids were built later for other kings, and both are over 100 metres tall. The best-known statue on the site is a sphinx.

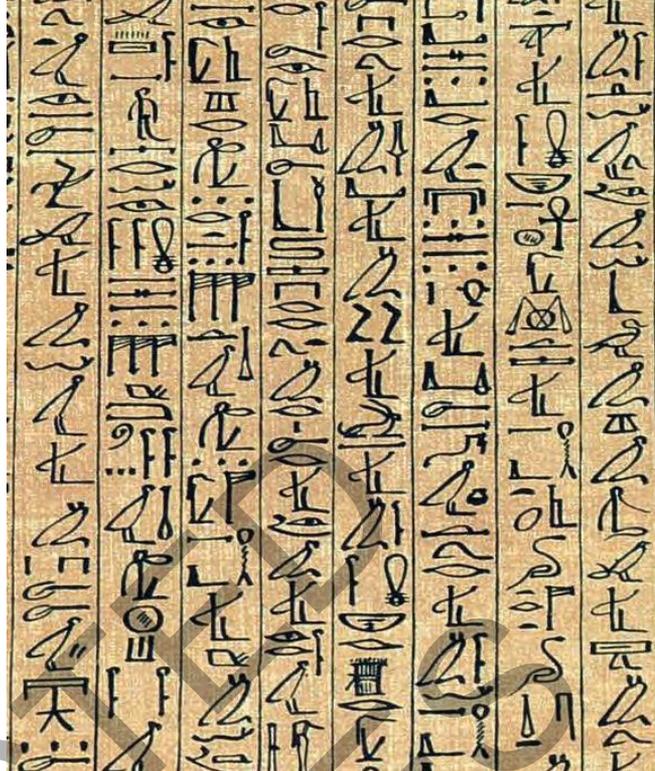


↑ Source 4.12.2 The step pyramid for pharaoh Djoser is over 62 metres tall.



↑ Source 4.12.3 The Great Sphinx of Giza, a 20-metre-tall statue carved from a single piece of limestone shortly after the pyramid was finished.

The pyramid was originally covered in gleaming white limestone. In the fierce sunlight of the desert, it shone brightly. The white covering was later stripped away by thieves, who also cut their own entrance into the pyramid and stole all its treasures, making the pyramid empty by the time of the Middle Kingdom. Visitors in ancient times enjoyed guided tours around the site, just as tourists do today. In the fifth century BCE, the Greek historian Herodotus included the pyramid on his list of the 'Seven Wonders of the World'. It is the only wonder from that list that still exists.



→ Source 4.12.4 Scribes had the job of writing letters and records for the living, as well as scrolls to be placed with the dead to help them on their journey. This scroll, known as 'The Book of the Dead' was made in about 1250 BCE.

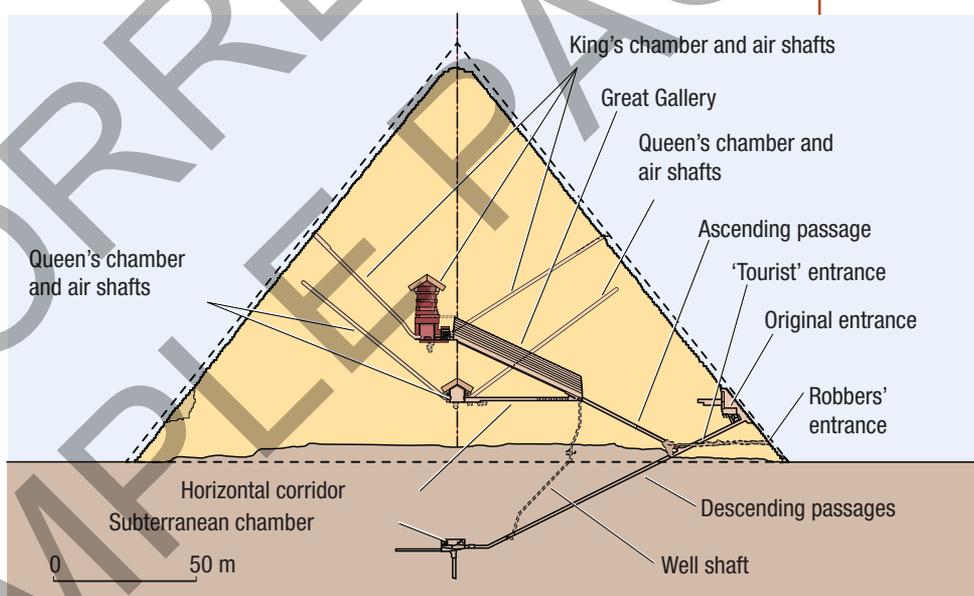
Concepts and skills builder 4.12



Using historical sources

Examine Source 4.12.5 and then answer the questions that follow.

- 1 Explain** what the dotted line around the outside of the pyramid represents.
- The original entrance was 17 metres above ground level. **Explain** how someone using that entrance could reach the king's chamber.
- The king's chamber contains the royal sarcophagus, but like the rest of the pyramid, it is empty. How did tomb robbers get into the pyramid?
- The air shafts are around 20 cm wide, and while some say they were designed to provide air to the interior, others say that they were designed to allow the king's soul to rise to the heavens. **Discuss** these theories and explain which sounds more likely to you.



↑ Source 4.12.5 A cross-section of the Great Pyramid. [Source: Cambridge University Press & Assessment]

Historical concepts and skills: questioning, perspectives, contestability

Treasures

sarcophagus a stone outer coffin, usually decorated with writings and pictures

Today, the most famous royal burial in Egypt is the tomb of Tutankhamun. He is called 'the boy king', because he became pharaoh at age nine, and died when he was just 19 in about 1350 BCE. Tutankhamun did not grow old enough to have the sort of impact on Egypt that other pharaohs did, like building cities or pyramids, or preparing a large tomb for the journey to the afterlife. But he did make one important decision: the previous pharaoh had told the people that they had to stop worshipping multiple gods, and only worship the sun god. Under Tutankhamun, Egyptians were once again allowed to worship many gods.

History could have forgotten Tutankhamun, but in 1922 archaeologists made the incredible discovery of his tomb, which had not been opened for over 3200 years! Most rich royal burials had been robbed by tomb raiders, but the entrance to the relatively small tomb of Tutankhamun in the Valley of the Kings had been hidden for centuries by mud, caused by avalanches. Therefore, when archaeologists opened his tomb, they found that it was still packed full of treasure.



↑ Source 4.12.6 British archaeologist Howard Carter and an Egyptian assistant examine Tutankhamun's sarcophagus, 1922. *What do you think they felt when they opened the tomb?*

Tutankhamun's tomb included his mummified body, laid in a coffin that was placed inside two larger coffins, which were then sealed inside a **sarcophagus**. The inner coffin alone was made of over 110 kg of solid gold!



↑ Source 4.12.7 Tutankhamun's death mask, placed over his head, was made of 10 kg of gold. *Since Egyptians believed that gods had gold skin and blue hair, why do you think the mask was made like this?*

When he became the first person in over 3000 years to look at the death mask, Howard Carter said that Tutankhamun's face bore the 'sad but calm expression' of a young man who died before his time. Around the coffin were over 5000 items for the pharaoh to use in the afterlife, ranging from wooden chariots to musical instruments.

It took 10 years to document the objects, number them, and move them to a museum.

Less than a year after opening the tomb, the man who funded the expedition, Lord Carnarvon, mysteriously died of blood poisoning in Cairo after being bitten by a mosquito. In the following year, the man who had conducted the first x-ray of Tutankhamun's mummy, Sir Archibald Douglas Reid, also died. A rumour started of a 'mummy's curse'. It was only a rumour, but it persisted.



↑ Source 4.12.8 This 1922 photograph shows some of the 5000 items found in Tutankhamun's tomb, which included furniture, chariots, a golden throne, bows and arrows, daggers, statues of gods, cosmetics, jewellery, food, wine, sandals, writing materials and board games. *Which of those items surprise you?*

I cannot but think some risks are run by breaking into the last rest of a king in Egypt whose tomb is specially and solemnly guarded, and robbing him of his possessions.

According to a rare book I possess . . . entitled The Egyptian History of the Pyramids . . . the most dire punishment follows any rash intruder into a sealed tomb. The book names 'secret poisons enclosed in boxes in such wise that those who touch them shall not know how they come to suffer'.

That is why I ask, Was it a mosquito bite that has so seriously infected Lord Carnarvon?

↑ Source 4.12.9 Novelist Marie Corelli, writing in newspapers in London and New York, 1923

Lesson 4.12 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



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4.12 Review questions

- 1 **Identify** the first pyramid design, and how later builders changed the design.
- 2 **Describe** why the Great Pyramid of Giza is significant.
- 3 **Outline** why Tutankhamun's tomb was different from other royal burials.
- 4 **Explain** what the items in Tutankhamun's treasure show about Egyptians' beliefs about life after death.

How did Egyptians develop the science of mummification?



Learning intention

You have learned how tombs and pyramids were designed to help a person in the afterlife. This lesson explores how ancient Egyptians prepared the body of the dead person for this same purpose.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** How are the gods depicted in Source 4.13.1?
- 2 **Think:** Why might gods look like animals you might find in Egypt?
- 3 **Wonder:** Why might the ancient Egyptians have done this as part of their burial rituals? Do you think every ancient Egyptian would be able to have their internal organs stored like this, or would it be for specific people?



↑ Source 4.13.1 *Canopic jars* were used to store the internal organs that had been removed from a mummy's body: the stomach in a jar with images of the god Duamutef, the liver with the god Imseti, lungs with the god Hapi, and the intestines in a jar decorated with the god Qebhsenuf.

Mummies

The Egyptians believed that when a person died, the soul (which they called the *ka*) could live on in the afterlife only if they preserved the person's body or made a statue for the soul to return to live. We call the preserved body a 'mummy', but this word was never used in ancient times. It became popular a couple of hundred years ago, and was probably based on the Arabic word *mūmiya*, meaning tar or bitumen (road surfaces), which is the colour and texture of a mummified body.

Have you seen stories that show a mummy wrapped in bandages that comes back to life and scares living people? It is a popular theme in modern horror films and animations. The ancient Egyptians would be outraged if they knew this. They saw mummification as a sacred and careful preparation for their journey after death to another life. They would never have expected that, centuries later, anyone would want to unwrap their body to study it or make fun of it.

In the pre-dynastic early centuries of Egypt, people buried their loved ones in a simple pit. If the pit was in the right place, the dry climate and hot sands prevented the body from rotting, and dried out and preserved the body, so that the skin remained intact for many years. This practice might have given the Egyptians the idea of creating their own mummification procedures to preserve a body.

At first, they simply wrapped the dead body in bandages. By the 4th dynasty, the Egyptians understood that it was the internal organs that caused bodies to rot, so they developed the science of



↑ Source 4.13.2 The Hollywood horror-comedy film *The Mummy* shows a 3000-year-old curse bringing a mummy back to life. *What does this show about how people view mummies?*

mummification to include the removal of the major organs before wrapping took place. Only the heart, which was believed to be the source of all wisdom, was left in place.

Mummification was advanced surgery, done by priests. It was first used only for kings and queens, but later taken up by wealthy nobles. In time, a form of mummification was also available for working people.

A four-stage scientific process was developed. To make a mummy, you had to:

- Make a cut in the side of the body, to remove the organs, while the brain was removed by a long sharp instrument inserted through the nose – then store the organs in *canopic jars*
- Dry the body for 40 days in natron, a kind of salt
- Coat the body in oil and wrap it tightly in linen bandages, with *amulets* (good luck charms) for protection
- Bury the mummy inside coffins decorated with prayers, in dry sands.

Concepts and skills builder 4.13



Examine Source 4.13.3 and then answer the questions that follow.



↑ Source 4.13.3 Egypt's national director of antiquities, Dr Zahi Hawwas, with one of 250 mummies that were discovered in one valley in 1999.

- 1 **Identify** why the Egyptians' dead are called mummies, using information from this image.
- 2 **Explain** which part of the mummification process is visible in this image.
- 3 **Explain** which part of the mummification process is not visible in this image.
- 4 **Discuss** whether to help people appreciate the history, Dr Hawwas's museum should:
 - a unwrap the mummy to show people what the body looked like
 - b display the wrapped body in a museum
 - c scan the body to show inside the bandages
 - d do something else?

Historical concepts and skills: contestability, perspectives

Unwrapping the mysteries of a mummy

Careful study of objects and writing in Egyptian tombs has enabled researchers to piece together what ancient Egyptians believed, and how they prepared bodies for the afterlife. However, mummies have not always been treated respectfully.

In the nineteenth-century, fascination with ancient Egypt known as *Egyptomania* spread across Europe. It was the height of fashion for wealthy people in places

like Britain to buy ancient objects for their personal collections, including mummies. You could also buy tickets to special events, where a presenter unwrapped a mummy on a table. As each layer was removed, often a precious gem or amulet tucked into the bandage would fall out. The nearest ticket holder could keep it. Eventually, the mummified body would be revealed.

Amazing but true...

The mummy unwrapping event in nineteenth-century England may have been the origin of the 'pass the parcel' children's birthday game!

Many of the mummies and precious objects that arrived in Europe were bought from black market art dealers and tomb raiders who had broken into tombs in Egypt's Valley of the Kings. This valley, near Luxor, was used for burials for nearly 500 years during the New Kingdom.

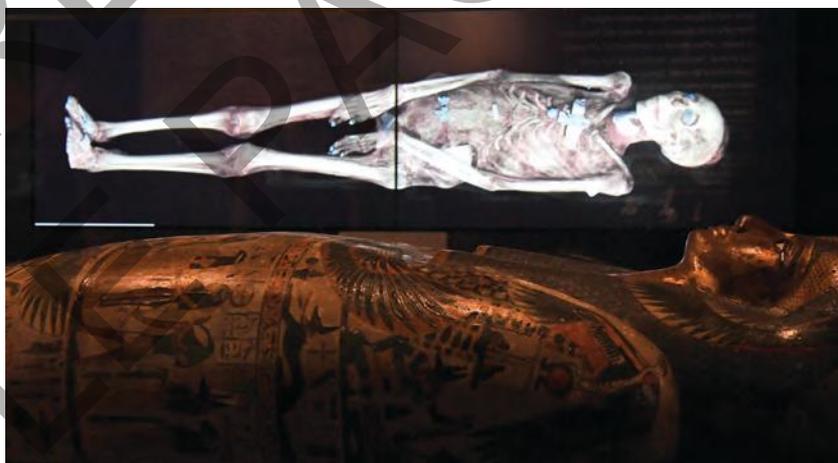
In museums, it was common for unwrapped mummies and mummified body parts to be put on public display. This practice is changing. In 2024, for example, the University of Sydney's Chau Chak Wing Museum, which has Australia's largest collection of ancient Egyptian artefacts, decided to remove body parts from its exhibition. However, wrapped mummies and CT scans of their bodies, showing how they lived and what they may have died from, remain on display.



↑ Source 4.13.4 The Valley of the Kings and Queens. *Since tombs are still being discovered here, do you think we might we find information that changes our understanding of ancient Egypt?*

For hundreds of years body parts in museum collections have been treated as objects. We have become so accustomed to seeing them on show that we often forget they once belonged to living people.

... we'd like to focus more on the transformation of the body into an eternal being, which is the whole point of mummification, rather than the body itself.



↑ Source 4.13.5 Dr Melanie Pitkin, Senior Curator of the University of Sydney's ancient history museum, media release April 2024

↑ Source 4.13.6 A CT scan of a museum mummy that has never been unwrapped, on a screen next to the person's coffin. *If you visited a museum that showed this view, what could you learn?*

Lesson 4.13 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



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4.13 Review questions

- 1 **Identify** the four steps of mummification.
- 2 **Describe** why ancient Egyptians mummified bodies.
- 3 **Explain** how some people treated mummies disrespectfully.
- 4 **Discuss** how museums are changing their approaches to mummified human remains.

End of investigation review: How did Egypt develop into a powerful ancient society?



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorchers timed competitive quiz.

Brain dump



What have you learnt about ancient Egypt? For this activity, copy the diagram and fill out by explaining your understanding. Aim for two points per topic.

Topic	What I have learned
The origin of Egyptian civilisation	
The Nile River	
Daily life	
Egyptian power and authority	
Rameses II	
Warfare with other ancient societies	
Trade with other ancient societies	
Workers	
Women	
The Egyptian afterlife	

Making thinking visible



This exercise in visible thinking asks you to track the difference between what you knew about Egypt before, and what new understandings you have acquired since reading this chapter.

Using the stem sentences here, write a paragraph explaining what you previously knew about the topic. Then write another paragraph explaining what you now understand about the topic.

- 1 I used to think that Egypt was ...
- 2 Now I think that Egypt was ...
- 3 I used to think that mummies ...
- 4 Now I think that mummies ...
- 5 A simple explanation for why pyramids were significant is ...
- 6 A better explanation for why pyramids were significant is ...

Practice questions



- 1 **Identify** how the Nile River made the development of civilisation in Egypt possible.
- 2 **Explain** the cause and consequences of key events in Egyptian history, by matching the cause on the left with its correct consequence on the right:

Causes	Consequences
The Nile River flooded annually	The first ever peace treaty was signed
Nilometers were used to measure the height of each year's flood	The first ever strike was organised
Pharaohs became kings of upper and lower Egypt	The government calculated a fair amount of tax to charge
Ramesses II took a different approach to wars	Egyptians worshipped many gods again
Workers at Deir el-Medina were angry about their conditions	Rich soils in the Nile delta made farming possible
Tutankhamun changed the laws about religion	Debates emerged about how to handle human remains
Thousands of mummies were discovered in tombs	Egypt became a powerful and united kingdom

- 3 **Apply** your understanding of causes and consequences by selecting two pairs of causes and consequences from the table in question 2 that you have found the most interesting to learn about and **explain** why you chose them.
- 4 **Analyse** Source 4.14.1, using the questions below.
 - a Which period in Egyptian history was the artefact from?
 - b What was the purpose of the item?
 - c What does the artefact show us about people's values at the time?



↑ Source 4.14.1 A *Book of the Dead* scroll made about 1275 BCE, buried with a wealthy scribe. The gods are weighing his heart is on a set of scales: Thoth (far right) stands with his record book, ready to record the result; Ammit, the monstrous devourer, looks on eagerly, no doubt hoping for a meal.

5 **Evaluate** the impact of Ramesses II, or another significant individual from ancient Egypt. How did they affect the way that Egypt was organised, and why are they remembered by historians?

6 Imagine you could communicate with Tjeby, the mummified Egyptian who introduced this chapter. Write a one-page letter to Tjeby, to introduce yourself and ask questions that you are curious about. You should:

- **Explain** what you have learned about Egyptians like him
- **Describe** what you have found interesting about Egyptian lives
- **Explain** how people can look at Egyptian treasures and remains today
- Ask at least three questions about Egypt that you would like Tjeby to answer.



↑ Source 4.14.1 An artist's impression of what Tjeby probably looked like, based on an analysis of his skull.

Response to chapter inquiry question: How did ancient Egypt develop into a powerful ancient society?



Write a paragraph in response to the question using all the key terms listed:

- pharaoh
- BCE
- mummified
- shrine
- tomb
- offering
- afterlife.

CHAPTER 5

What was the historical significance of ancient Greece?



LESSON	TITLE
5.1	Setting the scene: What was the trouble with oracles in ancient Greece?
5.2	What were the key events in ancient Greece?
5.3	How and where did ancient Greek society first develop?
5.4	What was daily life like in ancient Greece?
5.5	What were the significant beliefs, values and practices of the ancient Greeks?
5.6	What were some significant ideas and events in the lives of ancient Greeks?
5.7	What were the consequences of contact and conflict with other societies for ancient Greece?
5.8	Who was Pericles and what significant contribution did he make to ancient Greek society?
5.9	What do historians say about Pericles and his legacy?
5.10	End of investigation review: What was the historical significance of ancient Greece?



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CHAPTER 6

Why was ancient India a significant ancient civilisation?



LESSON	TITLE
6.1	Setting the scene: How do we know about ancient India today?
6.2	What were the key events in ancient India?
6.3	How did geography influence the development of ancient India?
6.4	What was the social structure of ancient India?
6.5	What were the significant beliefs, values and practices in ancient India?
6.6	How did contact and conflict with other societies change ancient India?
6.7	Who was Ashoka and how did he influence India?
6.8	What is the legacy of ancient India?
6.9	End of investigation review: Why was ancient India a significant ancient civilisation?



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CHAPTER 7

How did ancient Rome change Europe and the Mediterranean world?



LESSON	TITLE
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- | | |
|------|--|
| 7.1 | Setting the scene: What did Mount Vesuvius bury? |
| 7.2 | What were the key events in ancient Rome? |
| 7.3 | How and where did ancient Roman civilisation develop? |
| 7.4 | What social groups were there in ancient Rome? |
| 7.5 | What was daily life like in ancient Rome? |
| 7.6 | What were the significant beliefs, values and practices of the ancient Romans? |
| 7.7 | What were some of the major changes in society and their effects? |
| 7.8 | How did contact and conflict with other societies change ancient Rome? |
| 7.9 | What role did a significant individual like Julius Caesar play in ancient Rome? |
| 7.10 | Why is conserving the past so important? |
| 7.11 | End of topic assessment: How did ancient Rome change Europe and the Mediterranean world? |
-



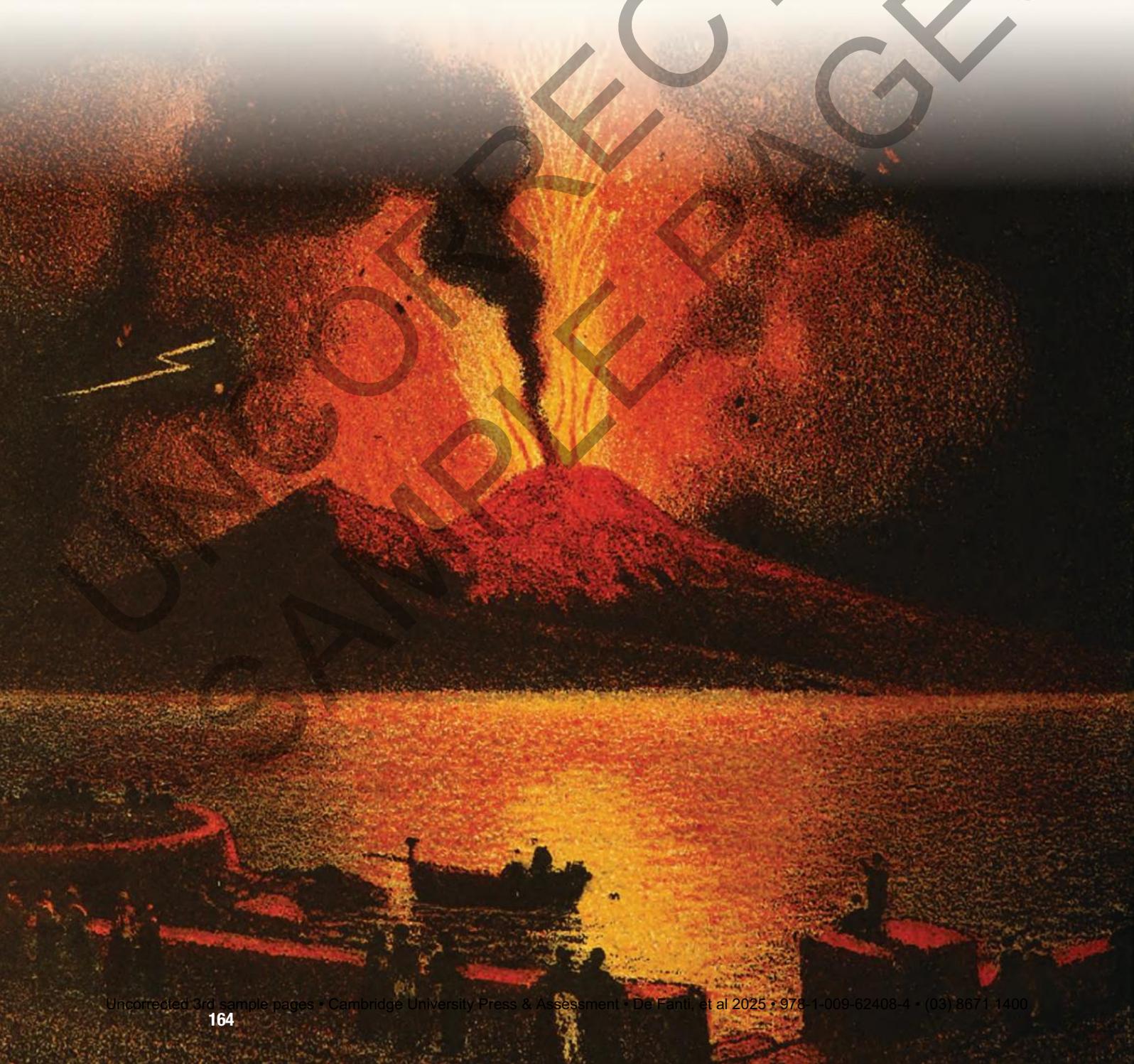
Setting the scene: What did Mount Vesuvius bury?



Learning intention

In this lesson, we will learn about a major natural disaster, which made it possible for people centuries later to learn about ancient Romans.

↓ [Source 7.1.1](#) An illustration from 1866 CE that imagines Mount Vesuvius erupting.



Buried

On a late summer or autumn day in the year 79 CE, probably around 24 August, the volcano known as Mount Vesuvius suddenly began to erupt. The force of the explosion was more powerful than any bomb that has ever been used in human history. Instantly, the skies of what is now southern Italy were thick, with poisonous gas and ashes. As the volcano smoked and rumbled, terracotta tiles on the roofs of nearby houses fell to the ground, and chunks of rock fell from the sky. Fires started and buildings collapsed.

Some of the terrified 20 000 people who lived beneath the volcano, in the city of Pompeii and the port town of Herculaneum, managed to flee to safety. But many were trapped. Over two days, the volcano kept erupting and people choked to death on the smoke. Incredibly hot lava and debris flowed down the steep sides of Vesuvius and buried the victims' bodies, houses and streets in up to six metres of pebbles and ash. They would remain buried for over 1700 years.

Just one day earlier, the people of Pompeii had celebrated the festival of Vulcanalia, to worship the Roman god of fire and volcanoes, whom they called Vulcan. There was a party atmosphere, as there often was in the city, because in the first century CE, Pompeii was a busy

tourist town of the Roman **Empire**, where wealthy Romans would come to holiday.

Pompeii was well-planned, with paved streets and separate footpaths, dozens of commercial bakeries and shops and take-away food stalls, and several theatres for entertainment. Neighbourhoods were decorated with beautiful murals and walls sometimes were graffitied with phrases like 'Aufidius was here', 'Marcus loves Spendusa' and 'Romula hung out here with Staphylus'. People moved through the streets to visit the temples of the city to worship their gods, such as at the Temple of Apollo, and they socialised and made business deals in the public baths. Businesspeople traded wheat, grapes and olives for valuable items from other parts of the Roman Empire.

People lived in villas, where they had private shrines for their household gods. If they could afford it, they had an enclosed garden to relax in. They usually showed off their most expensive items on tables in their entrance halls. Slaves attended to their masters and carried out a wide variety of jobs, including cooking, farming, building, and even removing human waste from toilets.

How do we know so much about the city of Pompeii and its destruction? Some information we can read, and other information can be dug up.

empire a large area of land under the control of a powerful emperor, king, or queen

Ashes were already falling, not as yet very thickly. I looked round: a dense black cloud was coming up behind us, spreading over the earth like a flood. 'Let us leave the road while we can still see', I said, 'or we shall be knocked down and trampled underfoot in the dark by the crowd behind.' We had scarcely sat down to rest when darkness fell, not the dark of a moonless or cloudy night, but as if the lamp had been put out in a closed room.

You could hear the shrieks of women, the wailing of infants and the shouting of men; some were calling their parents, others their children or their wives, trying to recognise them by their voices.

↑ Source 7.1.2 A letter from Pliny the Younger to the historian Tacitus, about the destruction of Pompeii in 79 CE. *Since Pliny was an eyewitness who was aged 18 when the volcano erupted, and wrote this description several decades later, is it a primary source?*

Rediscovered

archaeologists

people who dig up human and other physical remains to understand more about a society

carbonised

to turn something into charcoal by heat or fire so that it becomes a fossil and is preserved

monuments

statues or buildings created to commemorate an important event

Colosseum

an open-air stadium with seating around the edges to watch sports or theatre in the centre

Our best source of information about Pompeii is what has been dug up by **archaeologists**. Over the past 300 years, archaeologists from all over the world have visited Pompeii to scrape away the volcanic ash and pebbles and discover what was buried there. The tragedy, which killed people where they stood, also preserved the city like a snapshot in time. So far, around two-thirds of the city has been uncovered.

Thanks to archaeologists, we can see what life was like for the people of Pompeii on the day that it was destroyed. They have found uncooked bread loaves waiting to be put into the oven, but **carbonised** by the heat of the volcano. Over 1500 skeletons have been found, including children in the arms of their

parents. The frescos painted on the walls of villas, shops and bath houses can be seen clearly, showing what the Romans valued and worshipped.

Can you imagine being the first person to see an ancient object when it is dug up? How would you know what it is? In the case of the Roman Empire, the remains can be found from places like Pompeii and Rome in Italy, to thousands of kilometres away in Africa, the Middle East, northern Europe and Great Britain. Everywhere the Romans went, they left behind impressive buildings, **monuments** and roads. Some are still standing, like the **Colosseum** in Rome, while others remain buried, either beneath layers of soil and rock, or beneath layers of roads and buildings from the centuries since.

↓ [Source 7.1.3](#) The remains of the Roman city of Pompeii, with Mount Vesuvius in the background. *What might people have thought when every day they looked up and saw the smoking volcano?*





↑ Source 7.1.4 A carbonised wooden cradle found in Pompeii. *How could you use this primary source as evidence of what parents in ancient Pompeii had in common with parents today?*

Amazing but true...

When building finished in 80 CE under Emperor Titus, the Colosseum was the largest amphitheatre ever. Over 50 000 spectators watched gladiator fights, mock sea battles, animal hunts, executions, and dramas. *How would you feel if you were living in ancient Rome and entered the Colosseum for the first time?*

Lesson 7.1 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



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access the
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and more!

7.1 Review questions

- 1 **Recall** when Mount Vesuvius erupted.
- 2 **Summarise** how the text describes the explosion of Mount Vesuvius. How powerful was the force of the eruption?
- 3 **Describe** how we know about the events of the eruption of Mount Vesuvius today. What kinds of experts work to uncover what happened?
- 4 **Explain** whether the letter from Pliny the Younger is a primary or a secondary source.
- 5 **Analyse** how useful the letter from Pliny the Younger could be for historians trying to understand what it would have been like for people to experience this event.

What were the key events in ancient Rome?



Learning intention

Last lesson, we looked at a story about the destruction of Pompeii by the eruption of Mount Vesuvius. In this lesson, we will learn about significant events during the rise, establishment and fall of ancient Rome.

Lesson starter



Complete the following activity to kick-start this lesson.

KWL: Know, want to know, learned

- 1 What do you already **know** about Rome and how it began? Make a **list** of three things.
- 2 What would you like to find out about how civilisation in Rome began? **Identify** two things you would **like to know**.
- 3 After working through this investigation, come back and **identify** one new thing that you have **learned** about the origins of ancient Rome.



↑ Source 7.2.2 A statue of Julius Caesar

49 BCE

Julius Caesar becomes unpopular in Rome and his opponents start a civil war; Caesar wins and becomes the dictator of Rome

44 BCE

A group of Roman senators murder Julius Caesar

59 BCE

Gaius Julius Caesar is made Consul of Rome

58–51 BCE

Julius Caesar, a powerful **consul** and general, conquers Gaul (modern-day France) and tries to invade Britain but is forced to withdraw

509 BCE

Rome becomes a **republic**, with **senators** to give advice to governments

Rome expands by conquering more of the Italian peninsula

264–146 BCE

Rome eventually defeats its greatest rival, after three wars against the African city-state of Carthage
Invasions result in Roman control over most of Greece and the Middle East

753 BCE

Rome's **founding** by King Romulus, according to legend



↑ Source 7.2.1 A statue of the myth of the founding of Rome, showing a she-wolf nursing Romulus and Remus

republic a government where people's representatives hold power, not a king or queen

senators politicians who have been elected to a senate
founding when something new is created by a people, generally a city or place

consul the leader of Rome; during the Roman Republic, two consuls were elected into office every year



← Source 7.2.3 A statue of Augustus

27 BCE

The Republic of Rome becomes the Roman Empire, now including Egypt. The first Emperor, Augustus, is the great-nephew of Julius Caesar

43 CE

Emperor Claudius begins the Roman conquest of Britain

64 CE

The 'great fire' of Rome. Emperor Nero blames the Christians, who are a new religious community

79 CE

Pompeii and Herculaneum are buried by the eruption of Mount Vesuvius
Soon after, the Colosseum in Rome is opened

c.200 CE

The borders of the Roman Empire come under increased attacks by **barbarian** tribes. Civil wars weaken the empire

313 CE

Emperor Constantine accepts Christianity as a religion. He brings centuries of Christians being persecuted to an end, and starts the process of Christianity becoming the official religion of the empire

395 CE

The Roman Empire is split into the eastern and western empires

410 CE

Alaric the Goth **sacks** the city of Rome



↑ Source 7.2.4 A gold solidus of Constantine, from roughly 313 CE

476 CE

German chief Odoacer defeats Romulus, and the western Roman Empire ends

sack to invade and destroy a city

barbarian someone from another place who spoke a different language; for ancient Romans, a barbarian was any person who was not part of the Roman Empire

Lesson 7.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

7.2 Review questions

- 1 Use the timeline to **identify** three challenges faced by ancient Romans. These could be natural disasters, major changes, or attacks.
- 2 **Explain** the difference between a 'republic' and an 'empire' (clue: who is in charge?). Then use the timeline to **identify** how long Rome was a republic, and how long Rome was an empire.

How and where did ancient Roman civilisation develop?



Learning intention

In this lesson, we will learn about why the ancient Roman civilisation developed in a particular place at a particular time.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 7.3.1 How is the wolf caring for the twins?
- 2 **Think:** What questions do you have about this artefact?
- 3 **Wonder:** Why might the ancient Romans have developed stories or myths around the creation of their city?



↑ Source 7.3.1 A detail of an altar to worship the gods Mars and Venus, showing the myth of the twin boys who founded Rome, Romulus and Remus. They were raised by a female wolf and found by shepherds.

Reality or myth?

According to ancient Romans, their city was created on 21 April 753 BCE. However, there are different accounts of how their city came to be. The stories that Romans told about the origin of their civilisation were part history and part **mythology**.

One story is that Rome was founded by a prince of Troy, a mythical city that had lost a war against the ancient Greeks. Prince Aeneas, the son of the goddess of love, Venus, had fled Troy as it burned to the ground, sailed all the way to Italy, and created a new city there.

A more prominent story is that Rome was founded by twin brothers called Romulus and Remus. Their mother was said to be a princess named Rhea Silvia and their father the god of war, Mars.

According to this myth, a king who felt threatened by the baby boys had Romulus and Remus placed in a basket and left by the River Tiber to die. But the boys were saved – first, by a female wolf, and then by a shepherd, who raised them as his own children.

Romulus and Remus grew up and were natural leaders. They killed the king, and decided to create a new city together on the banks of the Tiber River, but they argued. In anger, Romulus fought Remus and killed him. Romulus then went on to name the city Rome, after himself. He made himself king of the city, and established a group of 100 noble men to be his advisers. These men would become the **patricians** of Rome.

mythology
fictional story, often part of a religion, that describes a heroic deed or the origin of something

patricians
wealthy upper-class people in ancient Rome who often had political power

Physical features of Rome

We may never know exactly how Rome was founded, but by studying the geography of Rome it is possible to understand why Rome was so successful. Rome began as just one city, but the rulers of Rome conquered all of Italy, and then expanded across Europe, northern Africa and the Middle East. How ancient Rome maintained control over its vast empire for hundreds of years when others failed is due in part to geography.

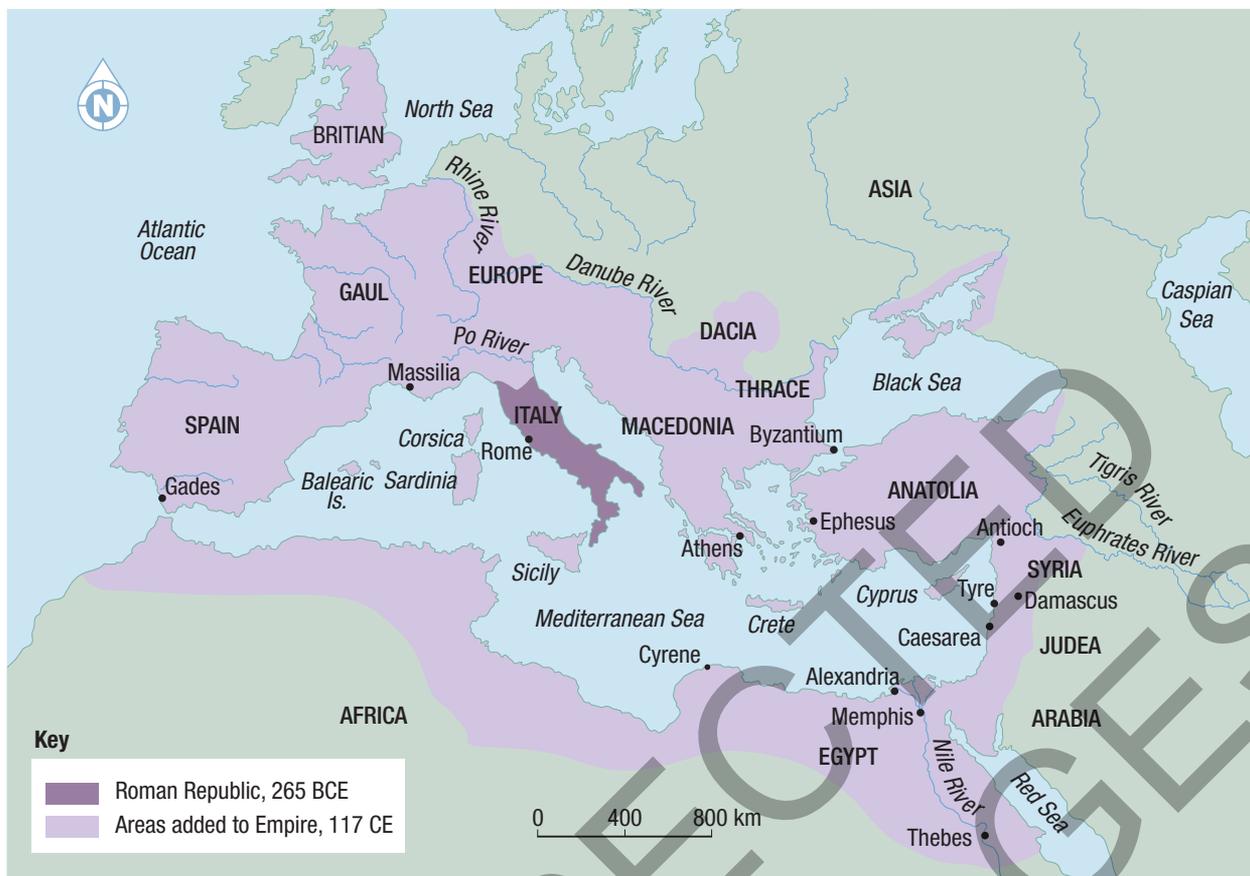
River and sea

The city of Rome is located on the banks of the Tiber River, near the western coastline of Italy. This position was ideal

for trade: goods were shipped down the Tiber River and into the city of Rome, and from there, out to the Mediterranean Sea. Ships helped Rome grow rich from trade and also to conquer lands on the Mediterranean coast, across Europe and north Africa. The ancient Romans used the sea so much that they named it *mare nostrum*, which translates as 'our sea'.

Amazing but true...

At its greatest size in the second century CE, the Roman Empire covered 5 million square km, controlling over 50 million people, or 20 per cent of the world's population.



↑ Source 7.3.2 A map showing the growth of the Roman Empire. *How much of the growth of the empire between 275 and 133 BCE was into lands on the Mediterranean coast?*

Concepts and skills builder 7.3



Using historical sources

The people of ancient Rome knew that their city was well located. Here are what two writers said, the historian Livy (59 BCE – 17 CE), and the engineer Vitruvius (c.80–15 BCE):

With good reason did the gods and men choose this site for the founding of the city. Rome's hills provide a healthy environment, the Tiber is favourable for navigation upstream to inland crops and downstream to the sea, and the sea itself is close enough for trade and yet far enough that we are not in danger of invasion by foreign fleets. Consider too Rome's location at the centre of Italy. This site is uniquely suited by nature for the expansion of a city.

It is a fact that southern nations, although extremely clever, give way when it comes to a contest of courage. This is because their spirit has been [weakened] by the hot sun. Conversely, people born in the [cold] regions of the north, though better suited for the violence of warfare on account of their fearless courage, are slow of mind, and [have] . . . no thought of strategy.

. . . the peoples of Italy are temperamentally balanced in each direction, having both physical strength and a mental vigour suited to their courage . . . Thus did divine intelligence situate the city of the Roman people in an extraordinary and temperate region, so that it might extend its empire across the world.

↑ Source 7.3.3 Livy, History 5.54.4, from Peter J. Aicher, *Rome Alive: A Source Guide to the Ancient City*, vol. 1, 2004.

↑ Source 7.3.4 Vitruvius, Architecture 6.1.10–11, from Peter J. Aicher, *Rome Alive: A Source Guide to the Ancient City*, vol. 1, 2004.

- 1 **Identify** three things that the Source 7.3.3 and Source 7.3.4 claim about the advantages of the location of Rome.
- 2 **Explain** the sources' perspectives:
 - a Which source emphasises how strategic Rome's location was? **Explain** what it claims.
 - b Which source emphasises how beneficial the climate was? **Explain** what it claims.

Historical concepts and skills: perspectives, using historical sources, communicating

Mountains and hills

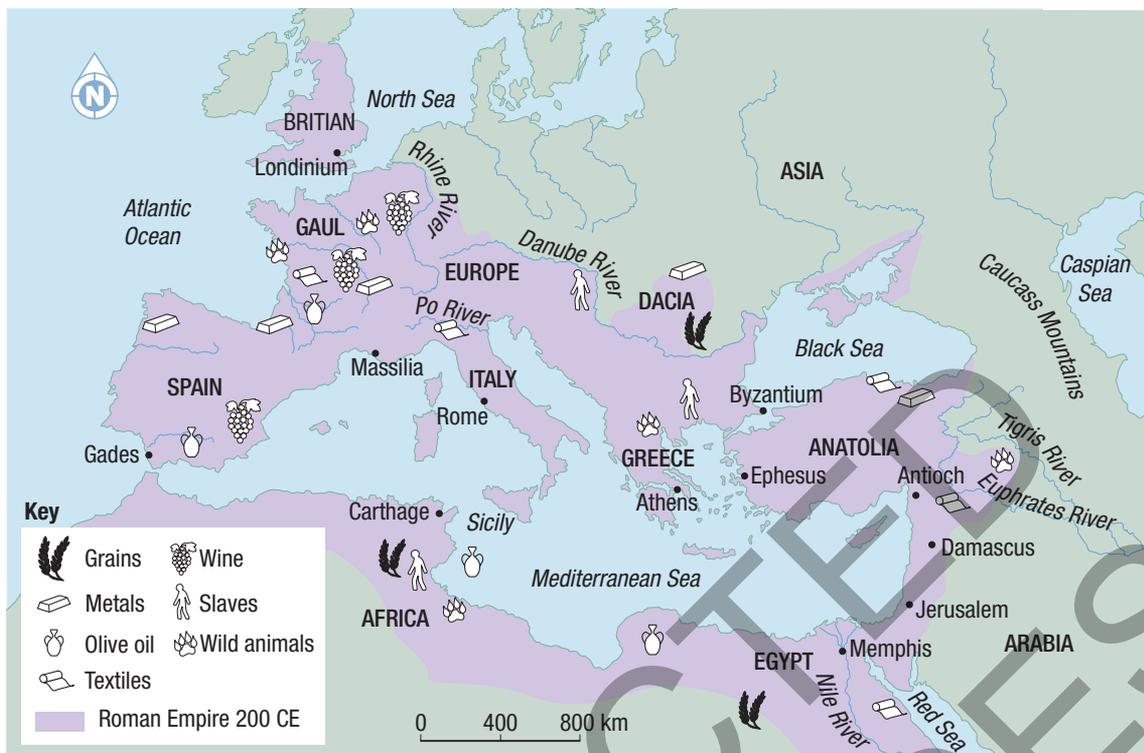
If you wanted to be safe from attack, would you build your city on the top of a hill or at the bottom? The city of Rome is famously built on the top of seven hills. According to myth, Romulus and Remus fought over which hill they should use to build the city.

Beyond the city, the Italian peninsula is divided from the rest of Europe by the

large mountain range known as the Alps, which are very steep mountains. The Alps protected the ancient Romans from enemies, particularly in winter. However, on one occasion the mountains were not a perfect defence. In 218 BCE, Hannibal, the ruler of Carthage in north Africa, invaded Italy by crossing the Alps with an enormous army.



← Source 7.3.5 An artist's impression of Hannibal's journey. *What does the painting show about what made crossing the Alps so difficult, and the unusual animals that Hannibal used?*



↑ Source 7.3.6 A map showing the types of crops around ancient Rome. *What were the main sorts of foods grown there?*

Farmland

Rome and its surrounding areas were also good places to grow food. There are volcanoes in the area, which over

centuries created soils that are rich with nutrients, and the climate is well suited to growing a wide range of crops. The Tiber River was used to transport the crops into the city.



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Lesson 7.3 review

Online quiz



Review questions



Research task

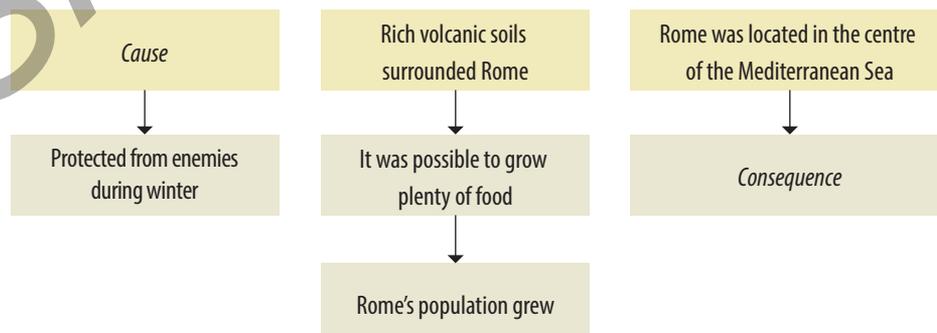


Teachers can assign tasks and track results



7.3 Review questions

- 1 **Identify** the advantages of the location of Rome as a place to grow a large city.
- 2 **Describe** why the location of Rome was ideal as a place to expand an empire.
- 3 **Explain** the myth of Romulus and Remus in your own words, in three sentences.
- 4 **Analyse** why Rome succeeded and grew, by creating a cause-and-effect diagram. Copy this diagram and fill in the spaces for cause and consequence. The arrows should lead from the causes and point to the consequences.



What social groups were there in ancient Rome?



Learning intention

Having learned where and when ancient Roman civilisation developed, in this lesson we will learn about the groups that made up Roman society, and daily life.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** How do their clothes indicate their social status?
- 2 **Think:** What clothing style would the Emperor wear?
- 3 **Wonder:** Would each social class use the same fabrics and materials, or would they be different?



↑ Source 7.4.1 An illustration of a Roman patrician couple, a soldier and slave, and a plebeian couple.

Imagine you lived in ancient Rome. What would your life be like? That would depend on many factors, including whether you lived during the republic or

the empire, what sort of family you were born into, whether you owned property, and your gender.

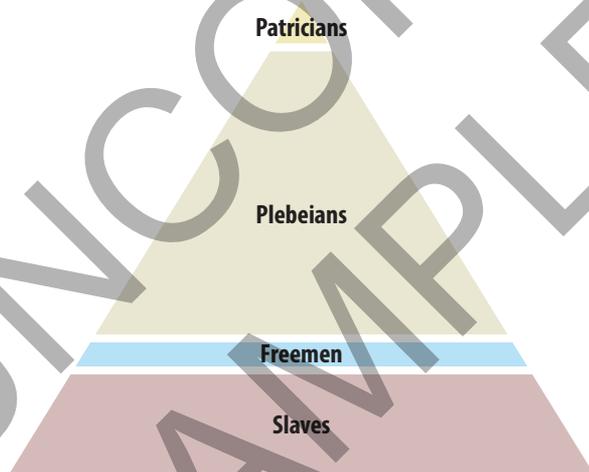
Citizens and non-citizens

citizen a person who is loyal to a government and entitled to its protection

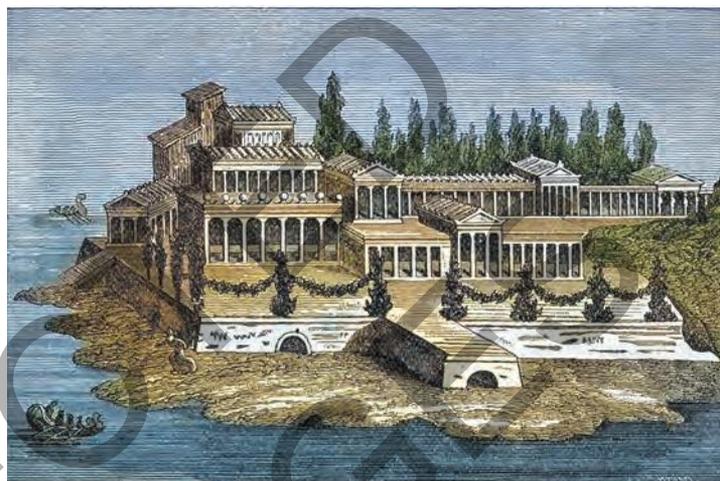
plebeian an ordinary Roman citizen who was not part of the privileged patrician class

The main difference between people in Rome was between **citizens**, who had some rights and influence over the laws of Rome, and non-citizens, who did not. However, there were differences within these groups too.

Citizens could be high or low status. Remember the myth of Romulus, in which he became the first king of Rome and chose 100 noble men to be 'patricians'? This privileged social group continued to hold high status and power when the Roman Republic was created in 509 BCE. However, if like most people you were not born into the patrician upper class, then you were a **plebeian**. Plebeians were citizens too, but they had fewer rights and less say over decisions.



↑ Source 7.4.2 A simple social hierarchy of ancient Rome. Which group has the majority of the people?



ROMAN VILLA

↑ Source 7.4.3 An artist's recreation of a patrician's villa. How many different rooms can you find?

Patrician life

While all patrician families were privileged, only some of them were very wealthy. If you were born into a patrician family, you could relax while plebeians and slaves worked on your land. Pliny the Younger, for example, who wrote about the destruction of Pompeii, had a *villa* in the countryside near Rome as well as a *domus* or town house in the city. His country villa featured different dining rooms for different seasons, running water and central heating, a gym, swimming pool, courtyards, and multiple gardens. Like other patricians, his villa had glass windows to make the most of the views, and slaves to serve his family.

Plebeian life

Most Romans were ordinary people, who worked hard to survive. In the countryside, most people were peasants, feeding themselves from the land. In the city, plebeians often lived in the same neighborhood as patricians, but they rented small apartments, and had to share facilities.

If you were a plebeian, you were known by what work you did – as a laundry worker, a cloth dyer, a butcher, baker, shopkeeper, toilet attendant, and so on. Their homes, called *insulae*, or islands, were apartment buildings above noisy shops, and they shared kitchens with several other families. The higher you went in the building, the smaller the apartment. Toilets were shared with the whole neighbourhood, and they were little more than holes in the ground.

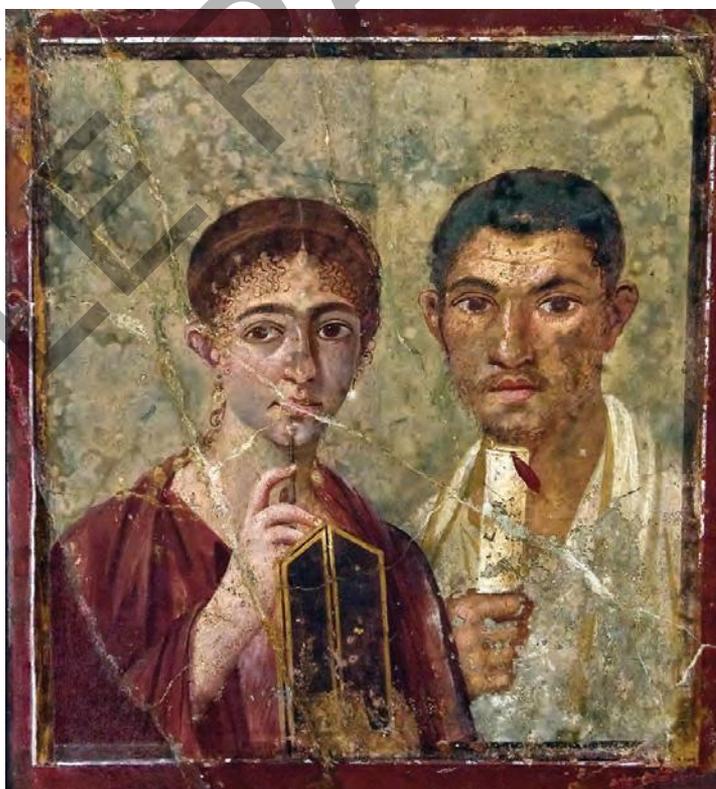
Patricians could afford to eat bread with every meal, and feasts included seasonal vegetables and fruits, wine, cheese, olives, and roasted birds, fish and meat from other animals. Poor plebeians, on the other hand, might not be able to afford to buy bread and instead usually ate a kind of porridge, with some vegetables or fruit. Some modern Italian foods were not yet invented: pasta would not be available until contact with China, and familiar pizza toppings had to wait until tomatoes were introduced from the Americas.

Women

If you were a woman, then your daily life would be much more comfortable as a wealthy patrician than as a poor plebeian, but you did not have the same rights as men. Women in ancient Rome were valued

for being beautiful, honest, and dutiful wives and mothers. A married woman was expected to bear children and look after the household. Women from lower social classes often helped their husbands in shops and workshops. Spinning, weaving and the sewing of cloth was considered part of a woman's role.

After the death of her father, a woman could inherit property and do business, but she needed a man, such as a husband or a brother, to approve her decisions. However, widows and divorced women were able to remarry, and from the first century CE, a woman could operate a business without a man to help, if she had three children. For these reasons, many historians argue that women in ancient Rome had more independence than women in other parts of the ancient world, such as in Greece.



↑ Source 7.4.4 Fresco of the baker Terentius Neo and his wife. From the collection of Museo Archeologico Nazionale di Napoli.

Concepts and skills builder 7.4



Analysing perspectives

Some ancient Romans' opinions about women were recorded. Read the extracts (Source 7.4.5 and 7.4.6), then answer the questions that follow.

Woman is a violent and uncontrolled animal . . . If you allow them to achieve complete equality with men, do you think they will be easier to live with? Not at all. Once they have achieved equality, they will be your masters.

↑ Source 7.4.5 Cato the Elder, in a speech in the Roman Senate in 195 BCE.

Why should we pay taxes when we do not share in the offices, honours, military commands, nor, in short, the government, for which you men fight between yourselves, with such harmful results?

↑ Source 7.4.6 A speech made by Hortensia, a Roman woman who spoke when a large group of women held a public meeting in Rome in 42 BCE.

- 1 **Identify** what Cato claimed would happen if women were given equality.
- 2 **Explain** why Hortensia questions why women should pay taxes.
- 3 **Outline** what these sources tell us about the challenges women faced living in ancient Rome?

Historical concepts and skills: perspectives, using historical sources, communicating

Slaves

The lowest social group was slaves, who had no rights. They were treated as property; they could be bought, sold, given as gifts and rented out to others. Many slaves had been captured in war, but others had been convicted of crimes and forced into slavery as punishment, or had been sold into slavery as children by their families who could not afford to look after them. If your mother was a slave, you automatically became a slave too.

→ Source 7.4.7 A mosaic from 2 CE shows a slave pouring out something to drink. *How does the slave's clothing compare with that of the people he is serving?*





↑ Source 7.4.8 A slave's collar with the inscription: 'I ran away. Hold me; when you bring me back to my master Zoninus, you will get a gold coin.' Dated from 4–6 CE. *What does the source tell us about how owners viewed their slaves?*

Slaves could be builders, cleaners, farmers, messengers, cooks or servants, and forced to join the army, but they could also be educated and carry out professional jobs such as being an accountant or a doctor.

Free men and women

It was possible for owners to free their slaves, making them freemen and freewomen, with some of the rights of citizens if they were male. This law ensured that the Roman citizen population was constantly expanding, and was open to people from many backgrounds and cultures. Freed slaves took on the names of the families that had freed them and had obligations to their ex-owners.

Lesson 7.4 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

7.4 Review questions

- 1 **Identify** the two main groups of citizens in ancient Rome, and the main difference between them.
- 2 **Compare** the living conditions of rich and poor people in Rome:
 - a How was a villa different from an *insulae*?
 - b What did the rich eat that the poor did not?
- 3 **Explain** why women and slaves might have been considered to be part of the same social group.
- 4 **Analyse** how fair Roman society was. Was it more or less fair than modern Australia?

What was daily life like in ancient Rome?



Learning intention

Having seen how the lives of ancient Romans were shaped by their birth, in this lesson we will learn about facilities and events that affected their daily lives.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** With a partner, discuss some of the things you can see in Source 7.5.1
- 2 **Think:** What might be the purpose of the under floor tunnels and cells you can see at the base of the structure?
- 3 **Wonder:** The Colosseum is now in ruins, but what would it have looked like fully built?

↓ Source 7.5.1 The Colosseum, Rome, is now visited by 12 million tourists annually, who can stand on the arena floor and visit the 14 underground corridors where events and performances were once prepared.



Public facilities

Baths

Ancient Romans liked to keep clean. Where possible, they bathed in a public bath house. Instead of using soap, they covered their skin with olive oil and scraped it off. Building bath houses throughout Rome and its territories and supplying water to them was only possible because of expert engineers. Bath houses were like modern gyms and health spas.



↑ Source 7.5.2 An example of a Roman bath house complex in Bath, England, which was built to give access to natural hot springs in 1 CE. *How does it compare with your local public pool?*

Aqueducts

A major feat of Roman engineering was the aqueduct. Aqueducts were large structures made out of stone, and their main purpose was to transport water. Aqueducts were many metres taller than local buildings, and usually constructed from several arches to make them as strong as possible. Across the top of the aqueduct was a channel that carried the water to where it was needed.



↑ Source 7.5.3 A Roman aqueduct that still stands in Spain today.

Sport and entertainment

Gladiators

Gladiator battles were very popular sporting events in which armed men fought for other people's entertainment. Colossal stadiums were built to host the games, and some slave gladiators could win enough fame and prize money to buy their freedom. Some free-born men also chose to become gladiators. There are even some references to female

gladiators in primary sources. It was highly dangerous, and usually meant an early death.

In the arena, different kinds of gladiators used different kinds of weapons. The *retarius*, for example, attempted to capture his opponent with a net and stab them with a trident. A *secutor* carried a long, rectangular shield and wore a helmet that covered the face.

Awesome buildings

The Colosseum

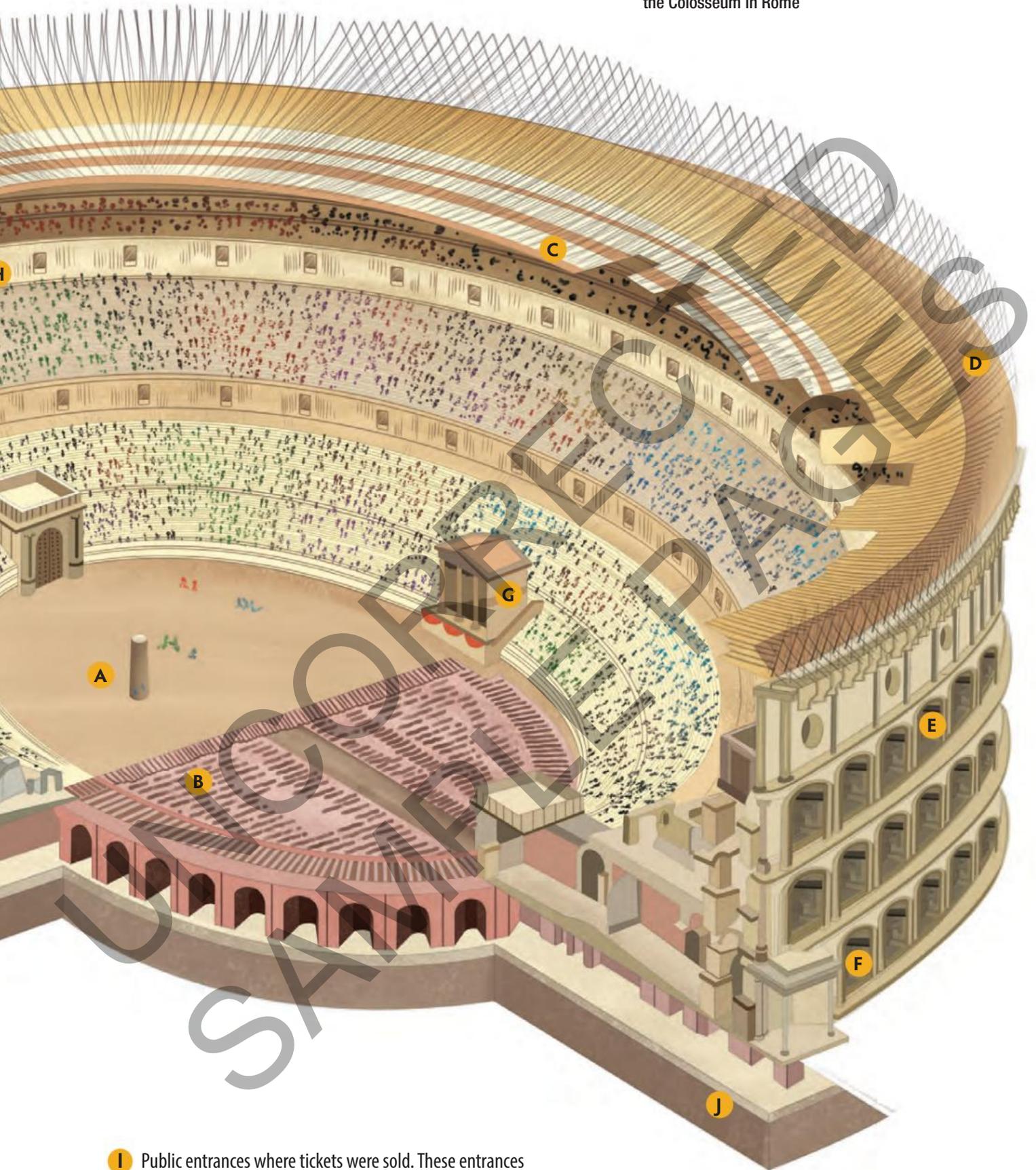
The Colosseum is an enormous stadium in central Rome, built by the Emperor Vespasian and completed under his son Titus in 80 CE. It seated an audience of approximately 50 000 people for gladiatorial games and spectacles. Titus opened the Colosseum with 100 days of celebratory gladiatorial games. You would know where to sit because that was determined by your social status – the higher your status, the more comfortable your seat and the closer you sat to the action.

Events at the Colosseum were hugely popular, but some critics at the time said that they were designed to distract the common people from their problems: the leaders made sure that all the plebeians cared about was 'bread and circuses'. Gladiatorial games remained popular within the Roman world until they were officially banned in 404 CE.



- A** Central arena, covered with sand. It could be set up with boulders or trees for some events.
- B** The *hypogeum* beneath the surface of the arena, with tunnels and animal pens. Pulleys, counterweights and ropes brought scenery into the arena, and caged animals for combat.
- C** Sails protecting spectators from sun and rain.
- D** Gilded bronze shields supporting the sails.
- E** Archways containing statues.
- F** Facade made of a type of limestone called travertine.
- G** Special box for the emperor.
- H** Several levels of seating. Seats closer to the arena were more expensive. Behind wealthy citizens sat middle-class citizens. Next came slaves and foreigners, and finally, in the standing areas only, were the poor. Women were also in this top tier, separated from the poor by a row of columns. They sat on wooden bleachers.

↓ Source 7.5.4 A cross-section of the Colosseum in Rome



- I** Public entrances where tickets were sold. These entrances had staircases giving access to the upper levels.
- J** Exits

Concepts and skills builder 7.5



Using historical sources

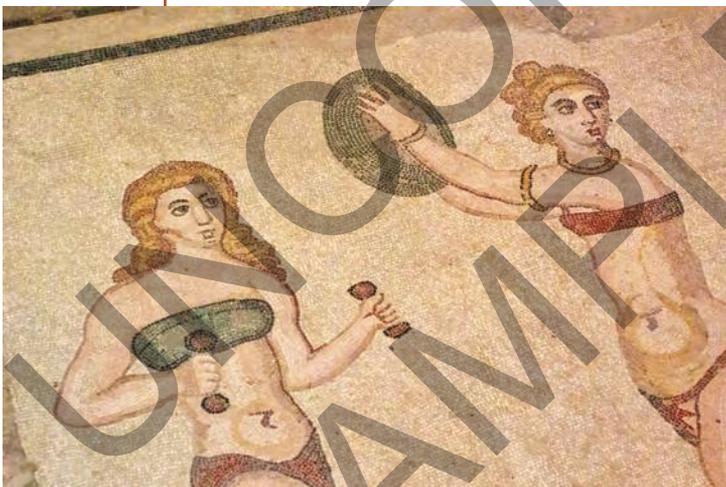
Roman sports captured the imaginations of artists at the time and have continued to ever since. **Examine** the images, then answer the questions that follow.



↑ Source 7.5.5 A detail of a mosaic showing gladiators fighting, c.320 CE



↑ Source 7.5.6 *Pollice Verso* ('With a turned thumb') by Jean-Léon Gerome, 1872 CE



← Source 7.5.7 A mosaic from a villa in Sicily, from the fourth century CE, showing women playing sport with weights and a discus

- 1 In Source 7.5.4, which kind of gladiator is about to lose? **Explain** his fighting method.
- 2 **Explain** how the crowd showed the emperor whether they wanted the defeated gladiator to live, or to be condemned to death, based on Source 7.5.6.
- 3 How does Source 7.5.7 challenge the idea that ancient Roman sport was only for men?

Historical concepts and skills: perspectives, using historical sources, communicating

The Forum

The Forum was considered the heart of Rome. It was a large square where people gathered for a range of public activities. Events held at the Forum included elections, public meetings and speeches, criminal trials, gladiator matches (before the Colosseum was built), social gatherings, business dealings, religious ceremonies and markets.

The senate house located at the Forum hosted political events. There was also a temple dedicated to Saturn, the god of agriculture. The Forum was also used as a treasury, which meant that Rome's money was managed and kept there.



→ Source 7.5.8 A reconstruction of what the Forum in ancient Rome might have looked like. *Which part do you think Roman leaders would have used as their platform for public speeches?*

Lesson 7.5 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



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7.5 Review questions

- 1 **Identify** two types of Roman construction related to water.
- 2 **Evaluate** the evidence that remains today of water management in different territories of the empire, referring to sources in this chapter.
- 3 **Explain** the place of gladiators in Roman society:
 - a Why did people enjoy watching gladiators?
 - b Why did some people want to become gladiators?
- 4 **Analyse** how awesome building projects could have encouraged people to feel proud to be Roman, using examples.

What were the significant beliefs, values and practices of the ancient Romans?



Learning intention

Having seen how the ancient Roman society changed, in this lesson we will learn about Roman beliefs and practices.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 7.6.1 What kind of building is it, and where is it?
- 2 **Think:** This temple is very far from Rome, what might that say about the size and strength of the Roman empire?
- 3 **Wonder:** What kind of ceremonies or rituals would be held in a place like this? Would you worship each god using the same practices?

↓ Source 7.6.1 The remains of the second-century temple of Bacchus, Roman god of wine and fertility. It is 31 metres tall, and stands in modern-day Lebanon, over 2000 km south east of Rome.



Religious beliefs

Gods and goddesses

Religion in ancient Rome had a very important place in the daily lives of the people. The ancient Romans were polytheistic, meaning that they believed there were many gods who had different roles to play in determining events in the world. They depicted their gods in statues, mosaics and paintings. When the Roman Republic claimed land in Greece, they adopted some of the Greek gods and goddesses and renamed them.

The ancient Romans generally believed that the actions of the gods could control the fate of the people. At home, families set up shrines for their household and favourite gods. In public, on special occasions at the Colosseum and the Forum, there were sacrifices to try and keep the gods happy and supportive of everything the Romans did. Over time, the role of the emperor became partly a religious one, and Romans believed that their emperors would become gods when they died.

Temples

Many **temples** were built to worship the gods across the Roman Empire. People would leave offerings to particular gods and ask for help in their lives. For example, a person might leave an offering to the god Apollo, god of healing, if they were unwell. But if they were preparing for battle, they might pray to Mars, god of war.

The Vestal Virgins were priestesses of the goddess Vesta, goddess of the **hearth** and protector of the family. The Vestal Virgins were selected as young girls to become priestesses and to dedicate their lives to their duty, which was to ensure that the eternal flame of Rome, housed in the Temple of Vesta on the Palatine Hill, continued to burn.

If the flame went out, it was believed to be a sign that Rome would be destroyed. If one of the priestesses was discovered to have let the flame go out, she was seen to have failed in her duty. The punishment for this was to be buried alive. Why buried alive? Because the Vestal Virgins were still considered to be sacred women – to kill one was a crime. Therefore, the Romans buried the failed priestesses alive so that it was the earth that killed them, not an individual person.

temples places for worship; in ancient Rome a temple would have an altar, where animals were sacrificed
hearth the central fireplace in a home

↓ Source 7.6.2
A fragment of a relief sculpture of the Vestal Virgins. *Since they had to focus on their task, what do you think they are all looking at?*



Analysing perspectives

patron someone who supports others with money, gifts or favours; a patron god of a place was seen to support that place with divine favour

Jupiter

- **King of the gods**
- god of sky and thunder
- **patron** god of Rome
- like the Greek Zeus



Apollo

- twin brother of Diana
- god of music, healing, light and truth
- like the Greek Apollo



Neptune

- god of freshwater and the sea, earthquakes, hurricanes and horses
- often depicted with his trident
- like the Greek Poseidon



Vulcan

- god of fire, volcanoes, metal work and the forge
- like the Greek Hephaestus



Mars

- god of war, guardian of agriculture
- like the Greek Ares
- father of Romulus



Mercury

- god of translators and interpreters, trade and travel
- messenger of the gods
- like the Greek Hermes



↑ Source 7.6.3 Important gods of ancient Rome

Juno

- **Queen of the gods**
- wife and sister of Jupiter
- protector of Rome's women
- like the Greek Hera



Venus

- mother of the Roman people
- goddess of love, beauty, fertility, sex and desire
- like the Greek Aphrodite



Ceres

- goddess of agriculture and harvests
- protector of farmers, pastoralists and plebeians
- like the Greek Demeter



Diana

- twin sister of Apollo
- goddess of the hunt, the moon and birth
- like the Greek Artemis



Minerva

- goddess of wisdom, arts, trade and strategy
- like the Greek Athena
- born from the head of Jupiter – she leapt out of his head, fully grown and wearing armour!



Vesta

- the sacred fire of the Vestal Virgins
- goddess of hearth, home and family
- like the Greek Hestia



↑ Source 7.6.4 Important goddesses of ancient Rome

Look at the information about Roman gods and goddesses to answer the following questions.

- 1 **Identify** which gods or goddesses you would pray to or make a sacrifice to:
 - a If you were a soldier about to go to war
 - b If your mother was sick
 - c If you wanted your crops to grow well
 - d If you wanted to have a baby.
- 2 **Explain**, using examples, how Roman religion was polytheistic and inspired by other cultures.
- 3 Which god or goddess has the strangest combination of roles or characteristics? **Explain** your choice.

Historical concepts and skills: perspectives, using historical sources, communicating

cremation to dispose of a dead body by burning it to ashes

Religious beliefs and death

Ancient Romans had various beliefs about what happened when a person died. One thing that was universally believed was that good people would be rewarded in the afterlife, either in the Elysium fields or on the Plains of Asphodel, and that the wicked would be punished in a dark and scary place, but they could earn their way out for good behaviour.

The body of a loved one would generally be laid out so that their friends and family could come and visit, for about seven days. Initially, it was common to dispose of dead bodies by **cremation**. But, over time, more people were buried in the earth or in large tombs. Because it was illegal to bury a person's body or ashes inside the city, Roman tombs and cemeteries were always outside the city walls.

Values and changes

Ancient Roman values

The core set of values that Romans tried to follow in order to live well are known by their Latin names, which are:

- *Fides* – loyalty and trustworthiness, which were considered to be an important part of business relationships and the law.
- *Pietas* – piety and religious devotion. People had to conduct all the proper rituals and sacrifices to the gods. They also had to always act morally and with good intent.
- *Gravitas* – self-discipline and composure. People were expected to control their emotions and behaviours, and face problems in a calm manner. *Gravitas* also referred to someone who was respected for being wise.
- *Virtus* – the quality of manliness ('*vir*' means 'man'). This virtue changed in meaning, depending on what was thought of as manly. For most ancient Romans, *virtus* meant someone who could act rationally, who was a good fighter and a good leader of his family.
- *Dignitas* – the ultimate quality to achieve – if someone is able to uphold all the other values at once, they achieved *dignitas* or honour. It was about others viewing you as someone who is worthy and important.

Monotheism: Judaism and Christianity

Within the Roman Empire lived some people who believed in one god, which is known as monotheism. Jewish communities could be found in many cities across the empire, and when Rome captured Jerusalem in 63 BCE, it created the province of Judaea, where the world's main Jewish civilisation lived. Jewish people were allowed to continue to practise their religion, in local synagogues and a central temple, so long as they paid special taxes to Rome.

However, over time the Jewish people became angry at the way that Roman governors were exploiting the province, and they rebelled in a series of wars from 66 CE. The rebellion ended with a crushing Roman victory. In 70 CE, Romans destroyed all but the western wall of the great Jewish temple in Jerusalem, which has never been rebuilt. Many were forced to leave Jerusalem and live elsewhere, and since then, Jewish people have only worshipped in synagogues.

Christianity developed as a sect within the Jewish faith during the life of Jesus of Nazareth, who lived in the province of Judaea. Jesus challenged both Jewish leaders and Roman rulers, because he taught people to value humility, avoid fighting and embrace poverty.

Jesus was crucified around 33 CE, for the crimes of blasphemy against Judaism and treason against Rome. His followers spread the new religion across the Roman Empire, first through Jewish communities, and then by converting other people to Christianity. At first, the new religion was treated with suspicion, but tolerated.

In 64 CE, when a great fire burned the city of Rome for over a week, the situation changed for Christians. To distract attention from his own failure to control the crisis, Emperor Nero blamed the small number of Christians in the city for starting the fire, and had them executed, by crucifixion, burning alive, or by wild animals. Still the religion survived, and continued to gain followers, until in 313 CE, Emperor Constantine accepted Christianity as a religion. He brought the persecution of Christians to an end, and started the process of

Christianity becoming the official religion of the empire.

The irony is that the only religion that the Romans ever attempted to eradicate [destroy] was the one whose success their empire made possible and which grew up entirely within the Roman world.

↑ Source 7.6.5 Mary Beard, *SPQR: A History of Ancient Rome*, London: Profile Books, 2015, p. 276

Amazing but true...

Roman roads in Jerusalem, including ones that were built to allow Jewish people to walk to their temple, and on which Jesus of Nazareth may have walked to his crucifixion, are still there – but now they are buried 5 metres below the modern surface of the city!

Lesson 7.6 review

Online quiz 

Review questions  

Research task 

Teachers can assign tasks and track results 

Go online to access the interactive lesson review and more!

7.6 Review questions

- 1 **Define** polytheism.
- 2 **Explain** how the Vestal Virgins protected Rome.
- 3 **Summarise** the kind of person a good Roman was supposed to be, based on their values.
- 4 **Analyse** how monotheism challenged the empire, by explaining:
 - a What happened to Jewish people in the first century CE?
 - b What was the significance of the decision to make the empire officially Christian?

What were some of the major changes in society and their effects?



Learning intention

Having seen what the Romans built, what they believed and how they spent their days, in this lesson we will learn about how changes in power structures affected the people of Rome.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- See:** Look closely at the Roman coin (Source 7.7.1).
- Think:** How does this compare with voting today?
- Wonder:** What is something that could go wrong with this style of voting?



↑ Source 7.7.1 A Roman coin from 63 BCE showing a citizen voting. Citizens carved the initials of their preferred candidate into a wax tablet and then dropped the tablet into a box.

Over the centuries, Rome was ruled first as a kingdom, then as a republic and later an empire. There were major

changes in the way Rome was ruled and how much say ordinary people had in those decisions.

The Republic

In 509 BCE, the last king of Rome was overthrown and a republic was created. For Romans, *res publica* ('the public thing') meant a type of government where the male citizens elected representatives to rule on their behalf. Two consuls ruled the republic together so that no one person would have sole rule over Rome

at any time. The consuls ruled with the assistance of a **senate**.

Over time, the plebeians became angry at the power of the patricians. The plebeians protested, went on strike, and refused to join the army, until gradually they gained more rights.



← Source 7.7.2 A representation of the Roman senate, with senators wearing togas, painted in 1899 CE. *In what ways does it look similar to a modern parliament?*

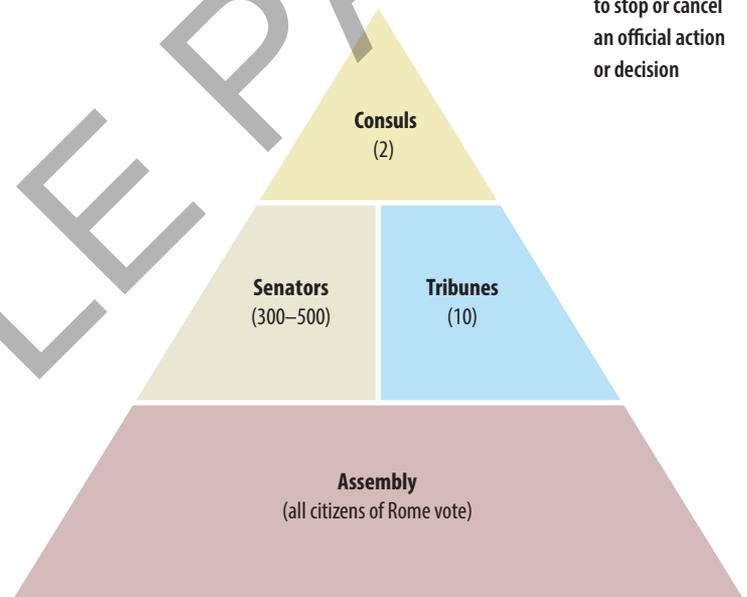
First, they won the right to elect their own representatives, called **tribunes**, to represent their views. Around 450 BCE, they won ‘the Law of the Twelve Tables’, which was a list of basic rights of all citizens. From the next century, one of the two consuls would have to be plebeian. By 287 BCE, the plebeians had equality under Roman law. Their assemblies and their laws were part of the politics and government of Rome.

Decisions about laws and military matters were shared in the republic:

- The two *consuls* were the main decision makers. Both consuls had the right to **veto** the other’s decisions, and they were only elected to head the government for one year.
- Two *censors* were chosen to conduct a regular census of the population (a head-count), and to investigate the private lives of citizens to make sure they were upholding Roman values.
- *Senators* were wealthy patricians who were appointed for life. They voted on what advice to give the consuls.

- *Tribunes* were elected by the plebeians’ assembly. They had the power to veto the Senate’s laws.
- There were multiple *assemblies*, for plebeians, the army and religious groups. These could be attended by all citizens of the group, and then decisions were taken by votes of representatives of the groups.

senate the group of politicians who had the most power to make laws in a government
tribunes elected officials whose job was to protect the people’s rights
veto a legal power to stop or cancel an official action or decision



↑ Source 7.7.3 The government of the Roman Republic. *What feature did the most to keep the government balanced?*

Amazing but true ...

The white toga was a semi-circular, woollen cloth that was draped over the left shoulder and around the body. The wearer had to hold the toga in place with his left hand, which meant that he could only really use his right hand. Women in ancient Rome wore an equivalent garment known as a *stola*.

Concepts and skills builder 7.7



Analysing significance

Spartacus (c.111-71 BCE)

Spartacus was a gladiator who led a rebellion for freedom. In 73 BCE he escaped along with 70 other gladiators. They travelled north, and won two battles against the highly organised army of the Roman republic that was sent to recapture them. Other rebels and runaway slaves joined them, until there were over 90 000 fighting for Spartacus. It took two years before the Roman army defeated the rebels. As punishment, Roman general Crassus crucified 6000 of them.

Just by fighting them, we won something. When just one man says, 'No, I won't,' Rome begins to fear. We were tens of thousands who said no. That was the wonder of it. To have seen slaves lift their heads from the dust, to see them rise from their knees, stand tall with a song on their lips . . .

There is no sign that he was motivated by ideological concerns to overturn the social structure. The sources make clear that Spartacus endeavored to bring his forces out of Italy toward freedom rather than to reform or reverse Roman society.

Spartacus' famous slave 'war' . . . remains one of the most glamorised conflicts in the whole of Roman history. Brave as they were, this handful of breakaway slave-gladiators must have been reinforced by many of the disaffected [unhappy] Roman citizens in Italy . . . This was a combination of slave rebellion and civil war.

↑ Source 7.7.4 Spartacus, as quoted in a famous 1960 Hollywood film, *Spartacus*

↑ Source 7.7.5 Erich Gruen, *The Last Generation of the Roman Republic*, University of California Press, 1974, pp. 20–21

↑ Source 7.7.6 Mary Beard, *SPQR: A History of Ancient Rome*, London: Profile Books, 2015, p. 217

Did Spartacus want a revolution to overturn the political structure of Rome, or was he just seeking his own freedom?

- 1 How useful is Source 7.7.4 to help us understand the significance of Spartacus?
- 2 **Explain** in your own words what Source 7.7.5 says was Spartacus' goal.
- 3 A civil war is a war between groups within a society. **Explain** why Source 7.7.6 says that Spartacus' actions were so significant that they were like a civil war.

Historical concepts and skills: perspectives, using historical sources, communicating

The empire

dictator someone who rules with total power over a country or territory

assassination murder of an important or powerful person by a surprise attack

The Roman Republic lasted until Julius Caesar (100–44 BCE), who gradually concentrated power until he ruled Rome as a single consul or **dictator**. Caesar was **assassinated** during a Senate meeting, when some men of Rome thought he had become too powerful.

The killing of Julius Caesar did not end the concentration of power in Rome, because he was replaced by a series of leaders who competed with each other for power, and eventually his great-nephew, Augustus, became the first emperor of Rome. From 27 BCE, Augustus ruled by

himself and with total authority. This began the period known as the Roman Empire. There were 70 emperors between then and the fall of the empire in 476 CE.

Augustus began major building projects in the city of Rome, and to expand the borders of the empire. Later emperors continued these activities, until in the first century CE, Rome reached its greatest expansion – including 5 million square km of provinces across Europe, Africa and Asia. Romans built roads to connect their territories, with stone markers along the way that told people how far it was to the next town. This led to the saying, ‘all roads lead to Rome’.

In the city of Rome, the emperor was all-powerful, but across his empire, he had to rely on loyal governors, whom he appointed to manage the provinces. Governors were appointed for one to five years at a time and controlled the lives of the people that came under Roman rule. The governor applied Roman laws, commanded a powerful army, charged people taxes, served as the highest judge,



and had the power to sentence a person to death. Pontius Pilate, for example, governor of the Roman province of Judaea from 26 to 37 CE, sentenced Jesus of Nazareth to death by crucifixion.

It was challenging for a single emperor to keep watch on the activities of more than two dozen provincial governors, some of whom were several weeks’ journey away from the capital. Some governors abused their positions and treated local people badly while they lived luxurious lives. However, they were required to report regularly back to Rome, and emperors sent their officials around the empire to inspect the provinces.

↑ Source 7.7.7
The remains of an intersection of Roman roads near Tripoli, Libya. *Can you find out how far is it from Rome to Tripoli?*

Lesson 7.7 Review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

7.7 Review questions

- 1 **Create** a simple timeline that shows the three types of government that were in place in ancient Rome, and for how long.
- 2 **Explain** at least two steps that plebeians took towards more equality.
- 3 **Suggest** how the hierarchy of the Roman Republic stopped one person from taking control.
- 4 **Analyse** how the Roman Empire changed life for Romans, by explaining:
 - a How did the Empire change the way Rome was ruled?
 - b How did the expansion of the empire create challenges for the rulers?

How did contact and conflict with other societies change ancient Rome?



Learning intention

So far, we have seen how Romans developed and what they believed. In this lesson, we will learn about Roman contacts with other societies, through trade networks and the imperial army.

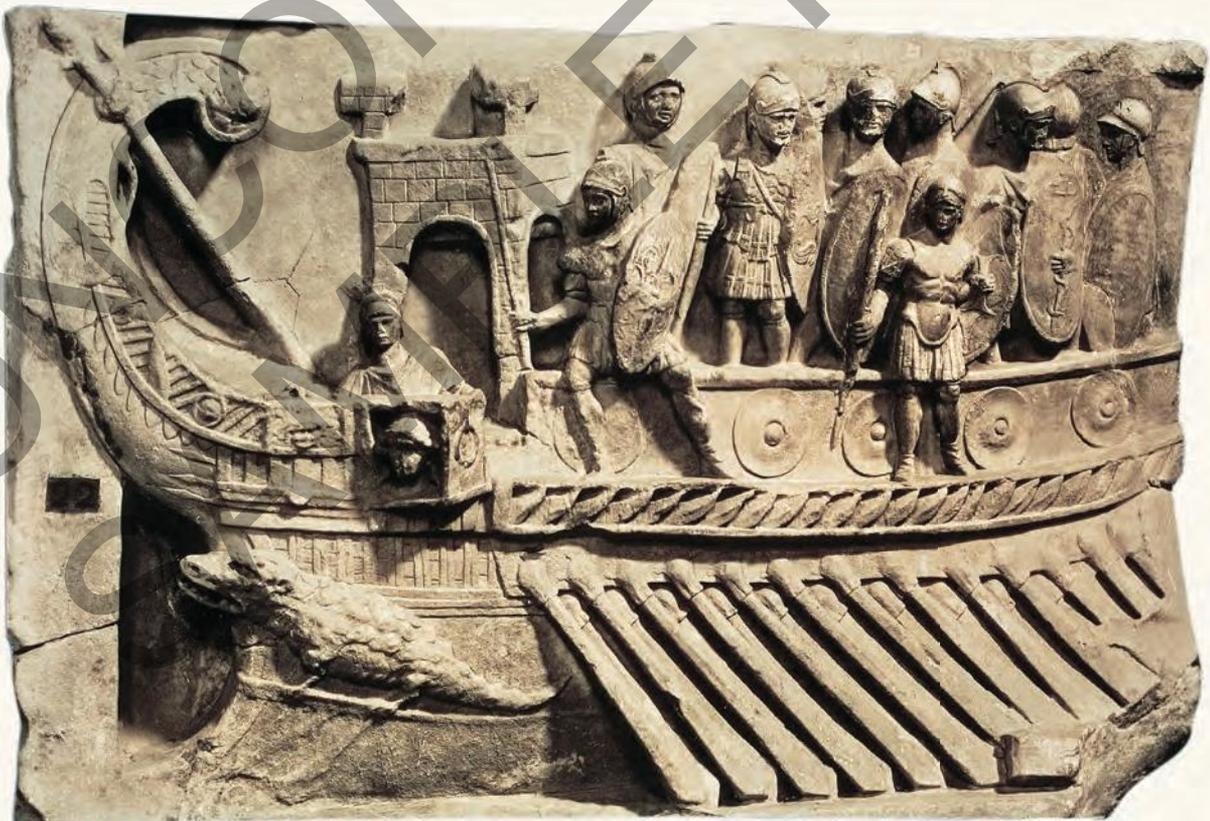
Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 7.8.1. What are some of the small details you can see in this carving?
- 2 **Think:** Why might ancient Rome need warships?
- 3 **Wonder:** Who are the other ancient societies that Rome had conflict with?



↑ Source 7.8.1 A carving of a Roman *bireme* or warship. Biremes were used since the eighth century BCE and could be up to 40 metres long, with two rows of oars and a separate platform for fighters.

A growing population _____

Rome as a refuge

The myths about the early kingdom of Rome are stories that cannot be proven, because there is no archaeological evidence. Despite this, the myths show us that Rome was seen as a city that welcomed people who had been forced to flee from other parts of the world. It was a haven for **asylum seekers**. Stories about Romulus, for example, say that he wanted the city of Rome to have a larger population, and therefore Romulus decided to offer any person a chance to be a citizen of Rome. This included criminals, exiled people and anyone looking for a fresh start. As the writer Livy describes:

to help fill his big new town he threw open in the ground – now enclosed – between the two copses as you go up the Capitoline hill, a place of asylum for fugitives. Hither fled for refuge all the rag-tag-and-bobtail from the neighbouring peoples: some free, some slaves, and all of them wanting nothing but a fresh start. That mob was the first real addition to the City's strength, the first step to her future greatness.

↑ Source 7.8.2 Livy, *The Early History of Rome*, c.29–9 BCE

Romans did not have a concept for an illegal immigrant. Instead, as the single city grew into an enormous empire, it incorporated people from other cultures. As you have seen, however, this did not mean that everyone had equal rights. One clear example was that many people whose homelands were included in the empire became slaves.

To achieve this expansion, Rome developed a highly efficient military, trained to invade, conquer and control other lands.

The Roman military _____

The Roman navy

Between 264 and 146 BCE, the north African kingdom of Carthage was Rome's greatest rival. Rome needed a **navy** to be able to defeat Carthage and conquer more of the Mediterranean. The writer Polybius describes the first steps towards creating this Roman navy.

Eventually, Rome defeated Carthage and turned many of their people into slaves.

asylum seeker a person who has left their home due to danger and is seeking to live in another country

navy a fleet of ships used to wage war; part of a country's armed forces

Observing how the war was dragging on, the Romans then, for the first time, undertook the building of ships . . . As the shipwrights were entirely inexperienced . . . the enterprise caused them much difficulty. From this, anyone might see the spirited and reckless nature of the Romans' determination . . . once they first had the idea they undertook it so boldly that, before they had any experience in the matter, they at once undertook a naval battle against the Carthaginians.

↑ Source 7.8.3 Polybius, *Histories*, c.146–118 BCE

Amazing but true...

The ancient Romans copied the design for their new warships from a ship they captured from Carthage. They borrowed what worked from their enemies and neighbours.

legions groups of 4000 to 6000 soldiers in the ancient Roman army

centurion an experienced and respected soldier, who commanded 100 men

equestrians soldiers who owned and rode horses

The Roman army

The ancient Roman army was enormous – up to 350 000 men in total – and highly organised. The army was divided into **legions**, which were groups of 4000 to 6000 men, usually organised in 10 ‘cohorts’, each of which had six ‘centuries’. There were different ranks. Members of the patrician class led the army, but an ordinary soldier could rise to the rank of **centurion**, and command 100 men. **Equestrians** were soldiers on horseback and usually members of noble families.

Conquests were celebrated back in Rome with parades through the streets, special awards and honours for the



← Source 7.8.4 A Roman legionary during the early second century BCE. Which body parts are protected by armour?

victorious commanders, and sometimes new buildings and columns, paid for by what was taken from the conquered territories.

Concepts and skills builder 7.8



Using historical sources

Under the reign of Emperor Trajan, Rome invaded Dacia (modern-day Romania) in 101–106 CE. The emperor had a giant column created to celebrate the victory, decorated with carvings which tell the story of the invasion, like a giant comic strip.

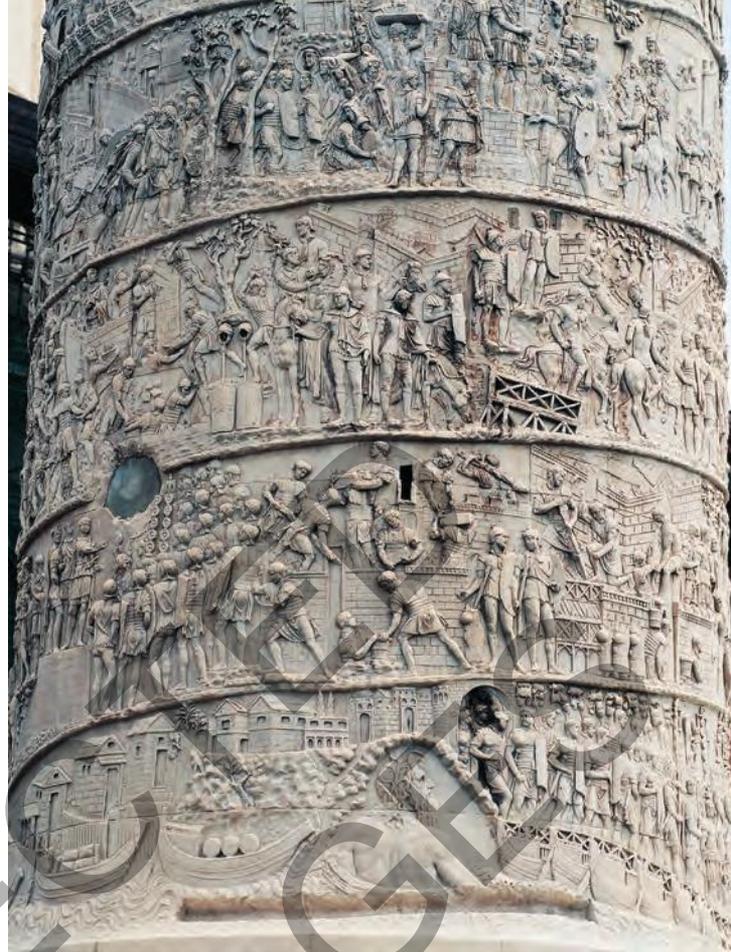


↑ Source 7.8.5 Trajan's Column in Rome, as it looks today. Can you see the remains of a forum around the column?



↑ Source 7.8.6 In this scene, Roman soldiers are building a fort during their invasion of Dacia.

→ Source 7.8.7 In this scene, the ancient Romans (those wearing helmets) are battling the Dacians. In the middle at the top of the scene, the god Jupiter helps the ancient Romans by throwing thunderbolts at the Dacians.



- 1 In Source 7.8.6, find three examples of Roman soldiers working together, and **explain** what they are doing.
- 2 According to the depictions in Source 7.8.7, what advantages did the Romans have to help them defeat the Dacians?
- 3 Given that this was a monument made by ancient Romans to celebrate Rome's victory, how reliable do you think it is as a source of information about this war?

Historical concepts and skills: perspectives, using historical sources, communicating

Contact and conflict with other ancient societies

Trade

As Trajan's Column shows, when Rome conquered territory, the empire became richer, with access to valuable goods. By controlling Dacia, Rome controlled the supply of gold, silver and salt. After Britain was conquered, the province supplied lead, tin and woollen products to Rome.

The empire also grew wealthy through peaceful trade. Within the empire, wine, olive oil and pottery were produced and swapped with neighbours in Africa and the Middle East, often for luxury items that the Roman Empire could not produce, such as silks, spices and dyes. Ships were used to transport goods and roads were built to move them across the land. People were also traded as slaves across the Mediterranean.

frontier a border between countries, or the limit of a country or empire

Trade also meant that people shared their cultures and beliefs, which is why so many Roman gods and goddesses have their equivalents in Greek and other religions. There is even evidence suggesting that the Roman Empire traded with China and India.

Conflicts

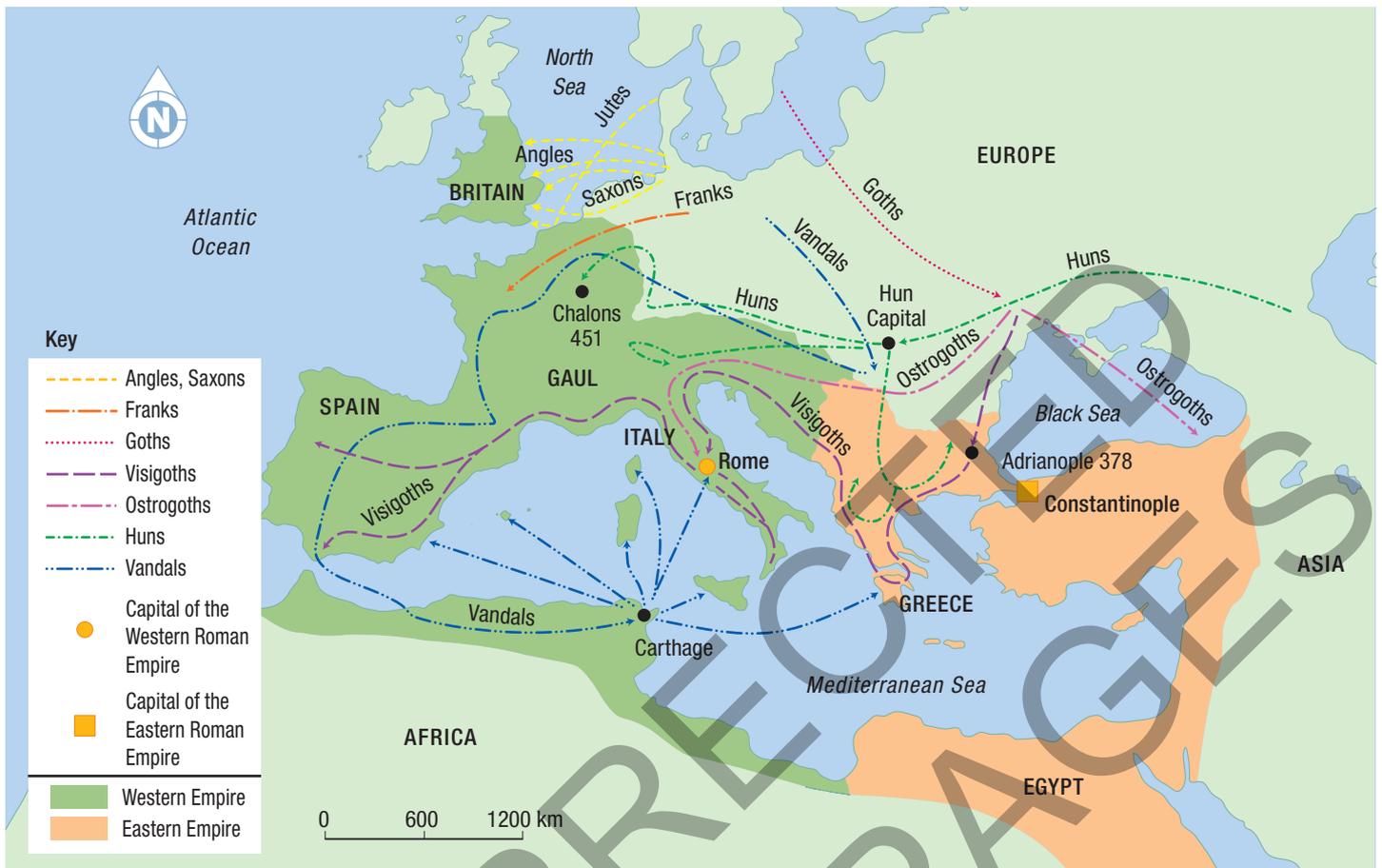
The Roman Empire came to an end during the fifth century CE. Historians argue over when and how it ended, as well as what caused the empire to weaken. One reason was undoubtedly invasions by barbarian tribes from a number of the **frontiers** of Rome, which occurred from early in the third century.

With its military stretched across the empire, Rome struggled to defend itself. Germanic tribes known as Goths invaded from the east, Angles and Saxons challenged Roman occupation of Britain, and Vandals came from Africa to the south. In 395 CE, the empire was split into a western half, managed and defended from Rome, and an eastern half, managed from Constantinople (modern-day Istanbul).

When Goths from the north, led by Alaric, successfully invaded and sacked Rome in 410 CE, the western Roman empire began to crumble. Ultimately, the western half of the empire was broken up into smaller kingdoms, ruled by the people who had managed to defeat the once invincible Roman army.

↓ Source 7.8.8 Roman *amphorae* (jars or jugs) found in Pompeii. *What sorts of goods could be traded across great distances within these containers?*





↑ Source 7.8.9 Invasions of the Roman Empire, c.100–500 CE. *How many different attacks can you identify by people known as 'goths'?*

Lesson 7.8 Review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

7.8 Review questions

- 1 **Identify** three different types of Roman soldiers.
- 2 **Explain** how the Roman military was organised, using the historical names for soldiers and groups.
- 3 **Examine** the goods that moved around the Mediterranean region through Roman trade routes.
- 4 **Discuss** why people on the frontiers of the empire would want to invade Rome. What had Rome taken from them or achieved, that they might want to have for themselves?

What role did a significant individual like Julius Caesar play in ancient Rome?



Learning intention

So far, we have seen how Rome developed and expanded. In this lesson we will learn about the lives of the best-known Roman rulers.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 7.9.1 How many men are trying to kill him?
- 2 **Think:** What have you heard about Julius Caesar before? Discuss with a partner.
- 3 **Wonder:** Why might a Roman ruler be under the threat of death?



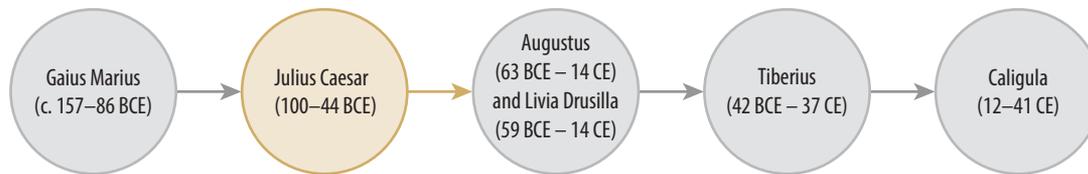
← Source 7.9.1 *The Death of Julius Caesar in the Roman Senate* by Vincenzo Camuccini, 1798 CE.

Significance means the relative importance of something. How do we decide which individuals in the past were significant enough to record information about? Is it because they introduced new ideas or systems? Is it because they were talented or unusual? Was the world in some way different because of the changes they brought? Do we need to measure how many people's lives they affected, or how long-lasting their effects were?

Remember some of the key leadership roles in Rome were:

- **Consul:** The political leader of the Roman Republic; usually shared between two men
- **Dictator:** A sole leader who ruled with total power
- **Emperor:** The political and military leader of the Roman Empire
- **General:** The senior commander of the army.

Before Caesar



Before Julius Caesar, Rome was a republic, led by two consuls, advised by patricians who formed a senate, and plebeians, who contributed advice through their tribunes and made laws through their assembly.

Gaius Marius (c.157–86 BCE)

Gaius Marius was a general who became consul during the Roman Republic. Marius was born 100 km south-east of Rome and came from a plebeian family. He was incredibly popular. He was elected as consul seven times, more often than anyone before.

Marius revolutionised the army, making it stronger and more efficient than before. Before Marius, a man had to be a citizen with considerable wealth before he was able to serve in a legion. Marius changed this, allowing any free man to serve. This increased the size of the army and meant that men were able to raise themselves up in the world by succeeding in the army and becoming wealthy.

Julius Caesar (100–44 BCE)

Julius Caesar is the best-known ancient Roman. He was born into the patrician



↑ Source 7.9.3 A statue of Julius Caesar.

class and became a famous politician, general and writer. He was celebrated for the way he led troops in the area of Gaul, modern-day France. He was also remembered for how he extended the empire. The writer Livy at the time said that Caesar was so driven to succeed that 'he was competing with himself, as though he were someone else'. After a victory in Asia Minor (modern-day Turkey), Caesar reportedly said simply and confidently: 'Veni, vidi, vici', which is a Latin phrase for, 'I came, I saw, I conquered'.

One way that Caesar made himself famous was by writing accounts of his own military campaigns and victories. He also became the lover of the most powerful woman in Egypt: Queen Cleopatra. The senate made Caesar a dictator of Rome, first for one year, then for 10 years, and eventually he was declared to be the dictator for life.

Many Romans became concerned that he was behaving like the kings that Rome had abolished five centuries before. Caesar wore a laurel wreath as a crown, which before had only been worn at the end of a military victory, statues of him were placed in all Rome's temples, his house was modified to look like a temple, and he refused to listen to his political opponents. Caesar introduced a new calendar, the 'Julian' calendar, the structure of which we still used today. He had one of the months renamed for him (Julius, or July). Within two months of being appointed dictator for life, many high-ranking wealthy Romans decided to put an end to his leadership. On 15 March 44 BCE, they killed Caesar, who reportedly suffered 23 stab wounds.



↑ Source 7.9.2 A statue portrait of Gaius Marius from the first century CE

Concepts and skills builder 7.9



Explaining perspectives in secondary sources

Caesar is one of the most widely discussed Romans. Historians have a range of perspectives about him.

Caesar . . . made friends among the **populares**, the group who sought to defend and increase the powers of the people's assembly in Rome against the senate, and who courted support by arguing for land reform, extended citizenship and various protections for the plebeians of Rome, the ordinary traders and workers.

Julius Caesar . . . was the first living person whose head featured on a coin minted in Rome. Up to that point, Roman small change had paraded only images of long-dead heroes, and the innovation was a blatant sign of Caesar's personal power, followed by all later Roman rulers.

[Statues of Caesar show qualities of] majesty, pride, disdain, reflection, prudence, boldness, tension, spirituality, delicacy, fortune, culture, humour, love, cruelty, grief, cheer, clemency, temperance, and wildness.

↑ Source 7.9.4 Rowan Williams, in *New Statesman* magazine, London, 2022

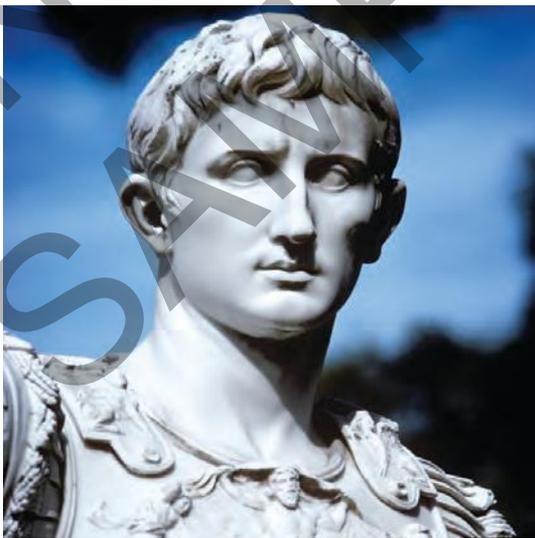
↑ Source 7.9.5 Mary Beard, *SPQR: A History of Ancient Rome*, London: Profile Books, 2015, ch. 7

↑ Source 7.9.6 R Herbig, quoted in Z Yavetz, 'Caesar, Caesarism, and the Historians', 1971

- 1 **Explain** the perspective in Source 7.9.4 about how Julius Caesar appealed to plebeians.
- 2 According to Source 7.9.5, **outline** how the face of Caesar became known around the empire?
- 3 Consider the qualities that Source 7.9.6 says are shown in different statues of Caesar. **List** the positive and negative. Then in a sentence, reflect on what this shows about Caesar.

Historical concepts and skills: perspectives, using historical sources, communicating

After Caesar



After Julius Caesar, Rome was an empire, led by a single emperor, some of whom worked cooperatively with the senate and assembly, while others made decisions without much advice.

Augustus (63 BCE to 14 CE)

Augustus was the adopted son and great-nephew of Julius Caesar. After Caesar's death, he defeated others who tried to seize control of Rome, including Cleopatra and her husband Marc Anthony. The senate made Augustus consul, and later emperor for life.

↑ Source 7.9.7 Statue of Augustus. *What characteristics does it represent?*

This meant the end of the Roman Republic and its belief in elected leaders. Augustus had anyone who posed a serious threat to him killed, by a process called 'proscription'. This was like a 'wanted' list: the names of enemies were written on a list and then anyone could kill them and receive a reward.

Generally, Augustus was seen as a good ruler. He helped the poor and had many grand buildings created. He is reported to have said, 'I found Rome a city of bricks and left it a city of marble.' He brought peace to the empire after years of discord. This period was known in Latin as the *pax romana* or the Roman peace, and lasted around 200 years. After Augustus died, he was declared to be a god by the next emperor, Tiberius. From this time on, all emperors were considered to become gods after they died.

Livia Drusilla (58 BCE to 29 CE)

Livia Drusilla became the third wife of Augustus, and gained influence because of her marriage. At a time when women were not even allowed to appear in public without a male relative, she was the most visible and powerful woman in Rome. Livia presented herself as a beautiful woman and a loyal wife, but in private she put pressure on Augustus and shaped many of his decisions. She also found a way to make her own decisions about



↑ Source 7.9.8 Statue of Livia Drusilla. Like the goddess Juno, she is shown holding a *cornucopia* (a horn overflowing with food and good things). *Why would she be shown to be like a goddess?*

major building projects in the city. Livia also fought fiercely to make sure that the son she had with her previous husband became the heir to the throne, including by having his rivals killed. She succeeded – her son Tiberius (42 BCE to 37 CE) became the next emperor.

Amazing but true...

Following Tiberius, Emperor Caligula (12–41 CE) was known as the mad emperor, and could be vicious towards people around him. He reportedly said, 'Remember that I have the right to do anything to anybody.' He once ordered hundreds of Roman ships to be tied together to make a 3-km-long floating bridge across a bay, so that he could spend two days galloping back and forth across it on his favourite horse!

Lesson 7.9 Review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

7.9 Review questions

- 1 **Identify** one way in which Rome was changed by Gaius Marius.
- 2 **Describe** one way in which Rome was changed by Julius Caesar.
- 3 **Explain** a negative and a positive aspect of Augustus' leadership.
- 4 **Analyse** what qualities of a successful leader were shown by the influential Romans described in this lesson.

Why is conserving the past so important?



Learning intention

Having seen how Rome was shaped and strengthened by significant individuals, in this lesson we investigate how historians and archaeologists try to conserve the past of ancient Rome.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Consider Source 7.10.1 What tools does the archaeologist use?
- 2 **Think:** Why might archaeologists want to preserve a site like Pompeii?
- 3 **Wonder:** What other ancient wonders have yet to be discovered?

↓ Source 7.10.1 A restorer works on a fresco at the archaeological excavations of Pompeii, while tourists walk above.



Archaeology: Material history

Buried cities

Remember Pompeii, buried under the volcanic ash of Mt Vesuvius in 79 CE? Today, you can visit the site of Pompeii and wander around the remains of the city. In fact, around 4 million tourists visit the site every year. However, this was not always the case. For many years, the city was lost and entirely hidden under the ground, beneath layers of ash, rock and soil. Then one day, the lost city was found by accident! While builders were digging into the earth to lay foundations for a new building, they came across ancient roofs and walls. In 1748 CE, an organised effort to uncover the remains began, and soon proof was found that the site was the lost city of Pompeii.

Before the remains were uncovered, the story of Pompeii was only known through written primary sources, and the accounts of historians. Historians mainly use written records as their evidence, and these can survive even when the people or places they describe are long gone. Archaeologists, who work in teams to dig up human and other physical remains, gather **artifacts** that confirm, or add to, or change the findings of historians. For nearly 300 years, archaeologists have been adding to our knowledge of Roman history, by excavating sections of Pompeii and finding buildings and objects. New discoveries are still being made today.

artifacts objects from the past that were made by human beings



↑ Source 7.10.2 An archaeologist cleans a fresco which was discovered in Pompeii in 2023. *How can they safely remove the ash and pebbles without damaging the art?*

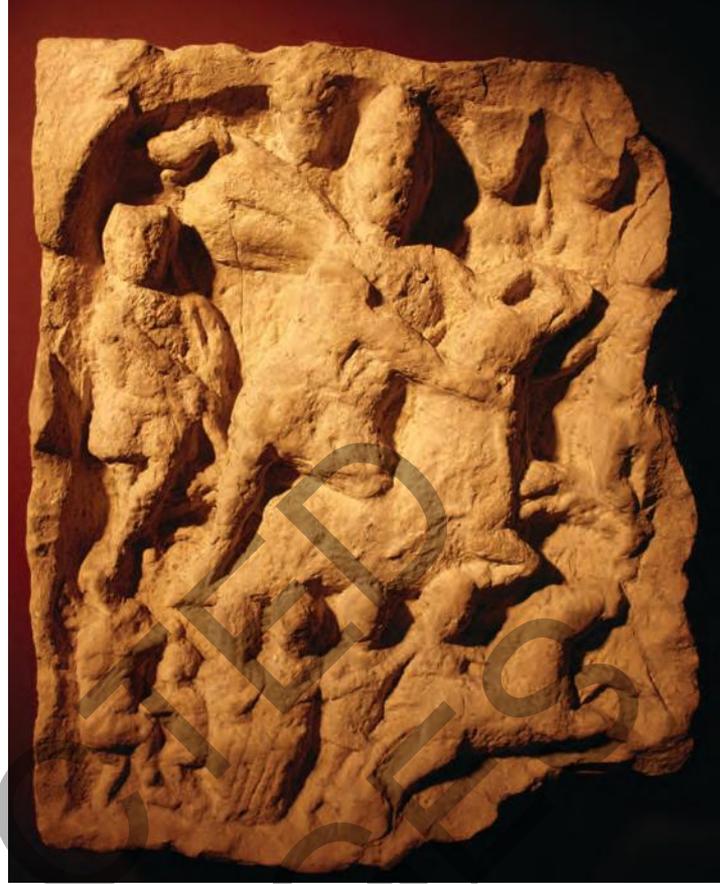
Secrets beneath modern cities

Another way that archaeologists learn more about ancient Romans is when construction work happens in a modern city that was built over a Roman site. London, for example, was established as a city by the

Romans in 43–50 CE and called Londinium. In 2013, in a part of London called Walbrook, builders were digging deep foundations for a new skyscraper, and when they started to uncover ancient looking articles, they called in archaeologists.

What they had found were the remains of a Roman temple and shopping street.

Archaeologists have limited time to gather evidence when they are working at a construction site. This is sometimes called ‘rescue archaeology’, because they have to work fast to rescue historic items before construction continues and buries the site. In the case of the skyscraper, archaeologists excavated more than 10 000 artefacts and moved them into a museum for further study about how people lived in the Roman Empire. Across the city, during the digging of a new train tunnel, a similar effort discovered Roman jewellery, personal items and some burials of human remains.



↑ Source 7.10.3 A Roman artefact found at a London site for a new skyscraper. *What is in the picture?*

Concepts and skills builder 7.10



Identifying methods used to study sites of historical significance

Vindolanda was a Roman fort in the north of the United Kingdom, to which soldiers were sent to protect the border of the empire. It is over 2000 km from Rome, near ‘Hadrian’s Wall’, which the Roman army built to defend the edge of their empire. The wall stopped Roman-occupied lands in Britain from invasions from the north (modern-day Scotland). Archaeologists have spent years digging and brushing, to uncover many artefacts that were buried at the fort under layers of soil. They work slowly, to avoid damaging any objects. These artefacts tell a range of stories about what life was like as an ordinary soldier in the Roman military.



↑ Source 7.10.4 An archaeologist at work on the ruins of the Roman fort of Vindolanda



↑ Source 7.10.5 An archaeologist at work, gently using a trowel and brushes to reveal an artefact.

- 1 **Identify** three tools shown in Sources 7.10.4 and 7.10.5 that archaeologists use to uncover artefacts.
- 2 **Explain** what the artefact in Source 7.10.6 shows us about the life of Roman soldiers at the edge of the empire.
- 3 **Explain** what makes this site significant.



↑ Source 7.10.6 A waxed writing tablet from Vindolanda, dated c.80 CE, which translates as, 'Give this to Junius the cooper, opposite the house of Catullus'. Messages like this were written on thin pieces of timber, which survived because they were preserved in the mud. Some of the messages talk about how cold life was on the border and how the soldiers needed to be sent certain clothes to try and keep warm.

Historical concepts and skills: historical significance, using historical sources, communicating

Written history

Primary sources

Many written primary sources survive from ancient Rome, and they were mostly written in Latin, which historians can read and translate. During the Roman Empire, histories of Rome were written by authors like Livy and Plutarch, and they have been published in books over the centuries since. These histories record details about what happened, when, where and who was involved, and the written texts can be used to make sense of the artefacts that archaeologists discover.

Also, the imperial government kept detailed records through censuses and military communications, some of which have been preserved. Some letters that Romans wrote to each other to keep in touch also survive, and these sources give us eyewitness accounts of some of the biggest moments in ancient Roman history. Romans also created poems and

plays to keep themselves entertained, which can also teach us about Roman beliefs and values.

Cicero (106–43 BCE)

Marcus Tullius Cicero lived during the end of the Roman Republic, as Julius Caesar fought against other powerful commanders for the right to rule on his own. He was known for his brilliant public speaking and debate skills. Cicero supported the idea of Rome remaining a republic and was voted as consul for one year in 63 BCE. But Cicero is best known for his writings. He wrote many letters in his lifetime and over 900 of these letters survived. This means that they were copied down and kept, instead of lost over time as many other written works were. However, Cicero was unable to prevent the dictatorship of Julius Caesar, and he was captured and killed after he insulted Augustus.

His head and hands were cut off and Augustus put them on display in the forum.

Cicero wrote discussions on all sorts of topics that interested him, from the nature of government to the best way to speak publicly. Cicero's writings, like archaeological evidence, provide historians with important information about what values and lives of people in ancient Rome.



↑ Source 7.10.7 A statue of Cicero wearing a toga.
What does his clothing show about his social status?

Licence [free choice] is wont to prevail when there is too little to fear, as in a calm voyage, or a trifling disease. But as we observe the voyager and invalid implore the aid of some competent director, as soon as the sea grows stormy and the disease alarming, so our nation in peace and security . . . insults its leaders, but in war obeys them as strictly as kings . . . And in the most serious wars, our countrymen have even chosen the entire command to be deposited in the hands of some single chief, without a colleague.

↑ Source 7.10.8 Cicero, 'On the Republic', c.54–51 BCE, from Oliver J Thatcher, ed., *The Library of Original Sources*, Vol. III: *The Roman World*, p. 241

[To govern a province,] all that a governor has to do is to show consistency and firmness enough, not only to resist favouritism, but even the suspicion of it. To this also must be added courtesy in listening to pleaders, consideration in pronouncing a decision, and painstaking efforts to convince [people who complain] of its justice, and to answer their arguments.

↑ Source 7.10.9 Cicero, Letter about his experience as governor of Asia, 61–59 BCE, from E Shuckburgh, *The Letters of Cicero; the whole extant correspondence in chronological order*, George Bell: London, 1908–1909



Go online to access the interactive lesson review and more!

Lesson 7.10 Review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



7.10 Review questions

- 1 **Identify** how long archaeological research has been happening at Pompeii.
- 2 **Explain** how 'rescue archaeology' is different from the work at Pompeii.
- 3 If you were an archaeologist, **explain** which tools you would use and in what order, to uncover artefacts.
- 4 **Analyse** how archaeologists need written sources to complete their research.

End of investigation review: How did ancient Rome change Europe and the Mediterranean world?



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorcher timed competitive quiz.

Brain dump



What have you learnt about ancient Rome? For this activity, copy the diagram and fill out by explaining your understanding. Aim for two points per topic.

Topic	What I have learned
The origin of Roman civilisation	
Roman social groups	
Daily life	
Social changes	
Beliefs and values	
Contacts and conflicts	
Julius Caesar	

Making thinking visible



This exercise in visible thinking asks you to track the difference between what you knew about Rome before, and what new understandings you have acquired since reading this chapter.

Using the stem sentences here, write a paragraph explaining what you previously knew about the topic. Then write another paragraph explaining what you now understand about the topic.

- 1 I used to think that Rome was ...
- 2 Now I think that Rome was ...
- 3 I used to think that archaeologists ...
- 4 Now I think that archaeologists ...
- 5 A simple explanation for why Rome was significant is ...
- 6 A better explanation for why Rome was significant is ...

Practice questions



- 1 **Identify** the difference between the way Rome was ruled during the Roman Republic and the Roman Empire.
- 2 **Explain** the causes and consequences of key events in Roman history, by matching the cause on the left with its correct consequence on the right:

Causes	Consequences
Rome became a republic	More people were linked by roads and accessed water through aqueducts
Rome conquered rich territories	Roman gods and goddesses were based on Greek ones
Rome became an empire	Rome was ruled by two consuls who shared power
Roman engineering spread	Rome was ruled by a single emperor
Romans were interested in Greek culture	The Roman Empire was split and then collapsed
The Roman military was highly organised	Slaves and riches were brought back to Rome
Goths and other enemies invaded Rome	Rome conquered and governed many lands

- 3 **Apply** your understanding of causes and consequences by selecting two pairs of causes and consequences from the table above that you have found the most interesting to learn about, and **explain** why you chose them.
- 4 **Analyse** Source 7.11.1 as a historical source, using the questions below.
 - a When was the artefact from?
 - b Who would have bought the item?
 - c What does the artefact show us about people's values at the time?



↑ Source 7.11.1 A terracotta oil lamp in the shape of a gladiator's helmet, bought by a spectator at the Colosseum, first–second century CE.

- 5 **Evaluate** the impact of Julius Caesar, or another significant individual from ancient Rome. How did they affect the way that Rome was organised, and why are they remembered by historians?
- 6 Create a speech about the significance of Rome: imagine you have been asked to give a speech to the Australian Senate in Canberra, to explain to the elected men and women how ancient Rome influenced modern societies like ours. You should:
- **Explain** which key values of ancient Rome are valued in our society.
 - **Describe** Roman engineering ideas that continue to be used today.
 - **Explain** where the idea of a 'senate' came from and what it was like in Rome.
 - **Evaluate** whether ancient Rome or modern Australia is a fairer society.

Response to chapter inquiry question: How did ancient Rome change Europe and the Mediterranean world?



Write a paragraph in response to the question using all the key terms listed:

- empire
- frontier
- navy
- centurion
- citizens
- artefacts
- archaeologists.



↑ Source 7.11.2 There are many statues of Julius Caesar on display around the world. *What might this say about his impact?*



Image: A woman stands next to a cart loaded with jerry cans after collecting water from a water point as residents queue in the Galabadja district of Bangui, on March 14, 2025. Water problems are common each dry season in Bangui, the capital of the Central African Republic, a situation recently exacerbated by a major electricity outage. Development has been hindered not only by years of civil war but also by governance failures. From February to May, wells dry up, prompting a rush to private water points with manual or mechanized pumps until the rains return.



Part 2

Geography



FPO

Watch the video for an introduction to Geography in Year 7 and the geographical skills and concepts you will be working with.

INVESTIGATION 1

Water in the world

OVERVIEW

Water in the world illustrates the ways in which the environment supports, influences and enriches human life. Students examine water as a renewable environmental resource, its spatial distribution in Australia, how it is used and valued, and how societies attempt to manage its scarcity. The sub-strand concludes with a study of an atmospheric or hydrological hazard.

Source: VCAA, Victorian Curriculum V2.0, 'Geography', 'Band description – Levels 7 and 8'

CURRICULUM GOALS

- Is the use of water in Australia sustainable?

Source: VCAA, Victorian Curriculum V2.0, 'Geography', 'Band description – Levels 7 and 8'

CHAPTER 8

How important is water as a resource?



LESSON TITLE

- 8.1 Setting the scene: A city that ran out of water
 - 8.2 How is water classified as a resource?
 - 8.3 In what forms does water exist?
 - 8.4 How does water connect and change places?
 - 8.5 How is water used around the world?
 - 8.6 What is water scarcity?
 - 8.7 Case study: How is water scarcity managed in the United Arab Emirates?
 - 8.8 What is the distribution of water resources in Australia?
 - 8.9 Case study: Is water managed sustainably in the Murray-Darling Basin?
 - 8.10 What is the value of water for different people?
 - 8.11 Case study: How does water sustain life and culture for First Nations people?
 - 8.12 Fieldwork: Exploring the significance of a local water resource
-



Setting the scene: A city that ran out of water

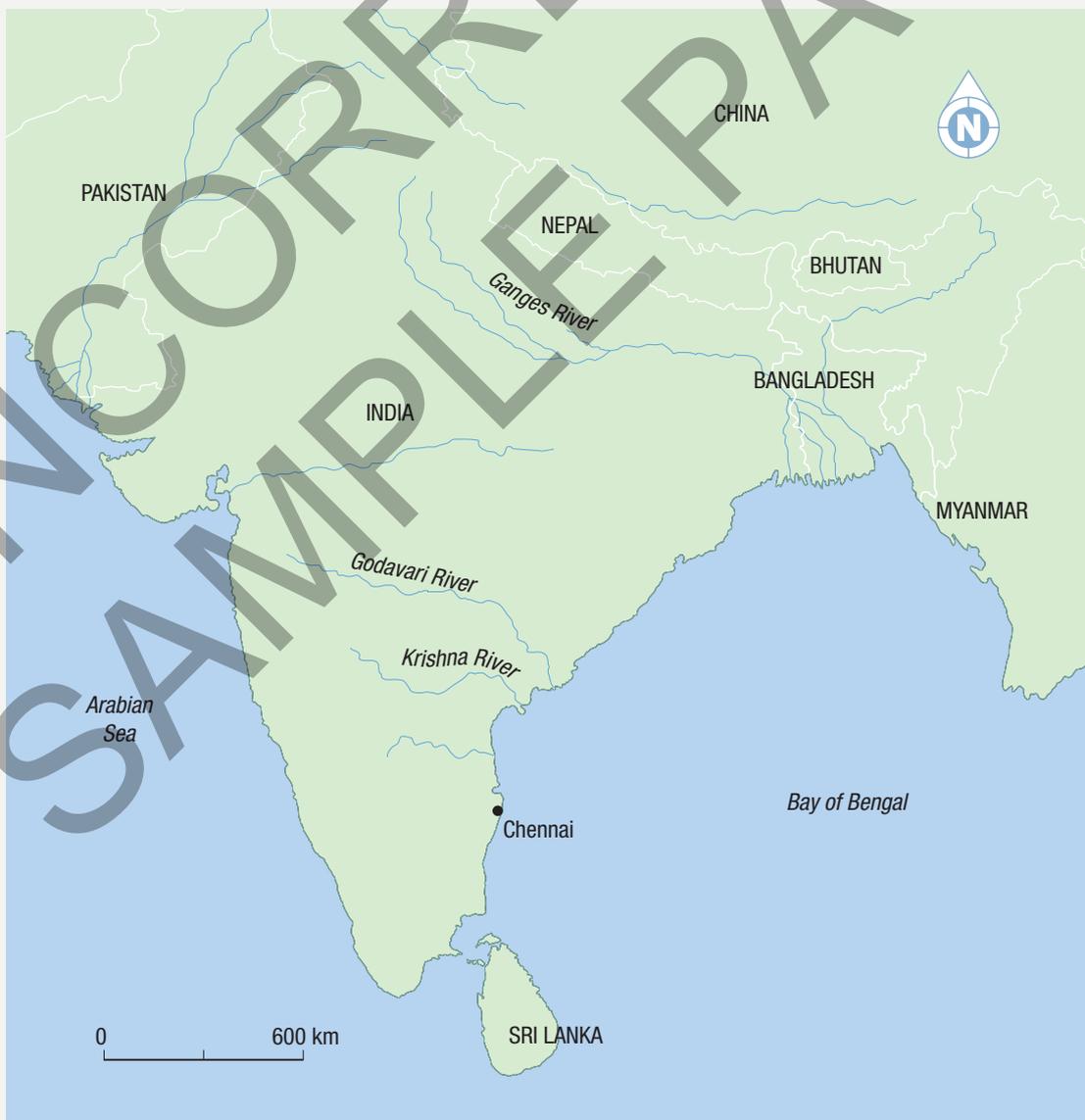


Learning intention

This lesson introduces the importance of water as a resource and the causes and consequences of water scarcity.

Chennai is gaining notoriety as the disaster capital of the world – floods one year, cyclone the next and drought the year after.

Nityanand Jayaraman, BBC



↑ Figure 8.1.1
Chennai is located
on the southeast
coast of India.

With a population of over 12 million people, Chennai is the fifth-largest city in India. Between 1980 and 2010, the city experienced rapid growth. Almost 400 square kilometres of buildings were constructed in areas that were once **wetlands**. This completely changed the flow of water through the landscape as less water was able to **infiltrate** into the **groundwater** supplies. As the city continued to expand, pollution from various industries and coal power stations led to the **degradation** of many of the remaining wetlands and rivers. Meanwhile, Chennai's population grew considerably, increasing the demand for water resources.

In June 2019, after extended periods of low rainfall, soaring temperatures

and poor water management, Chennai reached 'day zero' and ran out of water. As reservoirs emptied, the Indian government began trucking water tankers into the city. Millions of residents waited in line for hours each day to fill buckets to take home to their families. As the crisis worsened, businesses and schools were forced to close and hospitals had to turn patients away. Residents struggled to maintain basic levels of hygiene as they were unable to wash their clothes, dishes, or even themselves. While the wealthy were able to pay extraordinary prices for water from private tankers, the poor living in slums were less fortunate. Many left, seeking refuge in nearby cities.

wetlands an environment featuring land that is either permanently or seasonally covered with water
infiltration the process of water moving from the surface and soaking into the soil and rock layers below
groundwater water that is located below the Earth's surface that has soaked into soil and rocks
degradation the reduction in the quality and health of a natural environment due to natural processes or human activities



↑ Figure 8.1.2 Puzhal Reservoir is one of the four major reservoirs in Chennai. This satellite imagery from NASA shows that it dried up completely between May 2018 (left) and June 2019 (right).

→Figure 8.1.3 People living in Chennai's dense urban settlements lined up for hours to collect their daily water from tankers.



Relief finally arrived in late 2019 when heavy rain filled Chennai's reservoirs and ended the water crisis. However, Chennai is still extremely vulnerable to future water shortages. To ensure Chennai's water management is sustainable, and to prevent future disasters, experts have recommended that Chennai future proof its water supply by:

- increasing the amount of rainwater that is harvested from the roofs of buildings
- constructing a pipeline that allows water to be transported from nearby regions
- restoring and conserving its rivers, lakes and wetlands
- building multiple desalination and wastewater treatment plants.

On a national scale, India needs to ensure it manages its water resources sustainably throughout the entire country. Twenty-one cities, including Bangalore, Hyderabad and Delhi, are all facing similar risks of running out of groundwater which could affect as many as 600 million people!

This chapter begins with an exploration of the importance of water as a resource, the ways in which it can be classified and the role it plays within environments. It covers issues such as water scarcity, the most sustainable way to manage water, and the economic and cultural value of water within societies.



Go online to access the interactive lesson review and more!

Lesson 8.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



8.1 Review questions

- 1 **Describe** how the construction and expansion of Chennai reduced the availability of water resources.
- 2 **Recall** the reasons that Chennai ran out of water in June 2019.
- 3 **Recall** the expert recommendations for how Chennai could future proof its water supply.

How is water classified as a resource?



Learning intention

In this lesson you will be introduced the concept of an environmental resource and learn about the ways in which water can be classified as a resource.

Lesson starter



Complete the following activity to kick-start this lesson.

What makes you say that?

Brainstorm answers to the following questions with a partner.

- 1 **Identify** the primary use for coal as a resource?
- 2 Would you **describe** coal as a renewable or non-renewable resource? What makes you say that?
- 3 **Outline** the positives and negatives of harvesting and using a resource like coal? Suggest alternatives resources.

↓ Figure 8.2.1 Coal is an example of a fossil fuel that is harvested in Australia to be used as a resource.



Environmental resources

environmental resources resources that are from the natural environment, such as water and wood

environment the living and non-living components within and surrounding a place

renewable resources resources that can be produced as quickly as they are used

infinite resources resources that will never run out

Resources are used by people to satisfy a need. Satisfying needs includes producing food, constructing a building, generating electricity or earning money.

Environmental resources are those that are found naturally in the Earth's **environment**. They include light, wind, heat, trees, rocks, minerals and water.

Classifying resources

A common way to classify environmental resources is based on whether they are renewable. **Renewable resources** are those that can naturally replenish themselves at a rate that is faster than

people use them. Table 8.2.1 describes three examples of renewable resources. Solar and wind energy are resources that will never run out, also known as **infinite resources**.

Amazing but true...

Scientists predict that the Sun will last for another 6.5 billion years. Although this is not technically infinite, it is longer than the Earth has existed!

Table 8.2.1 Examples of renewable resources

Source	Explanation	Collection
Solar energy	Solar energy is used to generate electricity using solar panels such as large-scale solar panel projects. Solar energy is also essential in the growth of plants. Solar energy is renewable since it is infinite and the supply does not reduce when it is used.	
Wind energy	Wind can be used to generate electricity using wind turbines. The wind spins each turbine like a fan. This then turns a generator, which creates electricity. An average onshore wind turbine can generate enough power to supply 1500 households with electricity. Although it does not always flow rapidly, the supply of wind does not reduce as it is used, meaning its supply is renewable.	
Trees	Wood from trees is used for a variety of purposes, such as construction and paper production. Wood can be considered a renewable resource if the rate at which it is harvested is slower than the rate at which new trees are growing. Allowing forests to regenerate so that they can be logged again in the future is an example of sustainable resource management.	

harvest to pick and collect a resource such as crops, or to collect plants, animals, or fish to eat

regenerate managing a forest so that it grows back following a disturbance such as logging

sustainability the use of natural resources in a way that does not reduce the supply for future generations

Non-renewable resources are those that cannot be replaced once they are used. A **fossil fuel** such as coal is a common example. Fossil fuels are produced from buried deposits, which are formed from layers of decayed plants and animals (fossils). Over millions of years, the layers of organic remains have been exposed to intense heat and high pressures turning them into fossil fuels. Since non-renewable resources are not replaced, their supply is limited and they could eventually run out. These types of resources are known as **finite resources**.

Amazing but true...

It will take 300 million years for new coal to form from current dead plant material!

Classifying water as a resource

Water is considered an environmental resource because it is part of the natural environment. It has a wide variety of uses. These include:

- *Domestic* – used in the home for flushing toilets, showers, drinking, cooking and cleaning

- *Agriculture* – used to grow crops and raise animals and farm fish
- *Industry* – used to manufacture and transport products
- *Environment* – used to maintain the health of natural and human environments such as river systems
- *Recreation* – used in community swimming pools, and to maintain parks, ovals and golf courses.

The water cycle

Water is constantly moving through landscapes by the processes that make up the water cycle (see Figure 8.2.2). Solar energy heats the water in rivers and lakes and turns it into water vapour, a process known as **evaporation**. Similarly, water in plants undergoes **transpiration** as water is lost from the leaves. As water cools in the atmosphere, clouds form and the water condenses. From this **condensation**, water droplets and ice crystals form. When clouds grow large enough, the water falls as **precipitation**, such as rain and snowfall. When this falls on the land, some of the water absorbs into the soil and is added to the groundwater supply.

non-renewable resources resources existing in limited quantities that cannot be replaced after they have all been used

fossil fuels resources that were formed underground from plant and animal remains millions of years ago; examples include gas, coal and oil

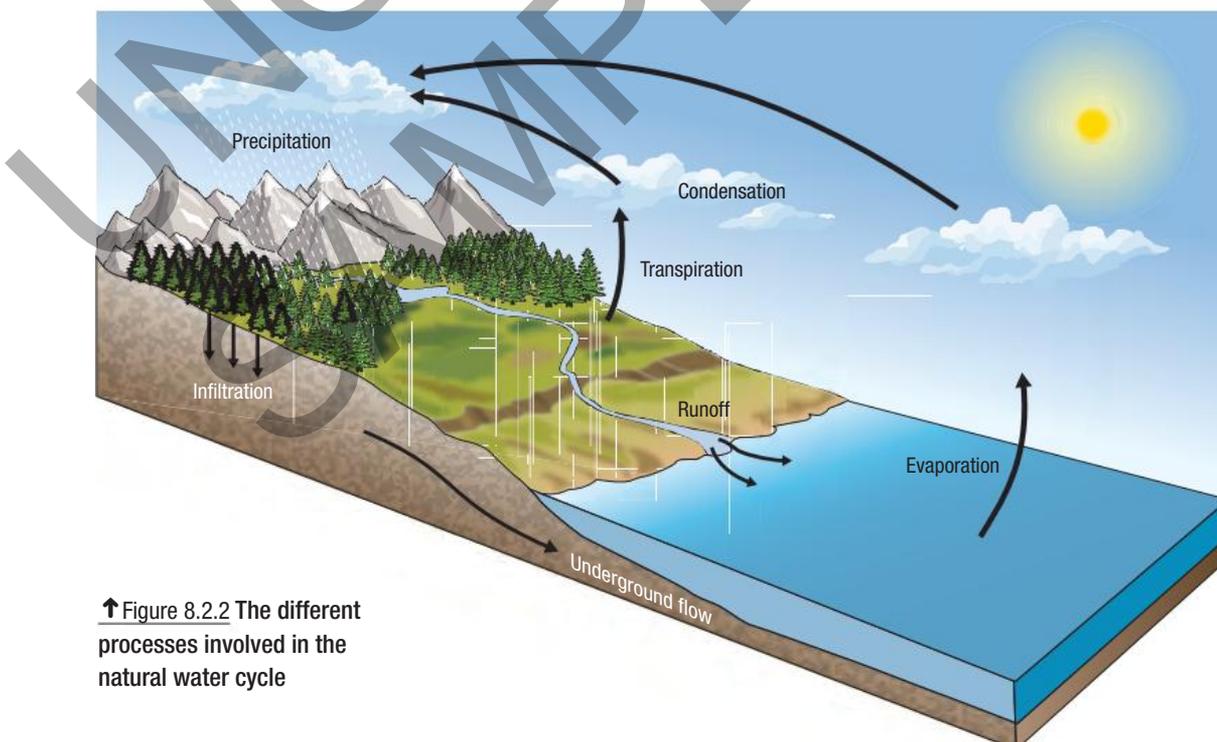
finite resources resources that have a limited supply

evaporation the process of a liquid changing to a gas, especially by heating

transpiration the process of losing water through the surface or skin of a body or a plant

condensation the process by which water vapour in the atmosphere cools and changes into liquid water

precipitation water that falls from the clouds towards the ground, especially as rain or snow



↑ Figure 8.2.2 The different processes involved in the natural water cycle

runoff water that is not absorbed by the land and flows from high areas to low areas

Water that infiltrates into the soil eventually flows underground into rivers, lakes, or to the coast. Water that does not infiltrate into the soil flows over the land and into rivers. This is known as **runoff**. This water eventually makes its way into river systems and flows back out into the ocean where the cycle repeats itself.

Despite constantly changing between a solid, liquid and gas through the water

cycle, the total amount of water on Earth never changes. This means that the overall supply of water is finite. However, in areas that receive high and regular amounts of rainfall, the resource can certainly seem infinite since the supply is constantly renewed. In other places, supplies are constantly monitored and the use might need to be restricted if the finite supplies run low.

Concepts and skills builder 8.2



Classifying resources

Geographers classify different components of the world around them in order to better understand different environments. Classifying involves grouping things based on their characteristics. Based on what you have learned about the different classifications of environment resources, classify the following based on whether they are renewable and whether their supply is finite or infinite. In each case, write a sentence **justifying** your choice.

- Native animals hunted as a food source
- Saltwater from the ocean that is converted into fresh water
- A forest that is used to harvest individual trees and then left to grow back
- A forest where all the trees are harvested so that the land can be turned into a farm.

You may wish to use the table template shown here to help set out your classifications.

Resource	Renewable or non-renewable	Finite or infinite	Justification

Geographical concepts and skills: environment



Go online to access the interactive lesson review and more!

Lesson 8.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



8.2 Review questions

- 1 **Describe** the difference between a renewable and non-renewable resource. Provide examples in your explanation.
- 2 **Explain** why an environmental resource such as timber might run out even though it is a renewable resource.
- 3 **Summarise**, in a series of dot points, the changes water goes through as it moves through the water cycle.
- 4 **Justify** why water can be classified as both finite and infinite depending on different circumstances.

In what forms does water exist?



Learning intention

In the previous lesson, we learnt about how water can be classified as a resource. In this lesson, we will take a closer look at some of the forms in which water exists in our environment.

Lesson starter



Complete the following activity to kick-start this lesson.

Thinking about drinking water

Figure 8.3.1 shows a wastewater treatment plant in which wastewater, such as sewage, is filtered and purified to specific levels of quality. This recycled water can be used to water crops, flush toilets and even as drinking water if it is treated to the highest quality. Many places in Australia, such as Perth, are currently investigating the possibility of adding recycled water to their water supply while some parts of Australia are already using water that contains recycled water.

- 1 Would you be comfortable drinking water that contains recycled water? **Justify** your opinion.
- 2 **Investigate** the benefits and risks of using recycled water as part of water supplies. Based on this research, has your opinion changed?

↓ Figure 8.3.1 The wastewater treatment plant in California's Orange County recycled enough water to supply 1 000 000 people.



How much water is there on Earth?

freshwater water with less than 0.5 per cent of dissolved salts

glaciers large masses of ice that move slowly; they are frozen rivers of ice that form when snow accumulates and is compacted

ice caps a thick layer of ice that permanently covers an area of land

surface water water available on the surface of the Earth in rivers and lakes

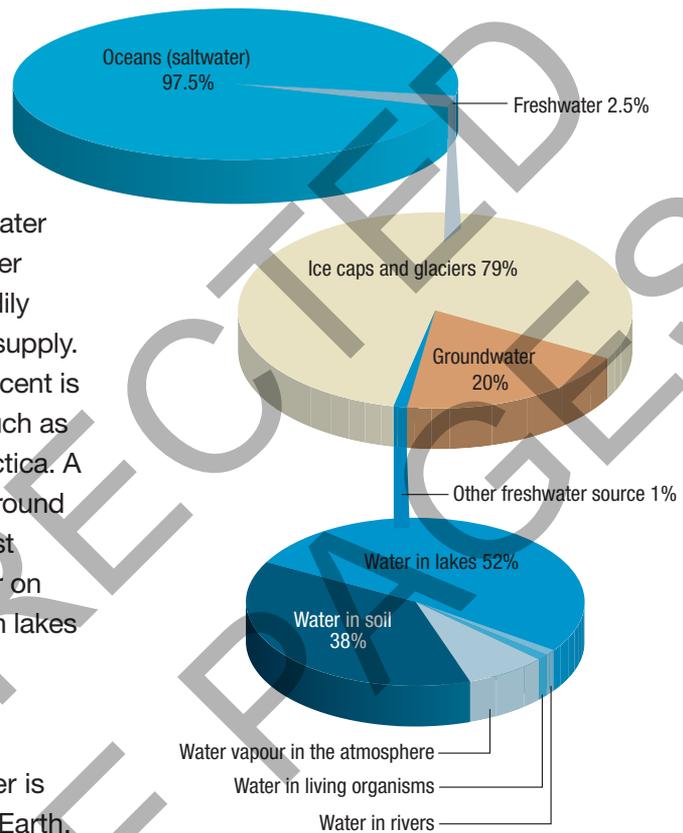
perennial something that happens repeatedly or all the time

Water is one of the most abundant resources on Earth. In fact, it is estimated that the Earth contains 1260 quintillion litres. That's 1 260 000 000 000 000 000 000 litres! Approximately 97.5 per cent of this water is saltwater found in oceans, which cover 71 per cent of the Earth's surface. This leaves 2.5 per cent as **freshwater**. Although freshwater is a small percentage of the total water on Earth, if this 2.5 per cent was readily available then it would be a plentiful supply. However, of this 2.5 per cent, 79 per cent is frozen in **glaciers** and **ice sheets**, such as those covering Greenland and Antarctica. A further 20 per cent is located underground in the groundwater supply. In fact, just over 0.5 per cent of all the freshwater on Earth is available as **surface water** in lakes and rivers.

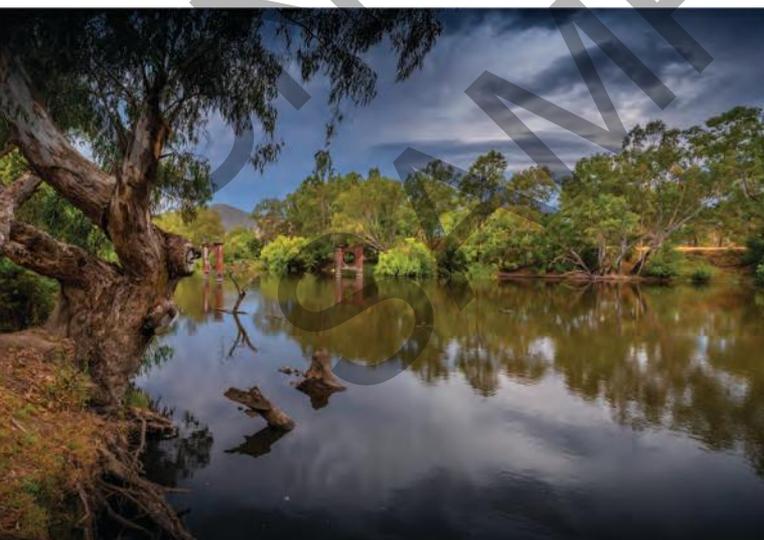
Surface water

As the name suggests, surface water is water located on the surface of the Earth. This includes rivers, lakes and wetlands, such as swamps. Most major cities are built near a reliable supply of surface water because it is easy and cheap to

↓ **Figure 8.3.2** Although the Earth contains a very large amount of water, only a very small percentage is available as freshwater and an even smaller amount is available as surface water.



access. In some cases, surface water resources are **perennial**, which means that they are permanent.



↑ **Figure 8.3.3** The Glenelg River is a perennial river in Victoria.



↑ **Figure 8.3.4** This dry river bed in the Flinders Ranges, South Australia, is an example of an ephemeral resource.

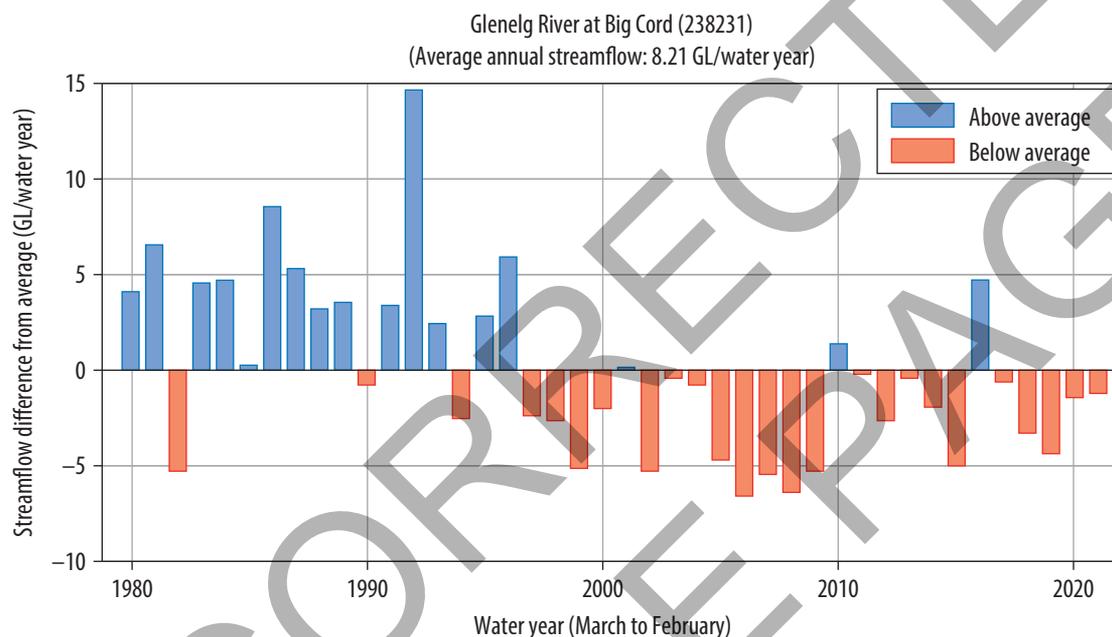
Perennial resources are lakes that always contain water and rivers that flow all year round, such as the Glenelg River in Victoria (Figure 8.3.3). Although the Glenelg River is permanently flowing, the amount of flow varies each year (see Figure 8.3.5). In drier areas, surface-water

resources are often **ephemeral**, which means they are semi-permanent. Ephemeral resources dry up during seasons with low rainfall. This is a common occurrence in many **arid** places in Australia, such as the Flinders Ranges in South Australia (Figure 8.3.4).

ephemeral
something that happens only for a short time
arid
very dry, often without rainfall to support plants

Concepts and skills builder 8.3

Interpreting bar graphs



↑ Figure 8.3.5 The variation in the flow of the Glenelg River each water year compared to the long-term average between 1980 and 2021. A water year is a defined 12-month period chosen to reflect the natural rainfall season in a location.

Bar graphs use bars of different lengths to represent quantities. In Figure 8.3.5, each bar represents a different year, allowing us to **analyse** how the data is changing over time. In this example, blue bars represent years in which the Glenelg River has more gigalitres of flow than the long-term average of 8.21GL/year. Red bars are years when the flow is below average. The amount that the flow is above or below the average is determined by the length of the bar.

Refer to Figure 8.3.5.

- Name** the years in which the flow of the Glenelg River was the highest and lowest compared to the average.
- Use the values on the y-axis (vertical axis) to determine the streamflow difference from the average.
- Use the annual average of 8.21 GL/year and your answer to question 2 to **calculate** the actual streamflow in these years.
- Describe** the trend in streamflow from 1980 to 2021.
- Suggest** a reason for the trend described in question 4.

Geographical concepts and skills: change

porous something that has many small holes so liquid or air can pass through, especially slowly

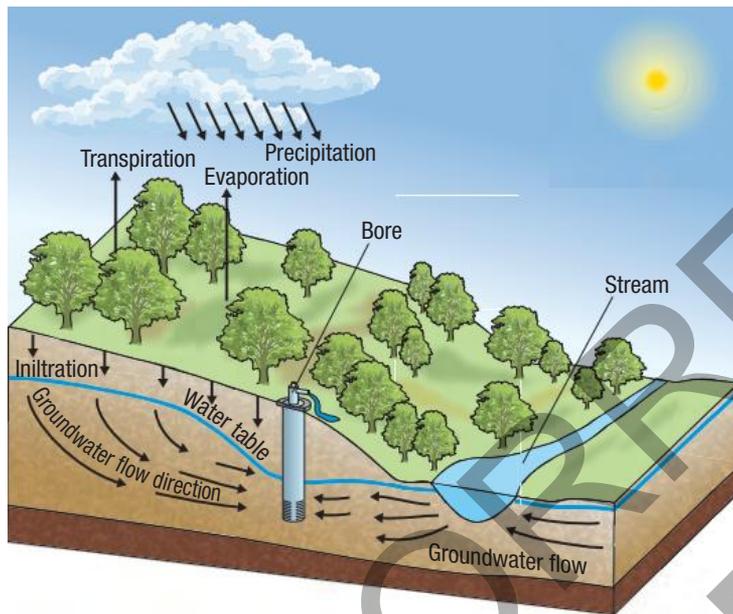
megalitre a metric unit of capacity equal to a million litres, symbol ML

bores holes drilled into the ground to access underground water resources

Groundwater

Water that is located below the Earth's surface is known as groundwater. It comes from rainfall that has infiltrated into the ground and has been absorbed by soil and **porous** rocks. The boundary between groundwater supplies and the drier soil above it is called the water table. Australia has a large system of groundwater basins, which stretch under about 60 per cent of

the continent. The Great Artesian Basin is the largest of these; it is estimated to hold around 65,000 **megalitres** of water. Many people living in dry areas are reliant on groundwater supplies, especially when rainfall is erratic or during extended periods of drought. During these periods, water is pumped to the surface using **bores**. Although groundwater supplies are finite, they are replenished during periods of high rainfall.



Potential water sources

Potential water resources are those that are not as easy to obtain. They include saltwater, ice, water vapour and wastewater. Accessing these resources require complex and expensive extracting and filtering technologies. Table 8.3.1 lists the positives and negatives of two potential water sources: desalination of saltwater and wastewater. As populations grow, many places are forced to use these types of resources to ensure their water supply is renewable.

← Figure 8.3.6 Groundwater comes from rainfall that infiltrates into the soil layer.

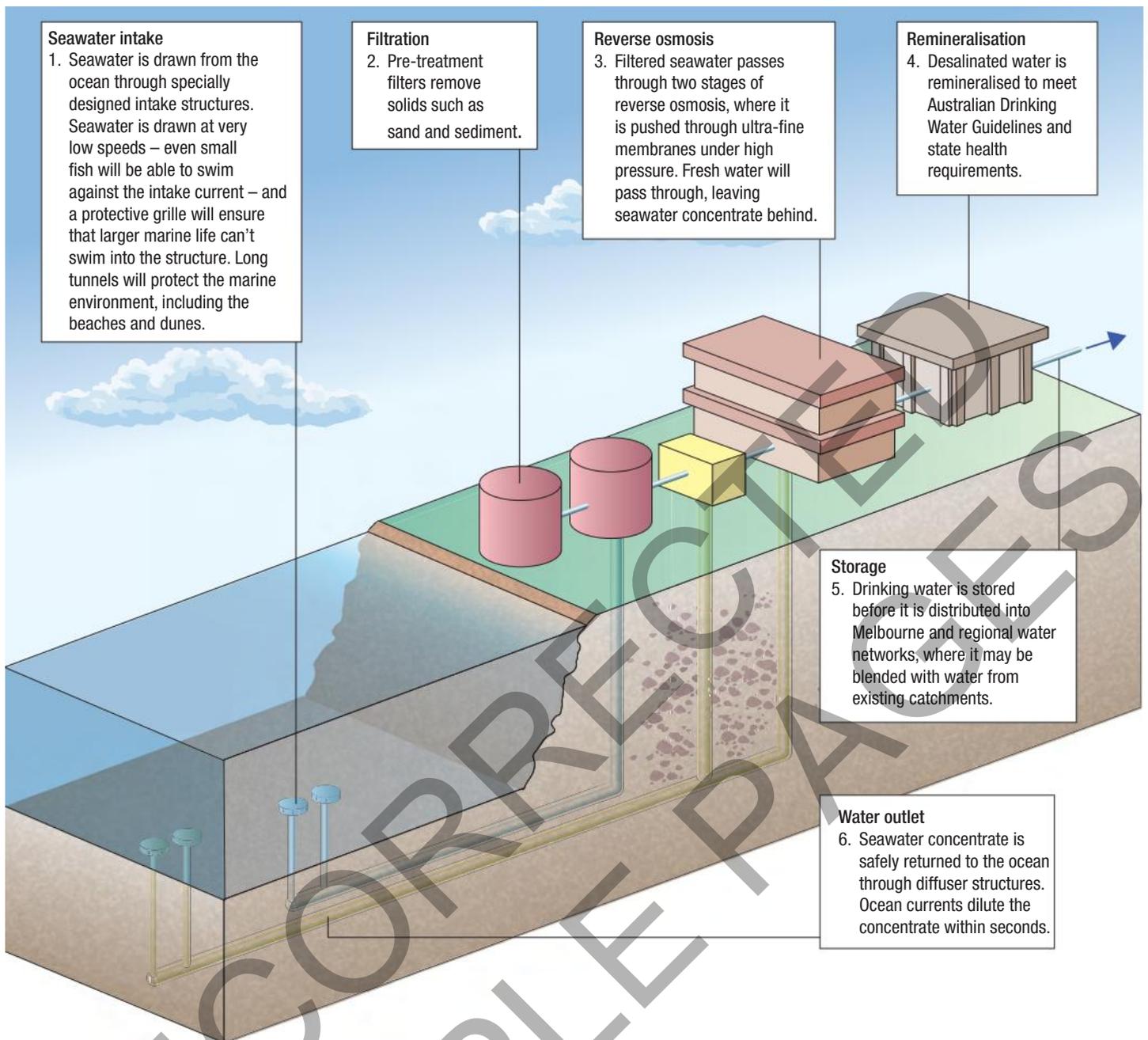
Table 8.3.1 The positives and negatives of potential water sources

Potential water resource	Description	Positives	Negatives
Desalination of saltwater	Desalination is the process of removing salt and other minerals from the water (see Figure 8.3.7). This can make water from the ocean safe for human consumption.	A very reliable and effectively limitless source of water for places near the coast.	Desalination plants are very expensive to build and maintain, and require large amounts of energy to run.
Wastewater	Water recycling involves re-using treated wastewater, such as sewage . Wastewater is transported to a treatment plant where it is filtered and purified (see Figure 8.3.1).	Recycled water can be used to water crops, flush toilets, replenish groundwater and even for drinking if treated correctly.	Many people are resistant to using wastewater because they assume it is unsafe. However, there have not yet been any cases of ill health due to the consumption of recycled water.

sewage waste matter such as human urine or solid waste

filtered the process of removing solids and impurities from water

purified the process of removing dirty or harmful substances from water



↑ Figure 8.3.7 The process involved in desalination to create drinkable water at Melbourne's desalination plant.

Lesson 8.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

8.3 Review questions

- 1 **State** how much of the water on the Earth is freshwater.
- 2 **Explain** why most of the freshwater on Earth cannot be easily used as a water resource.
- 3 **Describe** the difference between surface water, groundwater, seawater and wastewater as water resources.
- 4 **Suggest** a benefit and challenge in using the four types of water resources described in question 3.

How does water connect and change places?



Learning intention

In this lesson you will learn more about how water flows through different environments, the ways it connects them and the impacts this can have.

Lesson starter



Complete the following activity to kick-start this lesson.

Discussing the use of rivers for transport

Refer to Figure 8.4.1.

- 1 **List** some of the positive and negative impacts of the form of river transport shown. Consider impacts on people, the environment and the economy.
- 2 **Suggest** an alternative method of transport. What are the benefits and drawbacks of this alternative method?
- 3 Does Australia have rivers of a similar scale to the Mississippi River? **Suggest** a reason why or why not.

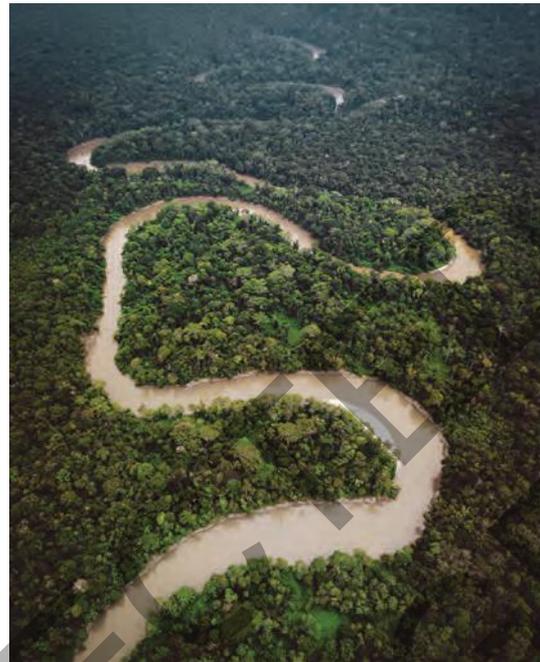
↓ Figure 8.4.1 Ocean-going tankers and bulk carriers transfer cargoes to river barges for transport along the Mississippi River, United States.



Water flowing through environments

When rain falls, it collects and drains into streams that flow downhill into larger streams, which eventually become large river channels. The area of land that collects rainfall is known as a **drainage basin**. The largest river drainage basins are the Amazon, Congo, Nile, Rio de la Plata and Mississippi. The Amazon Basin alone covers over 7 million square kilometres! Many major cities are built near rivers as they provide a reliable water source. In the past, rivers were heavily relied on for transport and for food supply (see Figure 8.4.1). Today, most large rivers are dammed, which limits their flow and enables water to be stored so that it can be used for agricultural, domestic and industrial purposes (see lesson 8.5).

As rivers flow downstream through environments, they provide important links between places. For example, Dandenong Creek in Melbourne's east begins as a small stream in the Dandenong Ranges in Olinda and flows south and south-west for 53 km until meeting the Eumemmerring Creek, which flows into the Patterson River. As it flows through the landscape, its surroundings change from



↑ Figure 8.4.2 The Amazon River in Brazil has the largest river basin in the world.

a forested environment through a series of wetlands towards Dandenong, which is a highly developed suburb with several industrial land uses. These locations are **interconnected**, as anything entering the stream such as stormwater or **pollutants** continue to travel through downstream environments affecting the quantity and quality of the water supply.

drainage basin
an area of land where precipitation collects and drains into a central point such as a river channel

interconnection
the relationship between places and people, and the ways in which they influence each other

pollutants
harmful substances such as industrial waste from factories or fertilisers and pesticides from farm use which get washed into waterways when it rains

↓ Figure 8.4.3 The Dandenong Creek in its upper reaches (left) in Olinda looks very different as it flows downstream through Dandenong (right).



tributaries rivers or streams that flow into a larger river or a lake

hydropower a form of renewable energy which uses the flow of moving water to generate electricity

nutrients any substance that plants or animals need in order to live and grow

On a much larger scale, the Mekong River is one of the largest rivers in the world and flows 4350 km through China, Myanmar, Thailand, Laos, Cambodia and Vietnam. Since the 1990s, the Mekong and its **tributaries** have been dammed throughout South-East Asia, largely for the generation of **hydropower**, and large volumes of water have been extracted for agriculture. These dams have blocked the movement of fish, reduced the amount of **nutrients** in the water, and have made water levels downstream irregular and unnatural. This is a challenge for Cambodia considering the fishing industry makes up 12 per cent of its economy. Furthermore, the water from the Mekong provides Cambodia with 85 per cent of its agricultural water supply. The damming of water in upstream countries also creates a hazard for Cambodia. During extreme weather events, dams can collapse, flooding downstream communities.



↑ Figure 8.4.4 Cambodia's fishing industry is in crisis as water levels in the Mekong River have hit record lows.

Water changing form

We learnt in the previous lesson that most of the freshwater available on Earth is frozen in glaciers and ice sheets. Glaciers are frozen rivers of ice that form when snow accumulates and is compacted, usually in high altitude mountainous regions such as northern Bhutan. In Bhutan, meltwater from these glaciers flows downstream into river



↑ Figure 8.4.5 A dam built in Laos in 2019 reduced the flow of the Mekong River in downstream regions, which impacted the lives of local villagers and destroyed the river's diverse ecosystems.



↑ Figure 8.4.6 In 2018, thousands of villagers in Cambodia were left stranded when a collapsed dam in Laos sent floodwaters hundreds of kilometres downstream.



↑ Figure 8.4.7 Northern Bhutan is dominated by tall mountains and glaciers that make up part of the Himalayas.

systems contributing 10–15 per cent of the total water in the country's river systems, the rest coming from precipitation. Villages downstream use the water for domestic and agricultural purposes. Agriculture is the main industry in Bhutan.



↑ Figure 8.4.8 Water from Bhutan's melting glaciers flows downstream into rivers.



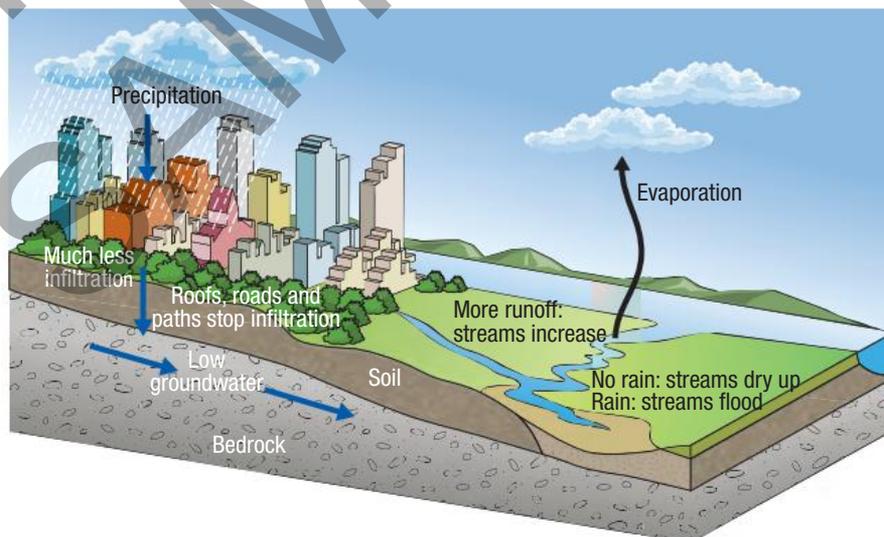
↑ Figure 8.4.9 Bhutan's rivers supply villages with water to use for agriculture.

The urban water cycle

The development of **urban** places changes natural environments into artificial environments. This typically involves the removal of trees and other vegetation, as well as the construction of houses, buildings, roads and footpaths. Although this development is necessary to house a growing population, it can completely transform the way water moves through an environment. In these human environments, rather than following the natural water cycle (see Figure 8.2.2), water follows the urban water cycle (see Figure 8.4.10).

In the natural water cycle, water infiltrates the soil and maintains groundwater supplies. In urban areas, there is far less exposed soil. The landscape in an urban environment is dominated by **hard surfaces** such as concrete through which water cannot penetrate. Therefore, much less water infiltrates into the soil and groundwater in an urban environment and far more flows as runoff. The runoff can lead to increases in flooding and in the amount of pollutants entering local rivers. This becomes serious when rubbish collects in stormwater drains and runoff channels, to be washed by heavy rainfall.

urban relating to towns and cities
hard surfaces human-made surfaces, such as concrete, which cover the natural ground and limit the amount of water that can infiltrate the soil to become groundwater



↑ Figure 8.4.10 The urban water cycle

Concepts and skills builder 8.4



Comparing cycles

Figures 8.2.2 and 8.4.10 represent two very different cycles involving the movement of water through a landscape. **Compare** these figures by answering the following questions:

- 1 What major differences are there between the movement of water in the natural and urban water cycles?
- 2 **List** the impacts the differences in the urban water cycle will have on an urban environment.
- 3 One way to reduce the impact of urban development on local waterways is to **construct** raingardens. Visit Melbourne Water's website and learn about the benefits of using raingardens to treat stormwater. **Investigate** whether a raingarden would be suitable to construct outside your home or school.

Geographical concepts and skills: environment, change



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Lesson 8.4 review

Online quiz



Review questions



Research task



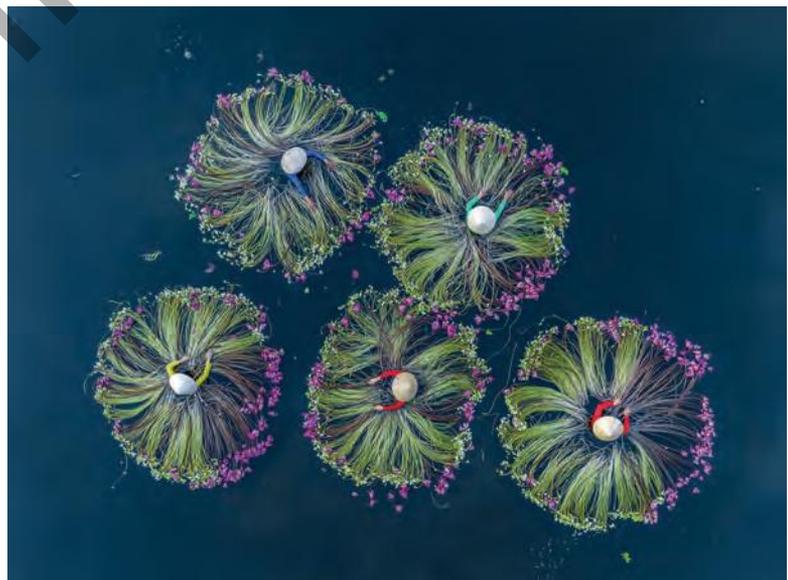
Teachers can assign tasks and track results



8.4 Review questions

- 1 Using Figure 8.4.3, **describe** the differences in the Dandenong Creek as it flows from Olinda through Dandenong.
- 2 **Explain** how the livelihoods of people who rely on the Mekong in Cambodia are being affected by the actions of people hundreds of kilometres away.
- 3 **Explain** the interconnection between villages in Bhutan and glaciers located high up in the mountains.
- 4 **Summarise** three ways in which water creates an interconnection between people, places and environments. Use examples from within this lesson or research your own.

→ Figure 8.4.11 Women harvesting water lillies in the Mekong River in Vietnam. The Mekong River flows into the sea in the Mekong Delta in southwestern Vietnam.



How is water used around the world?



Learning intention

In this lesson, we consider the three main uses for water and how this varies in different regions. We also look at how water resources are managed to ensure there is enough supply for these needs.

Lesson starter



Complete the following activity to kick-start this lesson.

Discussing the use of irrigation to grow crops

In areas without regular and reliable rainfall, crops are grown using water that is pumped from surface water supplies, such as rivers or from groundwater. This is known as irrigation.

- 1 What do you think is the cause of the green vegetation found within Jordan's desert shown in Figure 8.5.1?
- 2 **Suggest** one positive and one negative impact of using irrigation to grow crops in dry regions.
- 3 Undertake brief research to determine whether Australia uses irrigation to grow crops in dry regions. Based on what you have learnt, **justify** whether you think this sort of agriculture is appropriate in Australia.

↓ **Figure 8.5.1** Irrigation can allow crops to be grown in places that would otherwise be barren, as shown here in Jordan.



Water withdrawals

cubic kilometres a cubic kilometre is equal to a volume of $1000 \times 1000 \times 1000$ cubic metres; a cubic kilometre is also equal to a teralitre, which is exactly one trillion litres

flora the plants of a particular region

fauna the animals of a particular region

water withdrawals the total amount of water withdrawn from a surface water or groundwater source

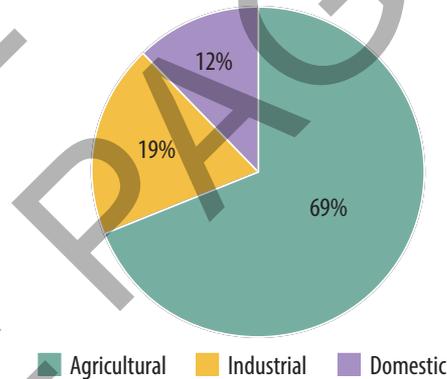
Approximately 110 000 **cubic kilometres** (km^3) of rain falls on land each year and a further 398 000 km^3 falls over the ocean. To get a sense of scale, the amount falling on land is the equivalent of 44 billion Olympic-sized swimming pools! Around 61 per cent of rainfall evaporates or transpires. This leaves 39 per cent, 43 000 km^3 , to fill rivers, lakes and groundwater. Some of this water is left in the environment to support local **flora** and **fauna**, and some is taken out by people to use as a resource, known as **water withdrawals**.

Water uses

Once water is withdrawn from the environment, most of it used for domestic, agricultural and industrial uses. Across the world, agriculture uses more water than both industrial and domestic uses combined (see Figure 8.5.2). While agriculture dominates the global use of water resources, Figure 8.5.3 shows that these proportions vary significantly in different continents.

Table 8.5.1 The three main types of water use.

Domestic	Water used in and around our homes including drinking, cooking, flushing toilets, showering and watering the garden.
Agricultural	Water used to grow our food including fruits, vegetables and grains. It also includes drinking water for farm animals such as cattle and sheep and a much larger amount of water used to grow their food.
Industrial	Water used by different industries for processes such as fabricating, washing, diluting, cooling, or transporting products



↑ Figure 8.5.2 The proportion of the world's water withdrawals that are used in the agricultural, industrial and domestic sectors



↑ Figure 8.5.3 The proportion of different water uses by continent compared to world usage

Concepts and skills builder 8.5



Interpreting percentage segmented bar graphs

In Concepts and skills builder 8.3 we interpreted bar graphs and compared the lengths of bars to **analyse** change over time. Figure 8.5.3 is a different type of bar graph called a percentage segmented bar graph. Each bar is split into segments and each segment represents a percentage. Together, these segments add up to 100 per cent. In Figure 8.5.3, each bar represents a continent and each segment represents the percentage of water used for agricultural, industrial and domestic uses. Remember this type of graph shows percentages not absolute values. Figure 8.5.3 tells you that in Europe 57 per cent of water is used by industry, compared to only 10 per cent in Asia. However the quantity of water used by industry in Asia is higher, since Asia uses nearly ten times as much water as Europe in total.

- 1 **State** which continent uses the highest percentage of water for agricultural, industrial and domestic uses.
- 2 **Discuss** whether there is a small or large variation between the water uses in the different continents. Consider which continents are similar and which are different. Refer to continents and percentages in your discussion.
- 3 **Suggest** a reason to **account for** your answer to question 2.

Geographical concepts and skills: represent and describe information and data

Quantifying water use

The amount of water used for domestic purposes is listed in Table 8.5.2. Factors that might affect the amount of water used in different households include the efficiency of appliances such as dishwashers and showerheads, the size of a garden and whether alternative sources of water are available, such as rainwater

tanks. In comparison, Table 8.5.3 lists the amount of water needed to grow 1 kg of a variety of foods. You might find it surprising that so much water is used to grow 1 kg of beef; however, you need to remember to take into account the water used to grow the grain and **pasture** needed for the cow over its lifetime.

pasture grass or similar plants suitable for animals, such as cows and sheep, to eat

Table 8.5.2 A list of common domestic water uses and the amount of water they consume.

Domestic water use	Water consumed (litres)
Toilet flush	12
Bath	100
Shower (10 minutes)	200
Dishwasher load	50
Washing machine load	150
Brushing teeth with tap running	5
Drinking, cooking and cleaning	10
Hand basin per use	5
Garden sprinkler per hour	1 000
Car washing with hose	200
Hosing driveway	100

Table 8.5.3 The amount of water needed to grow 1 kg of different types of food.

Food (1 kg)	Water use (litres)
Bread	1 608
Chocolate	17 196
Beef	15 415
Chicken	4 325
Rice	2 497
Apples	822
Cheese	3 178
Potatoes	287

Source: Riverina Water County Council website

irrigation the practice of supplying land with water so that crops and plants will grow

rural an area in the countryside that is not part of a large town or city

riverine ecosystems environments within and surrounding river channels

habitat the natural environment where an animal or plant usually lives

reservoir large lakes used to store large quantities of water

dams barriers that prevent the flow of water downstream

artificial made by people, often as a copy of something natural

hydroelectricity electricity produced by the force of fast-moving water below dams and in rivers

Managing water resources

Irrigation

Some of the foods listed in Table 8.5.3 are grown in regions with high rainfall in which water supplies are plentiful. In drier regions, irrigation is needed (see Figure 8.5.1). **Irrigation** is the artificial application of water to land for the purpose of agricultural production. In other words, the watering of crops on a farm using infrastructure such as sprinklers (see Figure 8.5.4). The water used for irrigation is taken from surface water resources, such as rivers, lakes and reservoirs, and groundwater supplies.

Although irrigation allows a wide range of high-quality crops to be grown, it comes at a cost. For example, irrigated farmland covers less than 1 per cent of Australia and provides 30 per cent of all our agricultural products, but accounts for 90 per cent of Australia's agricultural water usage. Irrigation can also reduce

the amount that is available in **rural** towns for their domestic or industrial needs.

Extracting water from river systems can also damage **riverine ecosystems** and wetland **habitats**.

Reservoirs and dams

Reservoirs and **dams** are used to ensure there are enough water resources to meet agricultural, domestic and industrial needs. Reservoirs are large natural or **artificial** lakes that are used to store a large quantity of water. In order to store water, the flow of rivers is stopped using a dam (see Figure 8.5.5). Dams are barriers that prevent the flow of water downstream through the use of a wall. Dams may have gates that can be opened to allow excess water to be released. By controlling the flow of rivers, dams can also be used to reduce flood and drought cycles downstream. Dams also create a water level height difference required to generate **hydroelectricity**.



↑ Figure 8.5.4 These large sprinkler systems are moving across a farm in Utah, United States.

Despite their usefulness, the construction of dams is not without consequences. Dams alter the natural flow of rivers and streams, which damages riverine ecosystems. For example, fish that need to migrate up and downstream

to feed and breed are unable to cross barriers. Altering a river's natural flow can also affect water temperature and water quality. This impacts on food networks, and the growth and reproduction of a variety of plants and animals.

Lesson 8.5 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results

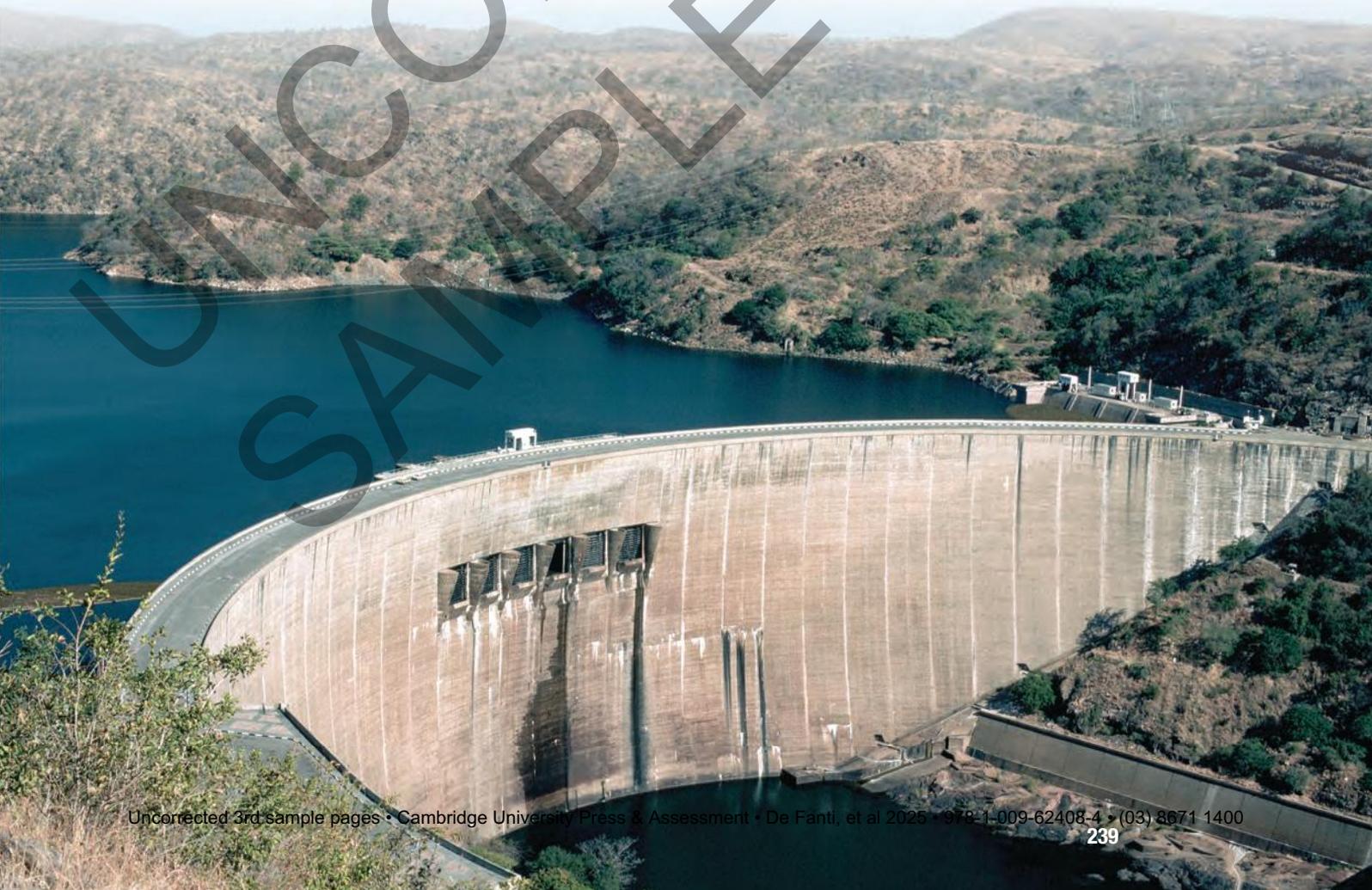


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8.5 Review questions

- 1 **Explain** the difference between agricultural and domestic water use and provide examples of each.
- 2 **State** whether most of the world's water withdrawals are used for agricultural, industrial or domestic uses.
- 3 Using the information from Table 8.5.2, **calculate** how many litres of water you would use for domestic purposes in one day.
- 4 Using the information provided, and your own research, **list** the positive and negative impacts of irrigation or dams. Consider environmental, social and economic impacts.

↓ Figure 8.5.5 The Kariba Dam on the border between Zambia and Zimbabwe is 128 metres tall and 579 metres long.



What is water scarcity?



Learning intention

So far we have learnt about why water is an important resource and how it is used. We will now learn about what happens when there is not enough water to meet the demands of people or the environment.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

Refer to Figure 8.6.1.

- 1 **See:** Consider the actions of the farmer and the surrounding landscape.
- 2 **Think:** Write down what you think might be the impacts of this situation. Consider short- and long-term impacts on people, the environment and the local economy.
- 3 **Wonder:** What do you wonder about this situation?

↓ [Figure 8.6.1](#) Droughts create challenges for farmers, who need to purchase feed from other regions to keep their animals alive.

FPO

The causes of water scarcity

Water scarcity is when there are insufficient water resources within a region to meet demands. In other words, the amount of water needed for agriculture, industries and domestic uses is greater than the amount of water available. This can be caused by:

- below-average rainfall, which means water supplies are not replenished
- population growth, which increases demand for water resources (see Figures 8.6.2 and 8.6.3)
- the growth of cities into surrounding landscapes that used to contain wetlands and river systems
- a lack of financial resources available to purchase water or construct water-management **infrastructure** such as desalination or water-recycling plants

- the unsustainable withdrawal of water resources for purposes such as irrigation.

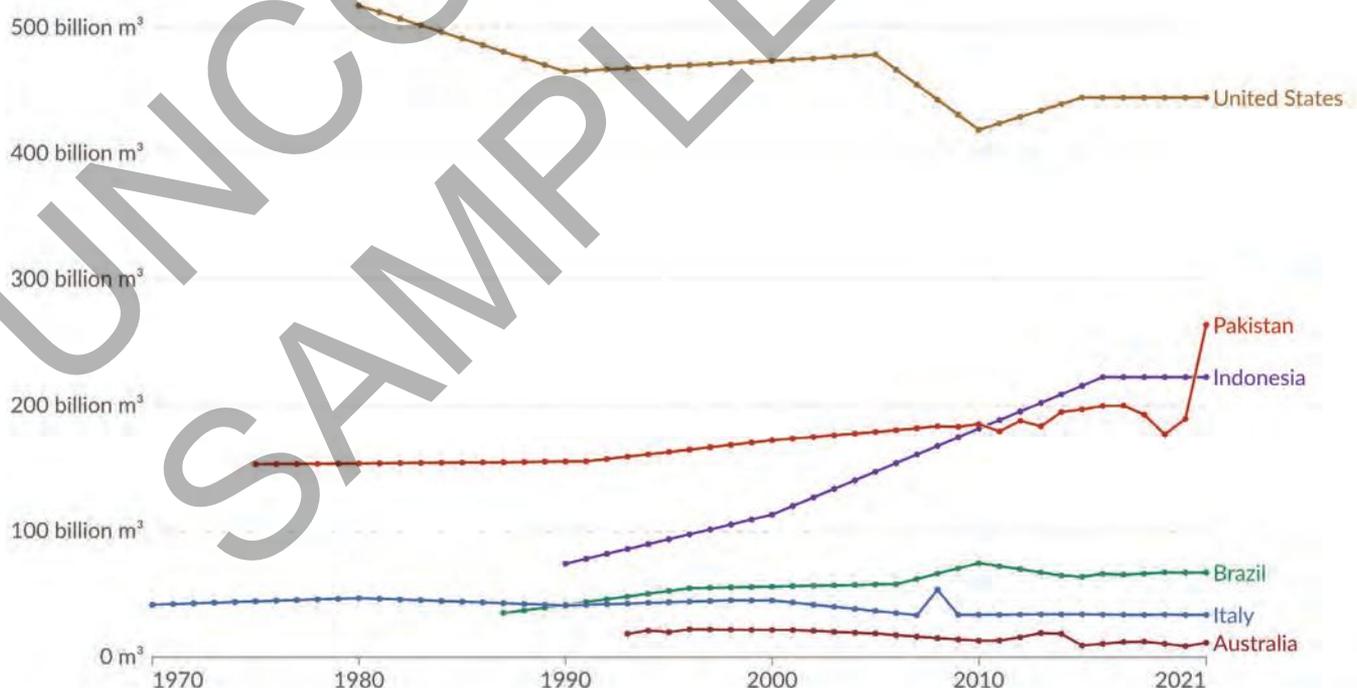
If water scarcity continues for an extended period, it can eventually lead to a water crisis in which supplies can eventually run out. In 2017 and 2018, Cape Town, South Africa, was facing a severe water crisis in which dam levels fell to just 10 per cent capacity. Strict water restrictions were put in place limiting residents to just 50 litres per day while water normally used for farming was diverted to cities. This enabled Cape Town to narrowly avoid 'day zero' which would have been a disaster for its five million residents.

water scarcity a lack of freshwater resources to meet the demands of water usage within a region

infrastructure the physical structures and facilities needed within a community such as roads, buildings and pipelines

Annual freshwater withdrawals

Annual freshwater withdrawals refer to total water withdrawals, not counting evaporation losses from storage basins, measured in cubic metres (m³) per year. Total water withdrawals are the sum of withdrawals for agriculture, industry and municipal (domestic uses). Withdrawals also include water from desalination plants in countries where they are a significant source.

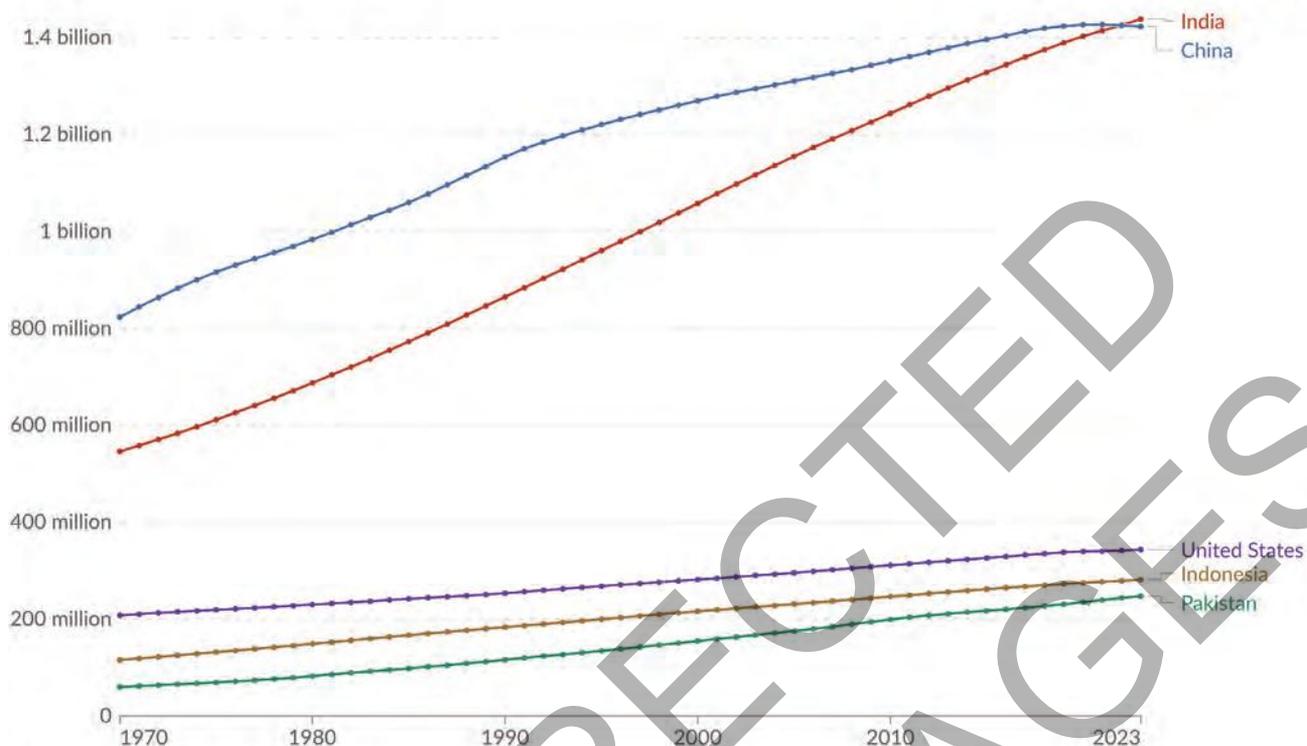


Data source: Food and Agriculture Organization of the United Nations (via World Bank) (2025) OurWorldinData.org/water-use-stress | CC BY

↑ Figure 8.6.2 The change in the amount of freshwater withdrawals in a selection of countries. [Source: Our World in Data]

Population, 1970 to 2023

Our World
in Data



Data source: UN, World Population Prospects (2024)

Note: Values as of 1 July of the indicated year.

CC BY

↑ Figure 8.6.3 The change in the population in a selection of countries from 1970 to 2023. [Source: Our World in Data]

Concepts and skills builder 8.6



Analysing line graphs

Line graphs use lines to connect individual data points to show the change in quantities over time. In Figures 8.6.2 and 8.6.3, each data point represents a year. In Figure 8.6.2, the data point relates to the total annual freshwater withdrawals in a year while in Figure 8.6.3 the data point relates to the total population in that year. Use the data from these two graphs to complete the following:

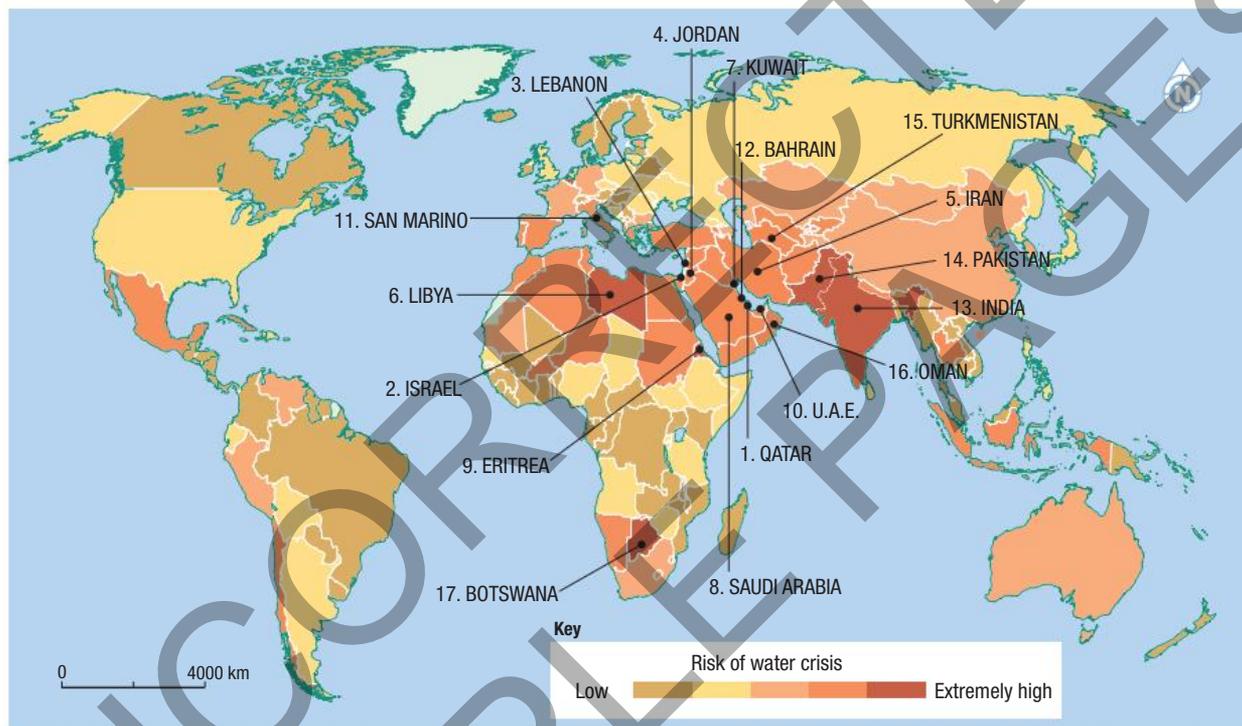
- 1 **Describe** the overall trend of water withdrawals for the six countries. **State** whether each country's water withdrawals have increased, decreased, or remained stable.
- 2 **Describe** the overall trend of population for the six countries. **State** whether their populations have increased, decreased, or remained stable.
- 3 Using your answers to questions 1 and 2, **discuss** whether population growth is likely to be a cause of increased demand for water withdrawals and therefore water scarcity. In your discussion, refer to specific countries and data from the graphs provided.

Geographical concepts and skills: change

The spatial distribution of water scarcity

Water scarcity affects people on every continent. The World Health Organization estimates that water scarcity affects over 40 per cent of the global population. Furthermore, they project that 700 million people may be forced to leave their homes as a result of severe water scarcity. As shown in Figure 8.6.4, countries in the Middle East and North Africa are facing the highest levels of

water scarcity. However, climate change is increasing the severity of dry periods while also raising temperatures, which increases evaporation and increases stress on surface water supplies. For example, during 2022, England, Portugal and France recorded record-breaking hot and dry conditions which are expected to become more common by 2050.



↑ Figure 8.6.4 The 17 countries labelled in this map are facing water scarcity and are at risk of having ongoing water crises.

Drought

Droughts are periods of below-average rainfall during which there is not enough water to meet the needs of people and the environment. These periods can last more than a decade, such as Australia's Millennium Drought from 1997 to 2009. In cities, droughts lead to water restrictions and can reduce domestic supplies, as occurred in Cape Town in 2018. In rural areas, droughts reduce agricultural water supplies. This can cause crops to fail and force farmers to sell or **cull** livestock if they are not able to purchase enough

feed to keep them alive. The economic hardship often leaves farmers feeling helpless, leading to depression and other mental-health issues. On a larger scale, countries in the Horn of Africa such as Ethiopia and Somalia have recently experienced their worst drought in over 40 years, causing severe hunger for over 18 million people.

Droughts can also damage natural environments. Low rainfall means less water is refilling rivers, lakes, wetlands and underground aquifers. Problems intensify when more water is withdrawn from these

drought a long period of water shortage, usually as a result of low rainfall

cull the selective slaughter of animals to reduce their population

systems to support nearby thirsty cities. As the volume of water flowing into these natural environments decreases, natural processes needed to maintain the health of these ecosystems, such as floods, are unable to occur.

The Macquarie Marshes in the western region of New South Wales is one of the largest remaining wetlands in Australia and is a habitat for mammals, birds,

amphibians, fish and invertebrates (Figure 8.6.5). During 2019, the Macquarie River, which transports water to the wetland, ran dry for the first time in over 50 years, turning the wetland's lush environment into a dry and dusty wasteland (Figure 8.6.6). Heavy rainfall in autumn 2020 helped the adaptable environment to recover and species such as frogs had once again returned the region by 2020.



↑ Figure 8.6.5 The Macquarie Marshes are a series of wetlands along the Macquarie River and a significant habitat for a range of species.



↑ Figure 8.6.6 During 2019, several years of drought conditions turned the Macquarie Marshes into a dust bowl.



Go online to access the interactive lesson review and more!

Lesson 8.6 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



8.6 Review questions

- 1 Rank the factors leading to water scarcity from the most significant to the least significant. Write a sentence **justifying** your ranking.
- 2 Using Figure 8.6.4, **list** three individual countries and one world region facing water scarcity.
- 3 **Outline** one example of environmental, economic, and social impact of drought.
- 4 Using Figures 8.6.5 and 8.6.6, **describe** the changes that occurred in the Macquarie Marshes wetland during the 2019 drought.

Case study: How is water scarcity managed in the United Arab Emirates?



Learning intention

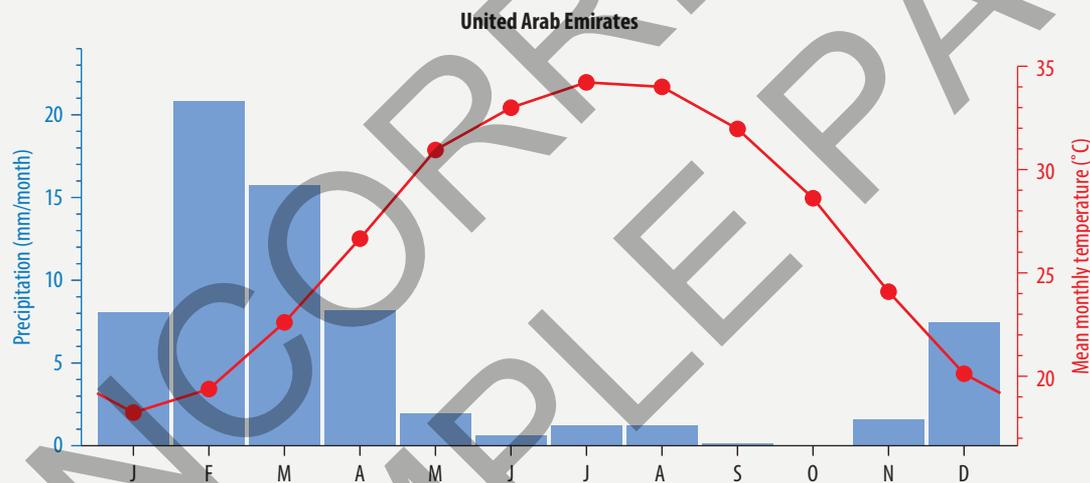
This lesson is a case study. A case study is when a specific concept is studied in detail in one relevant location. This case study focuses on the way the United Arab Emirates manages water to ensure its scarce supply is sustainable.

Lesson starter



Complete the following activity to kick-start this lesson.

Analysing water scarcity in different places



↑ Figure 8.7.1 A climate graph for the United Arab Emirates showing the monthly precipitation and mean monthly temperature

Figure 8.7.1 is a climate graph for the United Arab Emirates. The blue bars show the mean monthly amount of precipitation each month, measured in millimetres using the y-axis on the left side of the graph. The red dots and lines show the trend in average mean temperature each month, measured in degrees Celsius using the y-axis on the right of the graph.

- 1 **Describe** the climate of the United Arab Emirates based on monthly rainfall and mean monthly temperature.
- 2 Based on this information, **suggest** the degree to which you think this place is likely to face water scarcity.
- 3 Find a climate graph for your local region or city. How does its climate **compare** to the United Arab Emirates?

FPO

Figure 8.7.2
Geographical concepts and skills: climate graphs

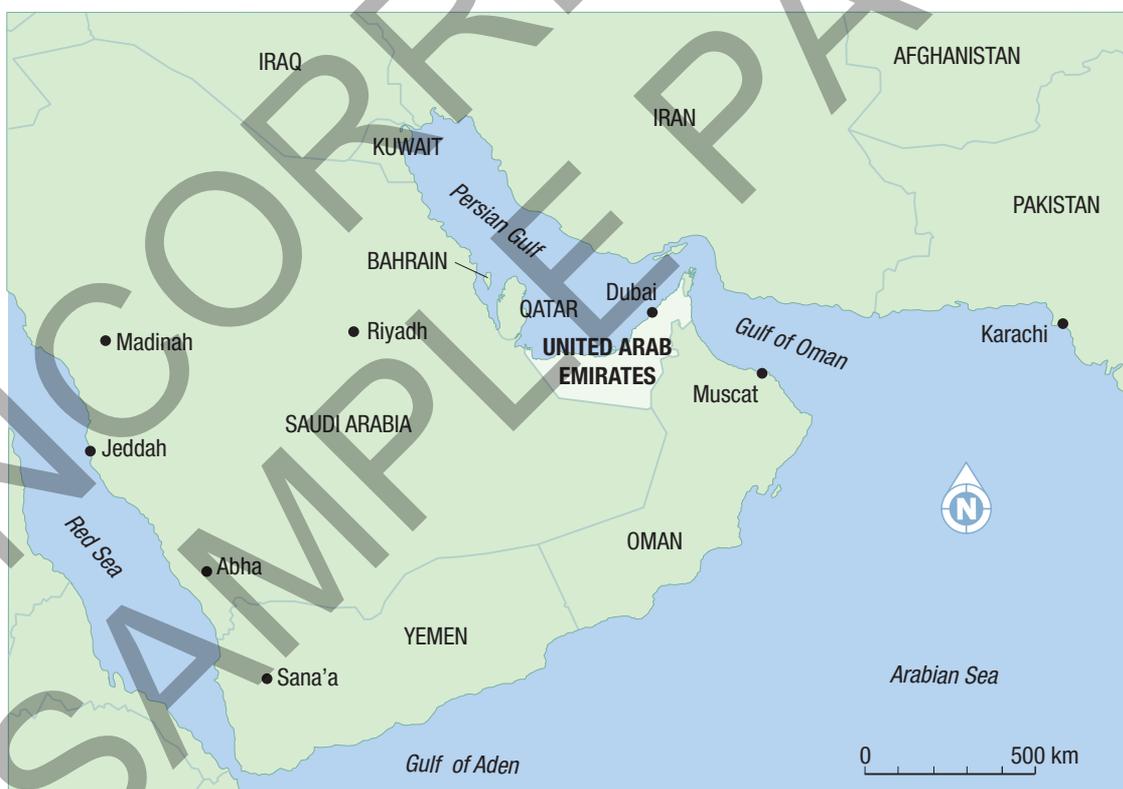


↑ Figure 8.7.3 Urban expansion in cities such as Dubai have increased the demand for water resources.

Geographic characteristics of the United Arab Emirates

The United Arab Emirates is a country located in the Middle East region along the eastern coast of the Arabian Peninsula. It borders Oman to the east, Saudi Arabia to the south and west, and

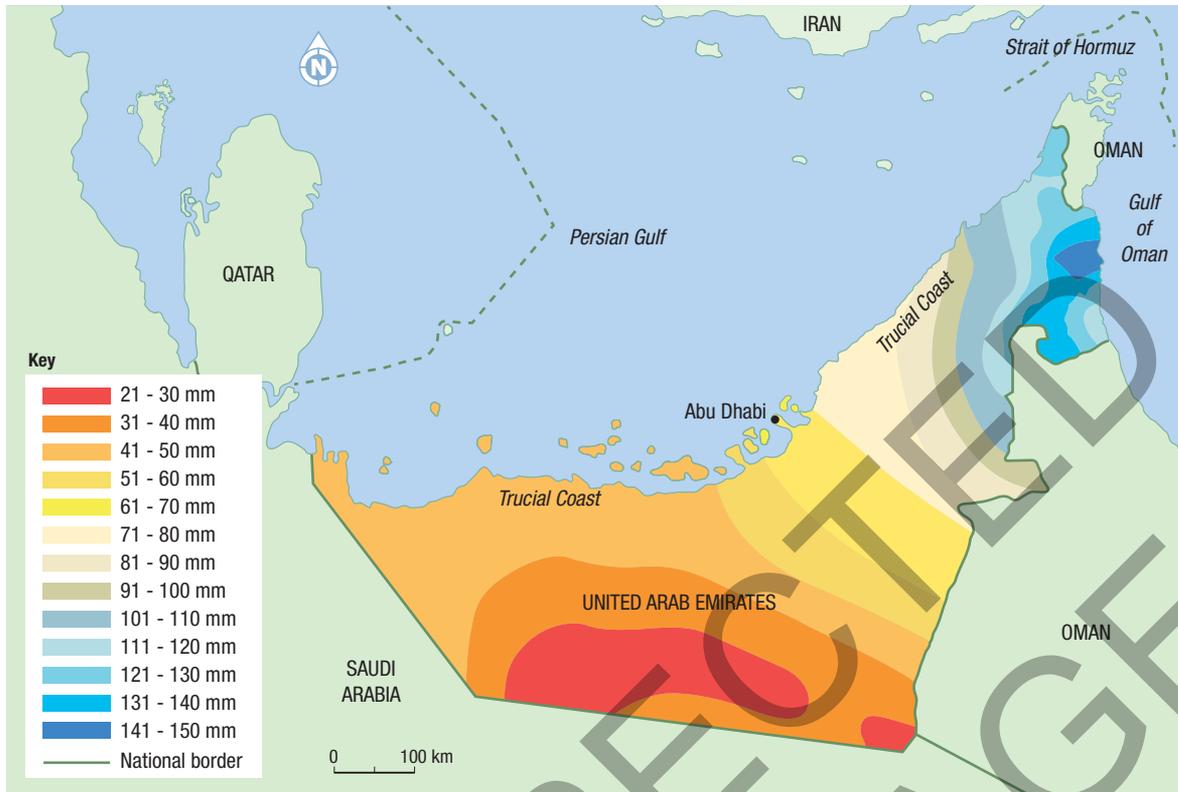
stretches 650 km along the Persian Gulf (see Figure 8.7.4). It is made up of seven territories, known as emirates, which are home to nearly 10 million people.



↑ Figure 8.7.4 The location of the United Arab Emirates

The United Arab Emirates' climate is classified as a hot desert. It receives less than 100 mm of rainfall each year and experiences extremely high average temperatures (see Figures 8.7.1 and 8.7.5). Over the past few decades, the United Arab Emirates has grown considerably. Its wealth

has attracted an influx of migrant workers seeking new jobs and opportunities, causing rapid population growth (see Figure 8.7.6) and urban expansion. Combined, these factors contribute to extreme water scarcity, a growing challenge that requires unique solutions.

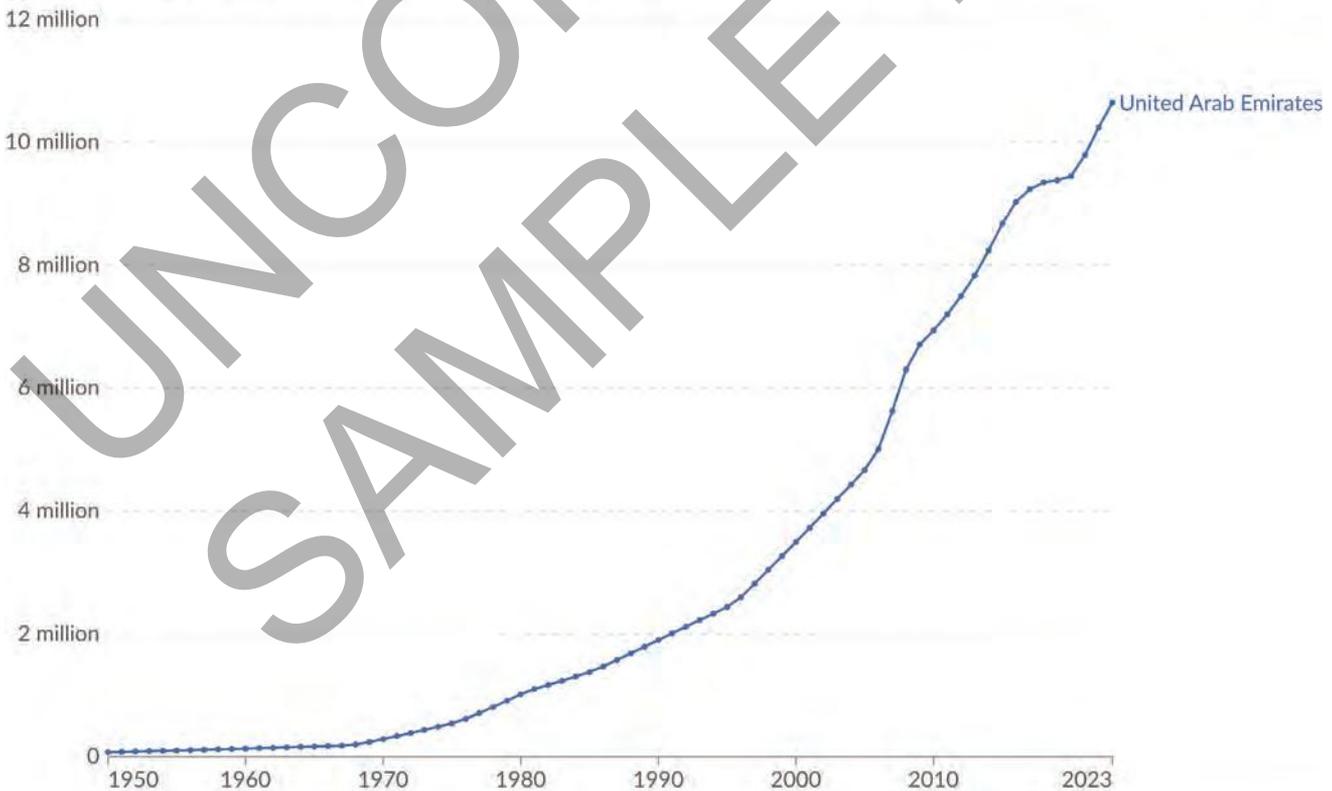


↑Figure 8.7.5 The climate of the United Arab Emirates is extremely dry, receiving an average of less than 100 mm of rainfall each year.

Population

De facto total population in a country, area or region as of 1 July of the year indicated.

Our World in Data



Data source: UN, World Population Prospects (2024)

OurWorldinData.org/population-growth | CC BY

↑Figure 8.7.6 The population of the United Arab Emirates has grown significantly, particularly due to the immigration of workers.
[Source: Our World in Data]

Managing water scarcity in the United Arab Emirates

potable water that is safe for drinking

brine water that contains a high concentration of salt

biodiversity the range of plant and animal life found in a particular environment

Desalination

To meet the rising demand for **potable** water, the United Arab Emirates has constructed some of the largest desalination plants in the world. Around 140 desalination plants produce 42 per cent of the country's water. The largest desalination plant, Jebel Ali Desalination Plant, can produce over 2.2 billion litres of clean water each day! However, this process requires an enormous amount of energy, accounting for around 20 per cent of the country's total energy supply. The facility has its own power plant, which runs on natural gas that must be imported via pipelines from neighbouring countries such as Iran and Qatar.

Desalination is often criticised due to the impact of the process on local marine environments. After water is desalinated, **brine** is discharged back into the ocean, increasing the salinity of the seawater in the Persian Gulf. As a result, the water in the Persian Gulf is around 25 per cent saltier than typical seawater, which can reduce the water's oxygen content,

impact the growth of aquatic plants and animals and decrease **biodiversity**. If the salinity of the Gulf continues to increase, it will become increasingly inefficient and expensive to desalinate.

Amazing but true...

The United Arab Emirates produces around 14 per cent of the world's desalinated water.

Water recycling

Water recycling is becoming a popular strategy in regions facing water scarcity. Dubai, the most populous city in the United Arab Emirates, recycles 90 per cent of the water used in households and by businesses. Wastewater, such as sewage, is collected and treated in specialised facilities. Water is treated as it is passed through a series of filters and tanks, and micro-organisms such as bacteria are used to consume the organic material. Reclaimed water is then able to be used to irrigate farmland, gardens and golf courses, fill artificial lakes and supplement firefighting operations. Dubai uses around 265 million cubic metres of recycled water for these purposes each year. The emirate aims to recycle 100 per cent of its water by 2030. This will reduce the need to desalinate water by 30 per cent, saving both energy and money.

Amazing but true...

Dubai produced more than 4.5 billion cubic metres of recycled water between 1980 and 2022.



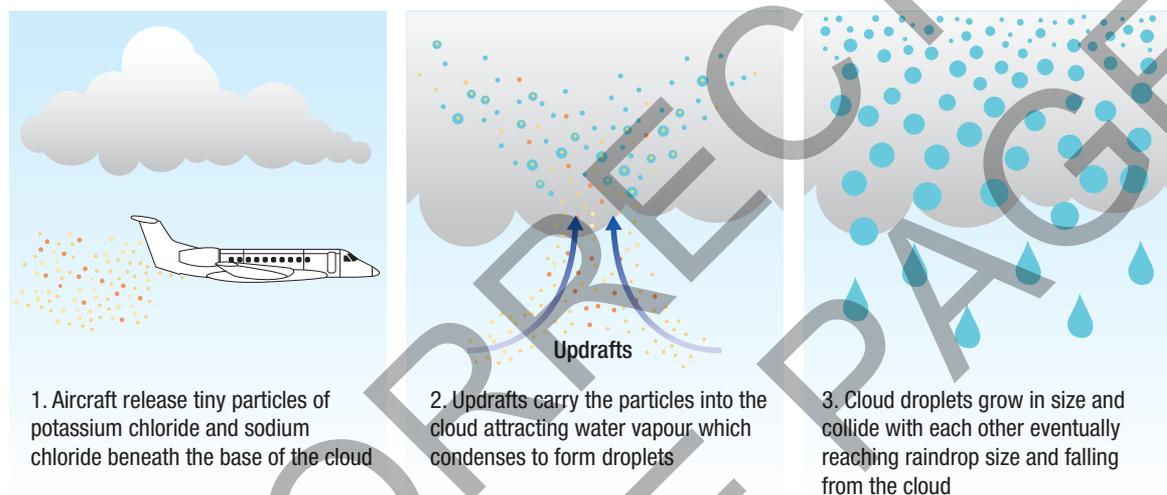
↑ Figure 8.7.7 Recycled water provides water to use to maintain gardens, golf courses and water features.

Cloud seeding

The United Arab Emirates is investing money in the research and development of cloud seeding. Cloud seeding is a process used to try to increase the amount of rainfall from existing clouds. Small planes fly through the clouds loaded with flares containing chemicals such as **sodium chloride**. Flares are fired to release chemical particles into the base of clouds. These particles travel into the cloud where they attract water vapour, which condenses into liquid and falls from

the clouds as raindrops (see Figure 8.7.8). Early results have claimed that these operations can increase rainfall by 15 per cent and on one occasion managed to increase it by 35 per cent. However, it is difficult to determine what proportion of rain is natural and how much is due to cloud seeding, leading scientists to question the reliability and effectiveness of this technology. The likely success of cloud seeding is also debatable since it relies on the presence of clouds containing moisture that suit the seeding process, which are a rarity in the region.

sodium chloride
the chemical
compound for
common table salt



↑ Figure 8.7.8 The process of cloud seeding

Concepts and skills builder 8.7



Comparing strengths and weaknesses

The United Arab Emirates are using various strategies to manage their water scarcity and ensure their future supply can cope with increased demands. Each of these strategies has strengths based on what they can currently achieve or aim to be able to achieve in the future. However, each strategy also has weaknesses based on cost, time, additional impacts, or other challenges that hinder their success.

- 1 Using a series of tables, **list** the strengths and weaknesses of desalination, water recycling and cloud seeding. You may wish to undertake additional research to find more detail to add to your tables.
- 2 Based on your summaries, write a paragraph **justifying** which of these three strategies you think will be the most successful. Base your decision on the extent to which the strengths outweigh the weaknesses.
- 3 **List** any additional questions you have about the three strategies presented. What additional information would be useful in evaluating these strategies?

Geographical concepts and skills: draw evidence-based conclusions and develop questions for a geographical inquiry

Future challenges: Climate change

Climate change is bringing a whole new set of challenges to the United Arab Emirates and the Middle East region. Days of extreme heat of above 50°C are becoming more common and daily temperature highs are regularly above the region's historical average. At these temperatures, there is a strong risk of dehydration and heatstroke. In addition to warmer temperatures, climate change is expected to increase the frequency of long-term droughts due to decreased rainfall, further threatening water

security. A drier landscape coupled with stronger winds will also increase the magnitude of sandstorms. In contrast, a warmer atmosphere means more surface water evaporates and the air can hold more water vapour, increasing the likelihood of dangerous thunderstorms during rare rainfall events. Scientists believe climate change was responsible for the heavy storm that caused flooding in April 2024, when some areas in the northeast of the country received nearly 250 mm.



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Lesson 8.7 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



8.7 Review questions

- 1 Using Figure 8.7.4 or Google Maps, **describe** the location of the United Arab Emirates.
- 2 Using Figure 8.7.5, **describe** how average rainfall varies across the United Arab Emirates.
- 3 **Explain** why population growth is a factor contributing to water scarcity in the United Arab Emirates. Refer to data from Figure 8.7.6 in your answer.
- 4 In a table, **summarise** the ways in which desalination, water recycling and cloud seeding help to manage water resources in the United Arab Emirates.
- 5 **Explain** why climate change is likely to increase the water scarcity challenge in the future.

↓ Figure 8.7.9 The April 2024 floods in the United Arab Emirates caused widespread damage, flight cancellations and school closures.



What is the distribution of water resources in Australia?



Learning intention

The previous lesson focussed on water scarcity in the UAE. This lesson considers the distribution and abundance of Australia's water resources.

Lesson starter



Complete the following activity to kick-start this lesson.

Researching different places in Australia

I love a sunburnt country, a land of sweeping plains, of ragged mountain ranges, of droughts and flooding rains.

My Country – Dorothea Mackellar

The quote above is an excerpt from Dorothea Mackellar's poem, *My Country*. Mackellar's poem depicts Australia as a land of contrasting climate.

- 1 Undertake research to find examples of places or events for each of the following: sweeping plains, ragged mountain ranges, drought, flooding rains.
- 2 Gather photos depicting each of these examples and write an appropriate caption.

The driest inhabited content on Earth

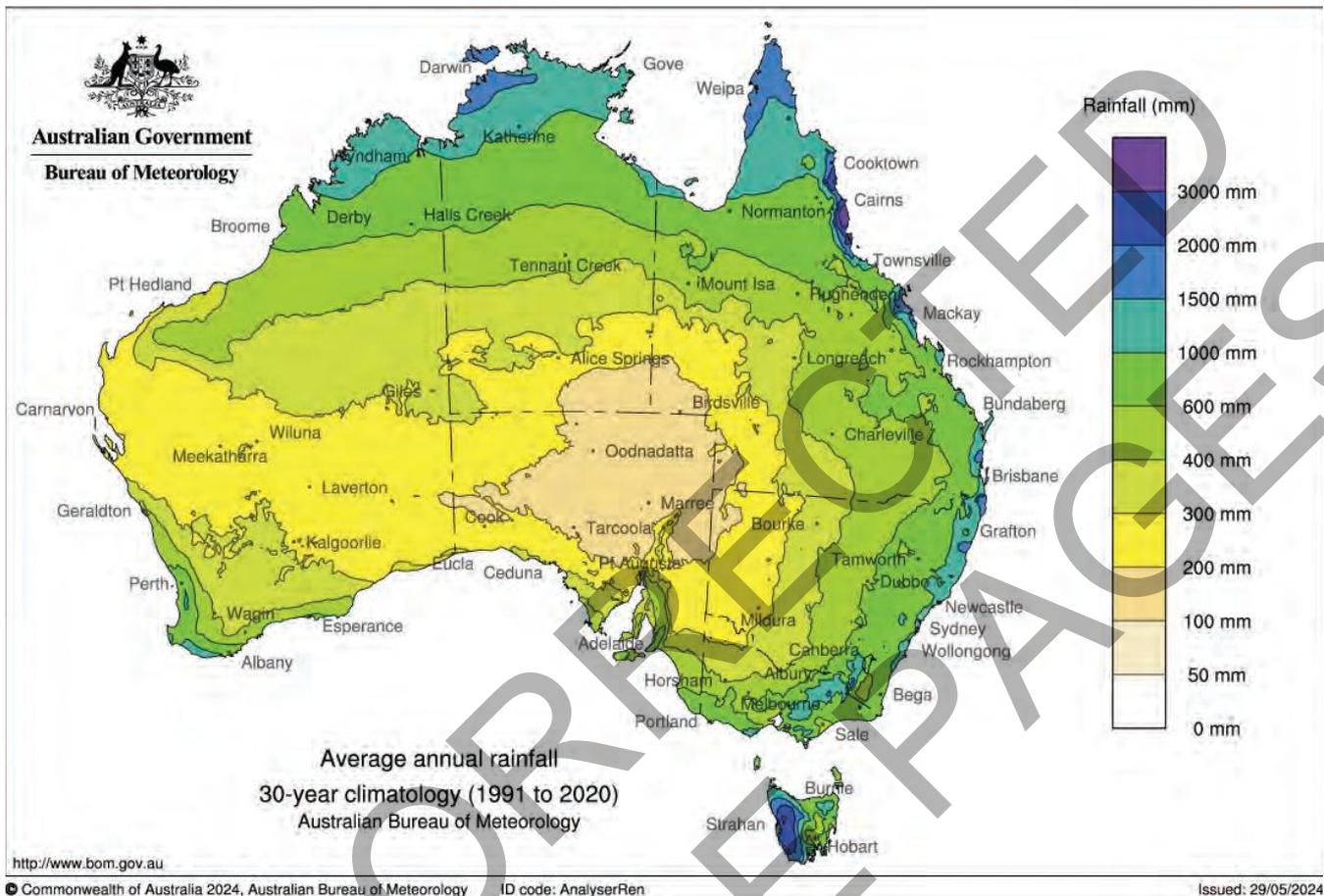
Australia is the second-driest continent on Earth after Antarctica and the driest **inhabited** continent. Around 70 per cent of Australia has a **climate** that is classified as arid or semi-arid. Places classified as arid, also known as deserts, receive less than 250 mm of rainfall on average each year, while semi-arid regions receive

less than 700 mm. Although the average annual rainfall in Australia is 417 mm, Figure 8.8.1 shows that rainfall varies significantly across Australia. Coastal areas generally receive the most rainfall whereas rainfall decreases towards the centre, especially in the region of the Simpson Desert.

inhabited a place in which people permanently live
climate the average weather conditions in an area over a long period of time

In Victoria, Melbourne receives an average of 531 mm of rainfall annually while the Mallee region in western Victoria receives between 250 to 400 mm. Rainfall

recharges rivers, lakes, reservoirs and groundwater supplies and although it alone does not determine the availability of water resources, it is a major contributing factor.



↑ Figure 8.8.1 The spatial distribution of average annual rainfall in Australia based on data from 1991 to 2020 [Source: Australian Government, the Bureau of Meteorology]

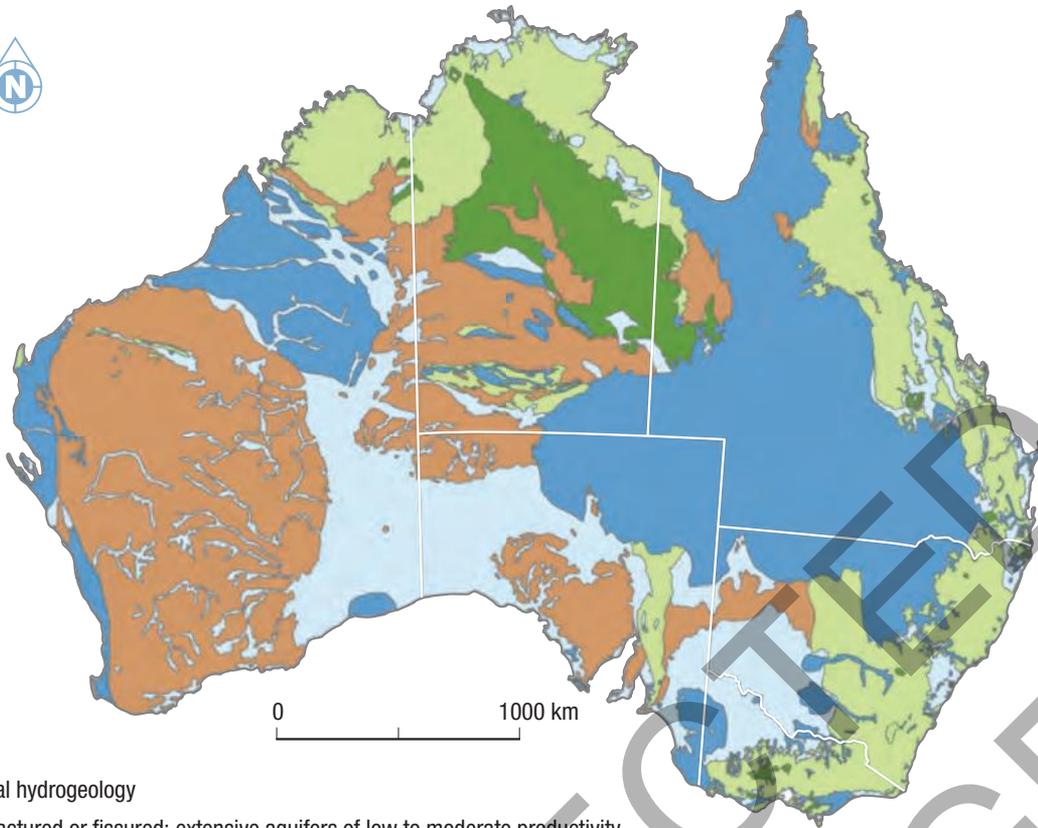
Amazing but true...

The driest place on earth is the McMurdo Dry Valleys in Antarctica. This region had virtually no precipitation for nearly two million years and any snow evaporates in the strong winds before melting.

A country reliant on groundwater

Australia has a large system of groundwater basins stretching under

about 60 per cent of the continent (see Figure 8.9.2). Australia's Great Artesian Basin is the largest and deepest groundwater basin in the world. It covers 1.8 million square km across Queensland and into the surrounding states and territories. The Great Artesian Basin is estimated to hold around 8700 million megalitres of water. Australians are reliant on groundwater extracted from basins in arid areas where rainfall is erratic and drought conditions are more common. Bores are used to pump water out of the ground for irrigation and domestic uses.

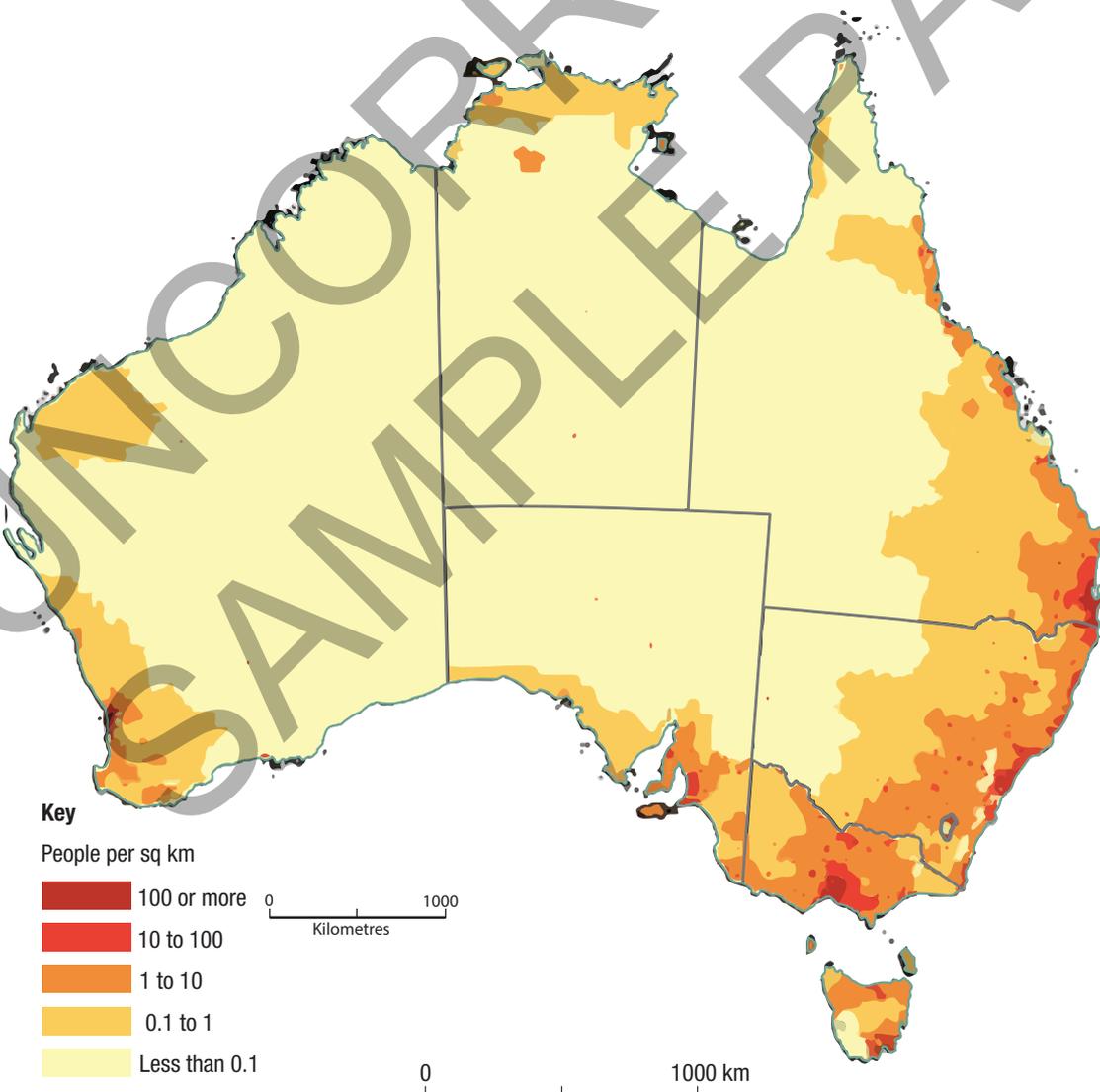


Key

Principal hydrogeology

- Light green: Fractured or fissured; extensive aquifers of low to moderate productivity
- Dark green: Fractured or fissured; extensive, highly productive aquifers
- Orange: Local aquifers: generally of low productivity
- Light blue: Porous; extensive aquifers of low to moderate productivity
- Dark blue: Porous; extensive, highly productive aquifers

←Figure 8.8.2
The spatial distribution of Australia's groundwater supplies. The aquifers, in dark blue and dark green, are the largest and highest quality supplies. [Source: Bureau of Meteorology Groundwater Insight]



Key

People per sq km

- Dark red: 100 or more
- Red: 10 to 100
- Orange: 1 to 10
- Yellow-orange: 0.1 to 1
- Light yellow: Less than 0.1

←Figure 8.8.3
The spatial distribution of Australia's population density

Concepts and skills builder 8.8



Describing spatial association

Spatial association refers to the degree to which two or more phenomena share a similar spatial distribution on the Earth's surface. In other words, whether they are arranged in a similar way. This information can then be used to answer questions. For example, do Australians mainly live in areas with high rainfall and plentiful groundwater supplies?

- 1 Refer to Figure 8.8.1. **List** five places or regions in Australia that have a high rainfall above 1000 mm per year.
- 2 Refer to Figure 8.8.3. **List** five places or regions in Australia that have a high **population density**.
- 3 Based on your answers to questions 1 and 2, **discuss** whether there is a strong, moderate, or weak spatial association between rainfall and population density in Australia. In other words, do more Australians live in regions with high rainfall? Refer to examples in your discussion.
- 4 Check if the opposite spatial association exists. Do areas with low levels of rainfall have low population densities?
- 5 Follow the same process as questions 1 to 3 to **discuss** the degree of spatial association between groundwater supplies and population density in Australia.

population density the amount of people per square kilometre

Geographical concepts and skills: place, space

Melbourne's water storage

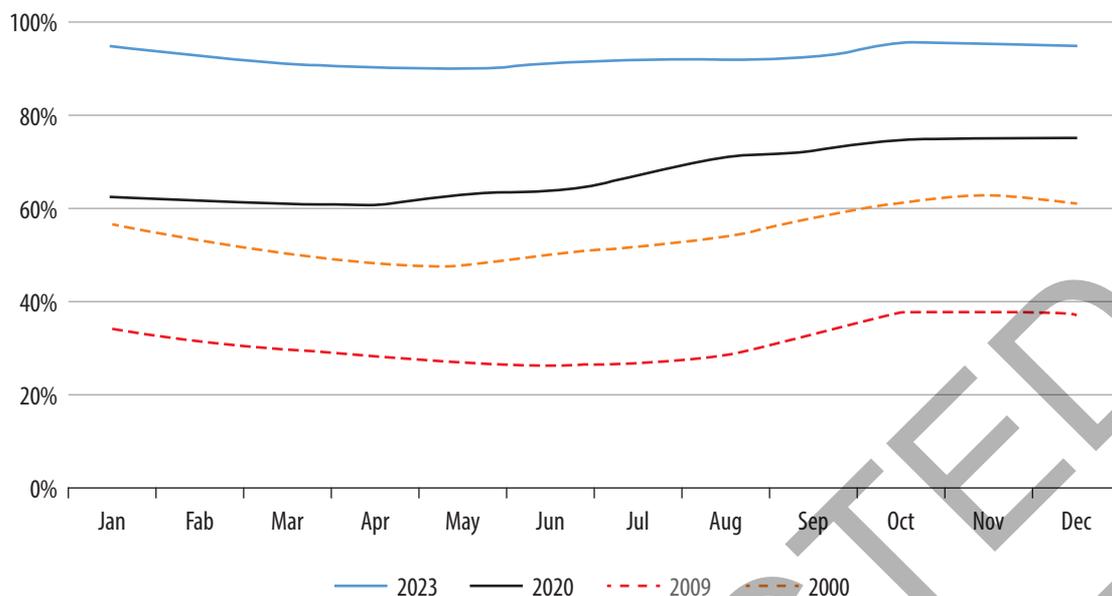
Lesson 8.5 highlighted the importance of reservoirs to ensure enough water is stored for its varying uses. Most of Melbourne's drinking water comes from catchments in the Yarra Ranges such as Tarago, Yan Yean and Sugarloaf. These areas are called catchments because they are areas of land that act like giant buckets, collecting water when it rains. Some of this water flows into rivers as runoff, some is absorbed by plants and some infiltrates into the soil. Runoff eventually flows or is piped into reservoirs that store it so that it can be used by people who live in Melbourne. Melbourne's largest reservoir is the Thomson Reservoir, which has a capacity of 1068 **gigalitres**.

Although this sounds like a lot of water, Melbourne is not immune to water shortages. At the peak of the Millennium Drought in 2009, Melbourne's water storages were dangerously low at just 25 per cent capacity and residents were forced to restrict their water use and were not allowed to wash their cars or water their lawns.

Amazing but true...

Melbourne's catchments are unique because they contain mostly protected eucalypt forest to which public access is restricted. As a result, Melbourne has some of the highest quality drinking water in the world.

gigalitre one billion litres



↑ Figure 8.8.4 The changes in Melbourne's water supply by month during 2000, 2009, 2020 and 2023

Lesson 8.8 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

8.8 Review questions

- 1 **Summarise** statistics from the opening paragraph which demonstrate that Australia is a dry country.
- 2 **Explain** why groundwater is such a significant water resource for Australians.
- 3 Refer to Figure 8.8.1.
 - a **Describe** the pattern of distribution of rainfall. How does rainfall vary across Australia? Consider how it varies from north to south, east to west and coastal to central.
 - b **Suggest** a reason for the patterns identified in part a.
- 4 **Explain** why Melbourne's water supply is of such high quality.

These two questions make up Question 5.

- 5
 - a Use Figure 8.8.4 to **describe** the changes in Melbourne's water supply in 2000, 2009, 2020 and 2023.
 - b Look up Melbourne's dam storage levels today on Melbourne Water's website. **Compare** this value with the data in Figure 8.8.5 and **justify** whether Melbourne is currently above or below average storage levels.

Case study: Is water managed sustainably in the Murray–Darling Basin?



Learning intention

This lesson is a case study looking at the way water is managed in the Murray–Darling Basin and the conflict that arises from competing uses of this scarce resource.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Describe what you can see in Figure 8.9.1.
- 2 **Think:** What do you think has caused this situation?
- 3 **Wonder:** Brainstorm the impacts of this situation both in the local region and beyond.

↓ [Figure 8.9.1](#) The Darling River at Louth in western New South Wales during a period of drought

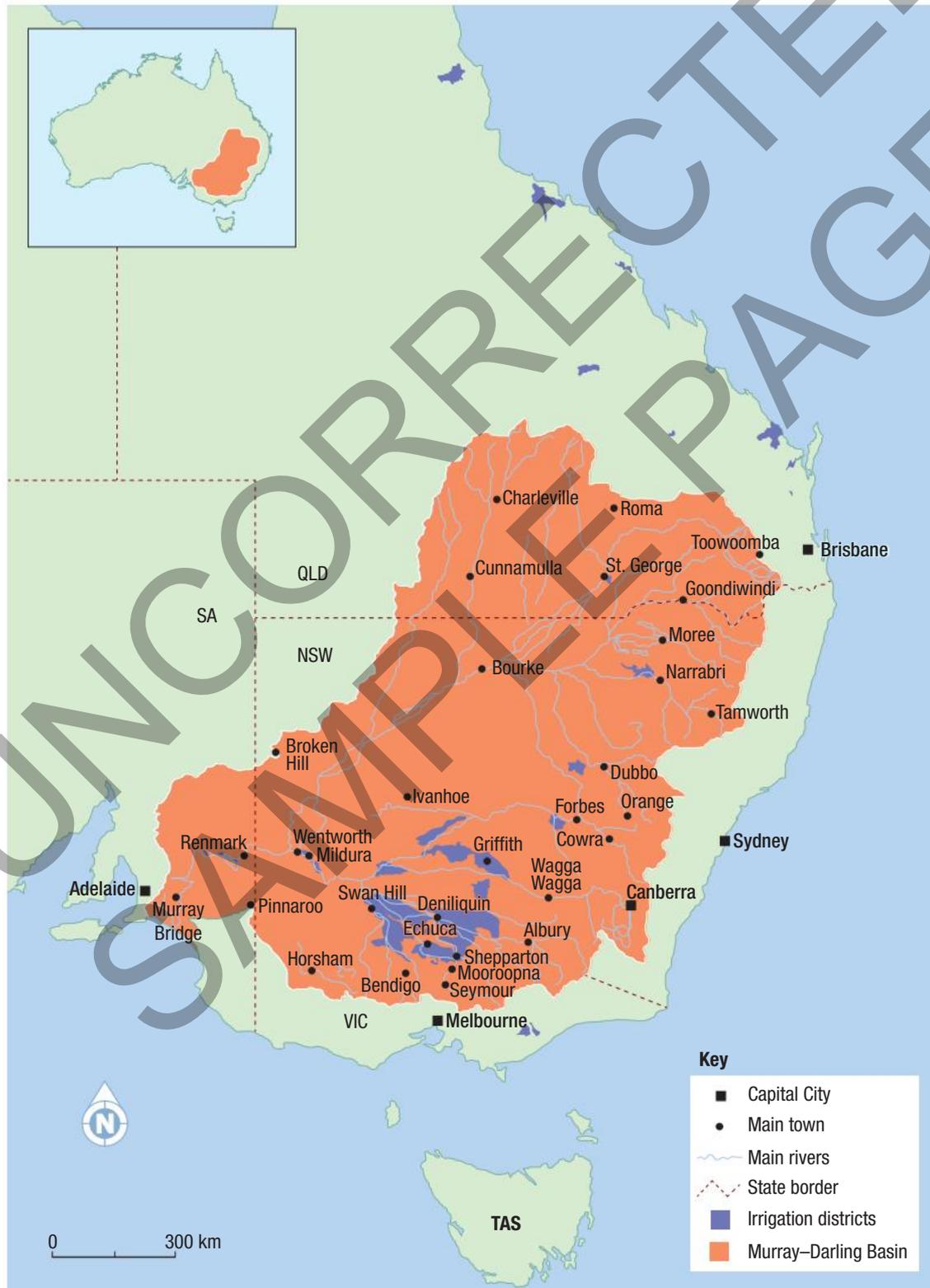


The geographic characteristics of the Murray–Darling Basin

The Murray–Darling Basin in south-eastern Australia is Australia’s largest river system and one of its most significant natural and cultural landscapes. It has a total **catchment area** of 1 060 000 square km, making it 20th-largest river system in the world.

It covers 14 per cent of Australia’s total surface area, including three-quarters of New South Wales, half of Victoria, and parts of Queensland and South Australia. The basin contains three major rivers: the Murray River, Darling River and the Murrumbidgee River.

catchment area the area of a drainage basin that collects and drains water



← Figure 8.9.2 The Murray–Darling Basin spans four states and one territory, and contains several large rivers.

The significance of the Murray–Darling Basin

Economic significance

The Murray–Darling Basin is often described as ‘Australia’s food bowl’ as it is where nearly 40 per cent of Australia’s food is produced. The region contains around 50 000 farms and 9000 agricultural businesses. Furthermore, much of the food grown here is exported, contributing an annual total of \$22 billion to the Australian economy. The use of irrigation on farms is significant in the Basin. It contains two-thirds of Australia’s total irrigated land, which together uses 70 per cent of all of Australia’s agricultural water use. Around half of this water is used to grow cotton and pasture, while other common crops include rice and grapes. The Basin also provides 30 per cent of Australia’s total dairy production. The money generated from irrigation contributes significantly to the region. For every \$1000 that is earned from irrigation, an additional \$3500 is generated in local towns and related industries.

floodplain the area of flat, low-lying land beside a river which is prone to flooding

migratory birds birds that travel seasonally for breeding and feeding

Social significance

More than 2.6 million Australians live within the Murray–Darling Basin and over 3 million people rely on its water resources. For First Nations Peoples, the Basin holds profound cultural, spiritual and environmental importance. Many places within the region are sacred, representing connections to Country that span tens of thousands of years (see lesson 8.10). The Basin is also central to the lives of non-Indigenous Australians. Each year, its picturesque rivers, lakes and wetlands draw visitors from across the globe, contributing \$11 billion to the economy through tourism. This highlights the Basin’s role not only as a source of water and food but also as a place of cultural exchange, biodiversity and natural beauty.

Environmental significance

The Murray–Darling Basin’s rivers, wetlands and **floodplains** provides a habitat for 120 species of waterbird and 46 native fish species. In total, there are 30 000 wetlands within the Murray–Darling Basin and 16 of these are internationally significant. This is because they are rare and unique environments that provide habitat for **migratory birds** from places like China and Japan.

The impacts of water scarcity in the Murray–Darling Basin

Competing demands for a limited water supply means that water scarcity within the Basin is a significant issue, especially during times of drought. Farmers are allocated a certain amount of water that limits how much they are allowed to withdraw each year from rivers and groundwater supplies. When water levels are low, allocations are reduced.



↑ Figure 8.9.3 The basin supports a range of diverse environments such as the red gum forests in the Murray Valley National Park.



↑ Figure 8.9.4 During times of drought, reservoirs such as the Hume Dam can reach low capacities and even dry out completely.

In times of extreme drought, some farmers are not allocated any water, leading to **crop failure**. Many farmers have to sell or cull livestock as they do not have enough feed to keep their animals alive. Not only does this lead to a loss of revenue for farmers, it has a flow-on effect to the economy of the local towns and communities and can have severe negative impacts on the mental health of people within the community.

Water scarcity also has severe environmental impacts within the Murray–Darling Basin. The plants and animals within the Basin’s wetlands, forests and waterways have adapted to seasonal wet and dry periods. While the regulation of rivers using dams and weirs is essential in providing a water source for irrigation, these structures significantly alter the **flow regime** of rivers and stop them from flowing naturally. This means that during drier times, rivers do not have adequate

water. On the other hand, during wetter times when flooding normally occurs to recharge wetlands and floodplains, water is held back and stored in dams. These changes significantly damage the environment, which relies upon these natural conditions. These changes are also harmful to First Nations communities, who have a strong connection to their Country and its natural characteristics.

In early 2019, a heat wave combined with low river flows from an ongoing drought led to a **algae bloom** of blue-green algae in the Darling River near Menindee. Blue-green algae is toxic to humans and animals if it is consumed. When blue-green algae dies and decomposes, it sucks oxygen out of the water, reducing the water’s quality. The bloom in 2019 led to the death of up to a million Murray cod and perch, which was an ecological disaster.

crop failure the complete loss of a crop on a farm
flow regime the seasonal changes to the flow of rivers
algae bloom the rapid increase or growth in the amount of algae within water



↑ Figure 8.9.5
In 2019, a blue-green algae bloom led to the death of up to one million fish in the Darling River.

Managing water resources: The Murray–Darling Basin Plan

Sustainable management of the Murray–Darling Basin’s water resource requires a balance between agricultural, domestic and environmental needs. Established in 2012, the Murray–Darling Basin Plan seeks to achieve this balance by coordinating the management of water between the four states and one territory together with the Australian government.

The three main aims of the plan are to ensure that the Murray–Darling Basin has:

- vibrant communities that have a stable water supply to meet their domestic uses
- productive industries such as agriculture that can provide jobs and help local communities to thrive
- healthy and diverse environments that support a range of plants and animals.

To meet these demands, the Plan sets limits on the amount of surface water and groundwater that can be withdrawn from the river system. These limits are adjusted based on rainfall conditions. The limit allows more water to be allocated for **environmental flows**. Environmental flows refer to water that is allowed to flow

through the system naturally to support the environment. One way to increase environmental flows is through water buybacks. Buybacks occur when farmers choose to sell their water entitlement to the federal government to be used for the environment instead of irrigation. Although this means less water is allocated for irrigation, upgrades to irrigation infrastructure means water withdrawn for agriculture can be used more efficiently so that farmers still have enough water to grow crops.

More than a decade from its establishment, the success of the Murray–Darling Basin Plan is being questioned. Scientists are concerned that the allocated environmental flows are still not sufficient, meaning natural systems are still degrading and many species are struggling to survive. Conversely, the agricultural industry is arguing that an increase in water allocated to environmental flows instead of irrigation would have a disastrous impact on local businesses, making farming unviable in the region. Maintaining the balance of allocating limited water resources throughout the Basin remains a complex challenge.

environmental flows water allowed to flow through the river system to help sustain freshwater environments

Concepts and skills builder 8.9



Evaluating a management strategy

An important skill in Geography is to **evaluate** management strategies. This means deciding whether a management strategy has been successful. The most common way to do this is to determine whether the strategy has achieved its goals. However, it's not always so simple. For example, sometimes a management strategy has successfully achieved its goals but has:

- cost far more than was budgeted
- taken longer than was planned
- caused additional problems elsewhere or for other people.

In reality, it is unlikely that any strategy has been completely successful. Therefore, it is important to consider both positive and negative outcomes to determine overall whether the strategy can be rated a success. Follow these steps to **evaluate** the success of the Murray–Darling Basin Plan:

- 1 Undertake more detailed research about the Murray–Darling Basin Plan. A good starting point is articles on the ABC website.
- 2 Create a table **summarising** the positive and negative outcomes of the Plan.
- 3 Based on your findings, determine whether the Plan has been largely successful, moderately successful, or unsuccessful in managing the Murray–Darling Basin's water resources.
- 4 Write a paragraph **summarising** your findings. Refer to examples and evidence to strengthen your arguments.

Geographical concepts and skills: draw evidence-based conclusions

Lesson 8.9 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



Go online to
access the
interactive
lesson review
and more!

8.9 Review questions

- 1 **Define** the following terms:
 - a Catchment area
 - b Flow regime
 - c Environmental flows
 - d Buybacks
- 2 Write a series of dot points **summarising** the geographic characteristics of the Murray–Darling Basin.
- 3 **Explain** why the Murray–Darling Basin is often referred to as Australia's 'food bowl'.
- 4 **Explain** why altering the flow regime of river systems for the sake of irrigation can have consequences for the environment.
- 5 **Outline** two ways in which water scarcity can impact the Murray–Darling Basin.
- 6 **Summarise** the reason why managing water within the Murray–Darling Basin is a complex challenge.

What is the value of water for different people?



Learning intention

This lesson looks at the significance of water for different people, including First Nations Peoples in Australia and people of the Hindu faith in South Asia.

Lesson starter



Complete the following activity to kick-start this lesson.

Discussing the value of water for First Nations Peoples

Aboriginal people on this dry continent have a strong connection to water but on our own country we should be seen as the original owners, the original custodians and have a say in how water is managed on our country, but at the moment, we don't.

Professor Brad Moggridge, University of Technology Sydney

- 1 List the ways you imagine First Nations Peoples might have a connection to water.
- 2 What do you think First Nations Peoples might prioritise in the way water is managed in Australia?
- 3 Why do you think First Nations Peoples lack a say in how water is managed in Australia?

The significance of the Murray–Darling Basin for First Nations Peoples

For tens of thousands of years, First Nations Peoples have cared for the Murray–Darling Basin, managing its waterways to sustain life, culture and Country. Rivers are not just water sources, they are central to Aboriginal and Torres Strait Islander identities and survival. However, since colonisation, First Nations Peoples have been excluded from decisions about water management.

As learnt in the previous lesson, the Murray–Darling Basin Plan was established with goal of restoring health

to the river system while meeting the demands of farmers and the people living in the region. One major criticism of the Plan is that it does not recognise or support the cultural needs and interest of Indigenous Peoples who make up the 40 First Nations groups within the region. Despite being the original custodians of these waterways, Indigenous groups have been locked out of water management decisions and water ownership. They currently control less than 1 per cent of the water within the Basin.

First Nations Peoples wish to have a proportion of the Murray–Darling Basin’s water allocated for **cultural flows**.

Cultural flows are water set aside to sustain First Nations cultural practices, care for Country and pass on knowledge. These flows allow for fishing, hunting, ceremonies, and the preservation of traditional medicines, all of which are vital to community wellbeing.

Agreements such as the Kungun Ngarrindjeri Yunnan Agreement, meaning ‘Listen to Ngarrindjeri Speak’, offer a way forward. This agreement prioritises collaboration, recognising Ngarrindjeri rights to land, water and sky, knowledge and cultural practices. It shows that when First Nations people lead the care of their Country, both Country and communities benefit. At Margooya Lagoon in Victoria, cultural flows enabled by First Nations leadership have already begun to restore degraded ecosystems, proving the effectiveness of this approach.

Despite the Australian government’s 2018 promise of 40 million dollars to support First Nations water allocations, this funding remains undelivered. Genuine partnerships, like those outlined in the Kungun Ngarrindjeri Yunnan Agreement,

require governments to honour their commitments, respect First Nations rights and share decision-making power.

The health of the Murray Darling Basin depends on Aboriginal and Torres Strait Islander knowledge and leadership. Cultural flows are not optional. They are a right and a necessity. By listening to First Nations voices and supporting culturally informed water management, it is hoped that the Basin’s future can be sustainable for both the environment and the people who depend on it.

cultural flows water within the river system that is reserved to be used to preserve environments and allow First Nations groups to undertake cultural practices



↑ Figure 8.10.1 Tati Tati People have used cultural flows at Margooya Lagoon to restore the environment and their cultural connection to the land and its water.

The significance of the Ganges River, South Asia

Hindus believe that large rivers are sacred and provide a connection with the gods. The Ganges River is one of the most significant rivers in Asia, flowing 2500 km through some of the most populated places in India and Bangladesh. Four hundred million people rely on it for drinking, bathing and irrigation. The Ganges River is sacred for Hindus as it is considered a form of the goddess, Ganga. Millions of Hindus make **pilgrimages** to bathe in the Ganges River, believing they will be cleaned of their impurities, while others scatter the ashes of deceased loved ones.

Despite being believed to be sacred and spiritually pure, rapid population growth and **urban development** in India has led to the widespread pollution of the Ganges River (see Figure 8.10.3 on the following page). Each day, three million litres of raw sewage is dumped into the river along with waste from factories and agricultural runoff, making it one of the most polluted waterways in the world. One stretch of the river over 600 km long has been classified as ecologically dead. Several governments have promised to allocate money to restore the health of the river but little progress has been made.

pilgrimage the journey of a person who visits sacred sites for religious reasons

urban development the growth of urban areas as they expand to cater for population growth



↑ Figure 8.10.2 The Ganges River is sacred for Hindus, and hundreds of festivals and celebrations are held on its banks each year.



↑ Figure 8.10.3 Despite being considered sacred and spiritually pure by many Hindus, the Ganges River is one of the most polluted rivers on Earth.

Concepts and skills builder 8.10



FPO

Annotating photograph of water

Photographs are an excellent way of capturing the memory of a place. However, photographs do not always highlight which aspects or characteristics of a place are the most significant. Annotating a photograph can help the viewer to understand features that might be important to a geographer. These features might include descriptions of the vegetation, soil type, water quality, or connection to the land, none of which are easily visible from just a photograph. Annotations are more than just labels and should include brief descriptions and observations. Follow these steps to annotate a photograph of a significant water-based environment:

- 1 Source a photograph of an environment containing water that is significant to you. This might be somewhere you have been or would like to go on a holiday, somewhere you visit regularly, or a place that fascinates you.
- 2 Highlight the place's geographic characteristics by writing brief descriptions of its features. Include both natural and human characteristics and living and non-living features.
- 3 Draw lines from your descriptions onto the relevant part of the photograph. This can be done by hand or using computer software.
- 4 Write a title at the top highlighting the location and importance of your annotated photograph.

Geographical concepts and skills: place, environment

↑ Figure 8.10.4
Geography skills:
Annotating photos

Go online to access the interactive lesson review and more!

Lesson 8.10 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



8.10 Review questions

- 1 **Examine** why are some First Nations Peoples unhappy with the Murray–Darling Basin Plan?
- 2 **Define** cultural flows and explain why some people think they should be an essential part of water management within the Murray–Darling Basin Plan.
- 3 **Explain** why Hindus make pilgrimages to the Ganges River?
- 4 **List** the reasons why the Ganges River has such poor water quality.

Case study: How does water sustain life and culture for First Nations people?



Learning intention

We have previously looked at the significance of water for different groups. This lesson is a case study investigating the importance of Budj Bim to Gunditjmara People.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder



↑ **Figure 8.11.1** What do you think this object is?

Referring to Figure 8.11.1:

- 1 **See:** Describe what you notice about the image.
- 2 **Think:** What is it used for?
- 3 **Wonder:** What questions do you have about this image?

Ways of thinking about water

For First Nations people, water is more than just a resource; it is a sacred part of life. Water is part of Country and is closely tied to the land, spirituality and the wellbeing of communities. Waterways such as rivers, lakes and springs are seen as living beings with their own meaningful stories or songlines, which have been passed down through generations. These places are often connected to important cultural practices, ceremonies and the health of Country as a whole.

In contrast, many other Australians might see water mainly as something to use in daily life, like for drinking, farming, or making electricity. Non-Indigenous people often understand that water is important for survival and fun, but may not fully appreciate the deep spiritual and cultural connections that First Nations people have with water as Country.

Lake Condah on Gunditjmara Country in Victoria is home to one of the most remarkable examples of ancient **aquaculture systems** created by anyone in the world. The stone fish traps found at Lake Condah, and similar sites, demonstrate the advanced knowledge and ingenuity of Aboriginal people in sustainably managing resources.

The Budj Bim landscape in south-western Victoria, Australia, was formed around 30 000 years ago through volcanic activity from the Budj Bim (Mount Eccles) volcano. Basaltic lava flows altered the terrain by filling valleys and blocking watercourses, leading to the creation of Lake Condah and extensive wetlands.

Bruce Pascoe, in *Young Dark Emu*, highlights the genius of

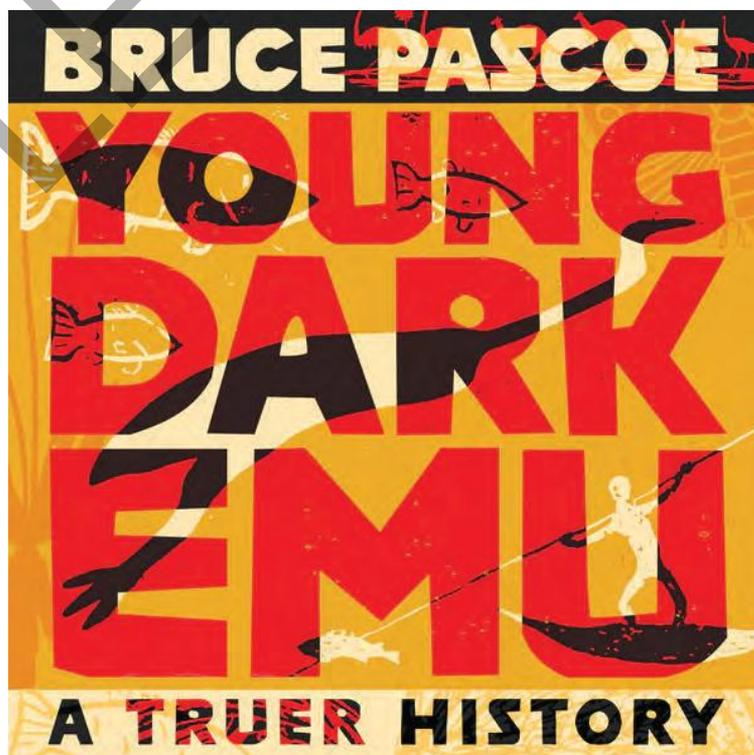
these aquaculture systems, which allowed communities to harvest fish and eels efficiently and sustainably.

Accounts from settler diaries often dismissed these complex engineering feats, undermining the intelligence and sophistication of Aboriginal people and cultures. These writings reflect the racist ideas of the time, failing to recognise the advanced and sustainable practices that were already in place long before European colonisation.

Amazing but true...

Aquaculture systems have been used by Aboriginal and Torres Strait Islander people for thousands of years to catch and breed fish in a way that protects the environment and ensures there is always enough food for the community

aquaculture system the farming or growing of aquatic animals and plants in a controlled environment.

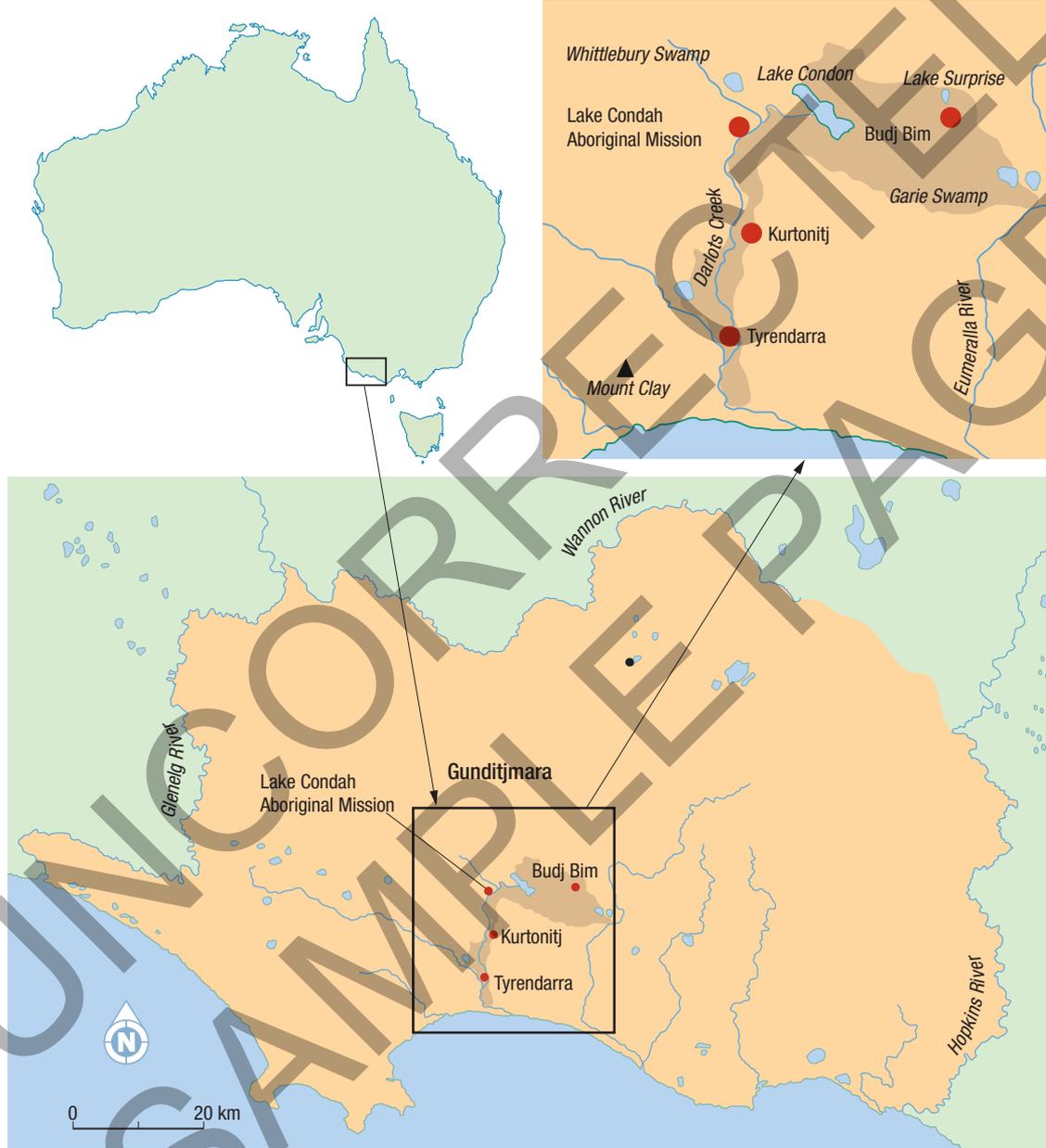


↑ Figure 8.11.2 *Young Dark Emu* by Yuin, Bunurong and Tasmanian historian Bruce Pascoe

Since colonisation, Aboriginal people have been denied the right to control their own lives, land and water. This right is called **self-determination**. Colonial policies on water management have often ignored Aboriginal voices. The removal of Aboriginal people from their lands and waters during the Stolen Generations

has caused significant harm. Aboriginal people were not allowed to speak their own languages, which impacted the ways that stories about water were passed on. To ensure a sustainable future for water in Australia, it's important to listen to and act on First Nations People's knowledge in decisions about water management.

self-determination having the freedom and power to make decisions about one's own lives and futures, including the management of lands, waters and resources, and the ability to maintain and develop cultures, languages and identities



→ Figure 8.11.3 The location of Lake Condah and Budj Bim Cultural Landscape in western Victoria on Gunditjmara land. Budj Bim is a Gunditjmara name meaning 'High Head', referring to the roughly conical peak rising 178 metres.

Amazing but true...

The fish traps at Lake Condah are part of the Budj Bim **Cultural Landscape**, which was added to the UNESCO World Heritage List in 2019. This acknowledges the site's global significance and Gunditjmara People's incredible cultural heritage.

Cultural Landscape according to UNESCO these are 'combined works of nature and humankind ... [that] ... express a long and intimate relationship between peoples and their natural environment'

Concepts and skills builder 8.11



Interpreting and analysing information and data to identify similarities and differences and explain patterns, relationships and trends

'In the Dreaming, the ancestral creators gave the Gunditjmarra the resources to live a settled lifestyle. They diverted the waterways, and gave us the stones and rocks to help us build the aquaculture systems. They gave us the wetlands where the reeds grow so that we could make the eel baskets, and they gave us the food-enriched landscape for us to survive.'

Eileen Alberts – Gunditjmarra Elder



↑ Figure 8.11.4 Budj Bim Rangers

events, like the beginning of colonisation in 1788. This helps you see how much longer Gunditjmarra People have been connected to the land and how important their knowledge is for understanding and managing the environment.

- How much longer have Gunditjmarra People been connected to Budj Bim than non-Indigenous Victorians?
- Did Gunditjmarra People manage water and water resources sustainably before colonisation?
- How did colonisation impact the management of Budj Bim Country?
- Why is it important that Gunditjmarra People have a say about how water can be managed sustainably in Budj Bim today?

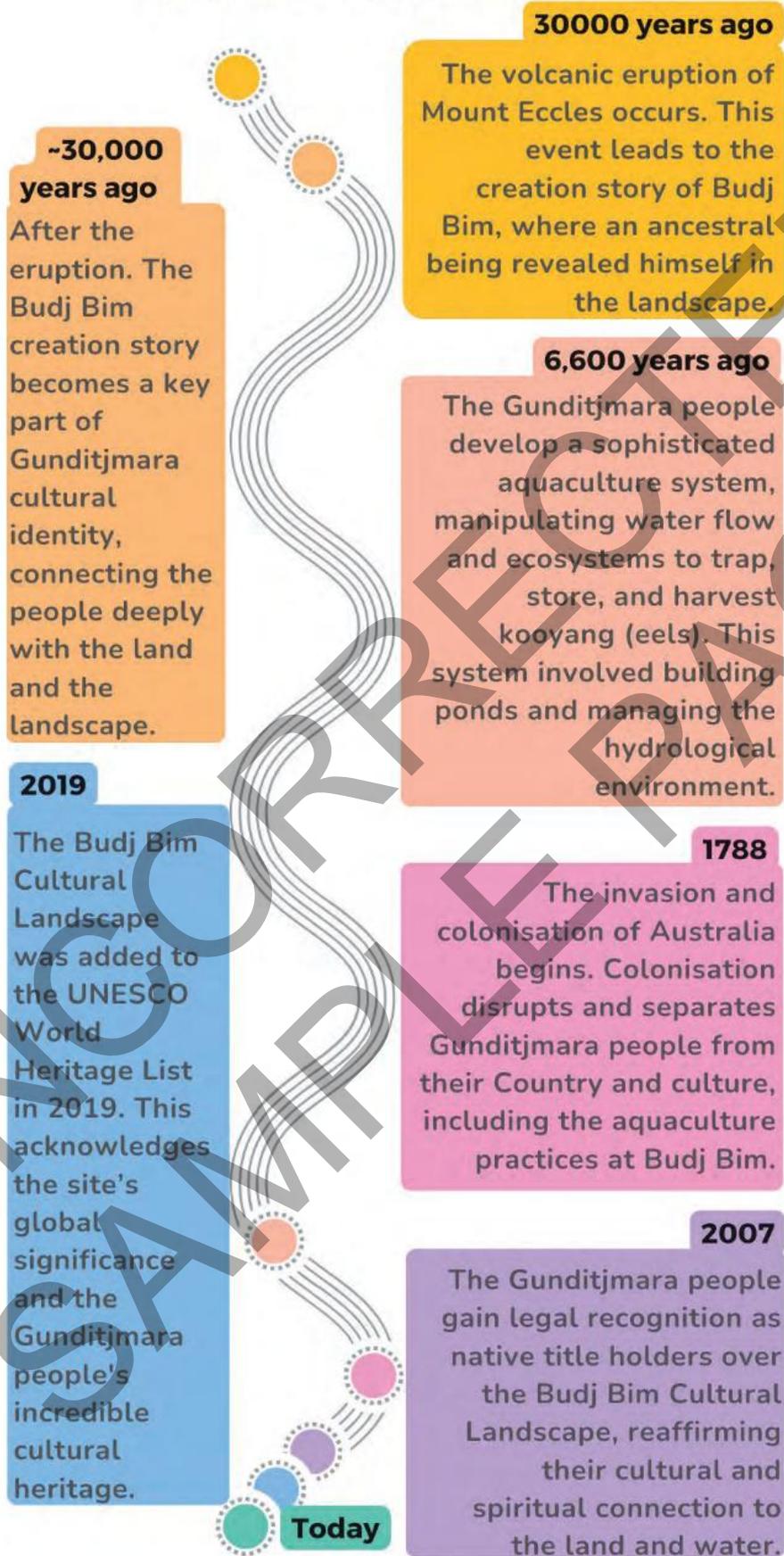
Self-determination at Budj Bim

Today, people manage Budj Bim in ways that support self-determination. After years of advocacy, Gunditjmarra regained control of this important cultural landscape from the Australian government, enabling them to care for it using traditional knowledge and practices. Gunditjmarra People now work in partnership with government bodies, conservation groups and other organisations to ensure the preservation of the ancient aquaculture systems and the protection of the environment. These partnerships help to share the cultural significance of Budj Bim with the world while allowing Gunditjmarra People to lead and make decisions about their land, ensuring their history, culture and sustainable practices are honoured and passed on.

A timeline helps you see events in the order they happened, making it easier to understand how long something has been around. In Geography, it can show the relationship between people and the land over time. For example, Gunditjmarra People have lived at Budj Bim for over 30 000 years, with their aquaculture systems developed at least 6600 years ago.

When you look at a timeline, you can **compare** that long history with more recent

TIMELINE OF GUNDITJMARA CONNECTION TO BUDJ BIM



↑ Figure 8.11.5 Timeline of Gunditjmara connection to Budj Bim

‘Water is life for Gunditjmara Country and its people.’

Denis Rose

Write a short paragraph or create a visual representation (e.g., drawing, diagram) that **explains** your understanding of the quote. Include the following points:

- How Gunditjmara People use water in their daily lives (e.g., for farming eels)
- The spiritual and cultural importance of water to Gunditjmara People
- Why water is so central to the health of the land and the community.

Geographical concepts and skills: environment, sustainability



Go online to access the interactive lesson review and more!

Lesson 8.11 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



8.11 Review questions

- 1 **Define** the term ‘aquaculture’.
- 2 **Define** the term ‘self-determination’.
- 3 Review your responses to the ‘see, think, wonder’ box at the beginning of this lesson. Read the artist’s description below and consider your learning in this chapter, then respond to the question.

‘The breeze going through the eel trap gives a feeling of water flowing through the vessel with the feathers softly waving as the water flows. My grandfather Nicholas Couzens and my uncles made eel traps to fish the Hopkins River – this is how my mother learnt the techniques which she passed on to me.’

Bronwyn Razem
Gunditjmara/Kirrae Whurrong

Outline how creating art based on traditional water practices related to self-determination for Gunditjmara People today?

Fieldwork: Exploring the significance of a local water resource



Learning intention

In this lesson you will have the opportunity to design a fieldwork investigation in which you will collect data relating to a local water resource.

Fieldwork is an essential part of studying geography. It enables you to investigate many of the concepts studied in the classroom while in the real world. It also provides with the opportunity to apply your knowledge to answer a research question based on issues in your local area. In

this investigation, your aim is to explore a water resource close to your school or home and to determine the ways it is used, investigate its significance for the surrounding region, and evaluate its health and management. The following structure will help to form the basis of your study.

↓ **Figure 8.12.1** The city skyline of Melbourne, Victoria, with the Yarra River in the foreground. The Yarra is an important water sources in Melbourne.



Section	Explanation	Examples
Title and introduction	Choose a suitable topic and title for your investigation. It should include the scope and location of your investigation. Identify the Country on which your local water resource is located. Write a brief introduction outlining the main aspects of your study including an outline of the type of urban management you will be investigating.	<ul style="list-style-type: none"> • An investigation of the health and management of the Yarra River • A comparison of the health of urban waterways in south-eastern Melbourne • An evaluation of sustainable urban water management in Docklands, Melbourne • An evaluation of the success of the Cardinia Reservoir as both a water and recreational resource • An evaluation of the management of the Yea wetlands in maintaining both a diverse ecosystem and a tourist attraction
Background information	Research some background information about your chosen topic and region. This will provide some context for your study.	<ul style="list-style-type: none"> • Geographic characteristics of your chosen location and a map showing your study area • A brief history of your chosen water resource and surrounding land uses
Research question	Write a research question that you intend to answer using the data that you collect. You may prefer to write one overall research question and multiple sub-questions.	<ul style="list-style-type: none"> • Do the different land uses along the Yarra River affect its water quality? • Is the Yea wetlands a successful example of sustainable environmental management? • Do local residents consider the Dandenong Creek to be an important local resource?
Hypothesis	A hypothesis is a clear and concise statement that can be tested. It should be written prior to collecting your primary data.	<ul style="list-style-type: none"> • The water quality of the Yarra River decreases from its source to its mouth • The Yea wetland is a thriving ecosystem with a high level of biodiversity
Primary data collection	Primary data is data you collect yourself in the field specifically for your investigation. Consider the types of primary data that you will need to collect in order to answer your research question. Consider the equipment and preparation required.	<ul style="list-style-type: none"> • Interviews with councillors and local environment groups • Surveys of residents living close to the water resource • Water quality samples and measurements • Habitat assessments including vegetation identification and soil tests • Photos and field sketches
Secondary data collection	Secondary data is data that other people have collected that you can use as part of your investigation. Undertake research to find suitable sources of information that you can apply to your topic.	<ul style="list-style-type: none"> • Satellite imagery and elevation data from Google Earth Pro • Water quality studies conducted by groups such as Melbourne Water • Information about works undertaken by local volunteer groups
Presenting and analysing your data	Summarise your findings in visual formats that are easy to read and understand.	<ul style="list-style-type: none"> • Different types of graphs (pie, line, bar) and maps (topographic, thematic, GIS) • Annotated photos and field sketches • Summary tables
Discussion, conclusion and evaluation	Use your primary and secondary data to answer your research question. Provide a concise summary of your major findings. Evaluate the success of your data collection and your overall investigation.	<ul style="list-style-type: none"> • The extent to which your hypothesis has been supported or disproven • An answer to your research question • The positive and negatives of your data collection and how they can be improved
References	Include a bibliography of any sources used.	Melbourne Water 2022, <i>Dandenong Creek</i> , Victorian government, accessed 16 September 2023, https://www.melbournewater.com.au/water-and-environment/water-management/rivers-and-creeks/dandenong-creek

CHAPTER 9

What are the causes and impact of hydrometeorological hazards and how can they be managed?



LESSON	TITLE
9.1	Setting the scene: How did Storm Daniel cause a dam failure in Derna, Libya?
9.2	What are hydrometeorological hazards?
9.3	Floods: A natural process or a natural disaster?
9.4	How are flood risks managed?
9.5	Case study: What were the impacts of the 2022 Lismore Floods?
9.6	End of investigation review: Water in the world



Setting the scene: How did Storm Daniel cause a dam failure in Derna, Libya?



Learning intention

This lesson recounts the disaster that unfolded when Storm Daniel hit Derna, Libya, as an introduction to the causes and consequences of hydrometeorological hazards.

low-pressure system areas of low pressure that suck air towards them, leading to high winds and rainfall

FPO

On 4 September 2023, a **low-pressure system** developed over the Ionian Sea. This soon formed into Storm Daniel, the deadliest and most costly Mediterranean tropical cyclone in recorded history. The storm caused torrential rainfall and extensive flooding across Greece, Bulgaria and Turkey as it passed across the Mediterranean. It then headed towards the coast of Libya on September 10 where it caused catastrophic flooding of an unprecedented scale.

In the city of Derna, northern Libya, rainfall for the 24-hour period totalled 240 mm, just below its total yearly average. The Wadi Derna River, running from Libya's inland Akhdar Mountains to the northern coast, could not contain the floodwaters. The two dams that were built to protect the city of Derna were not able to handle the additional volume of water, causing them to fail. 30 million cubic metres of water burst from the dams and flowed downstream forming waves up to 7 metres high.

Figure 9.1.1
Geography skills
video: working
with synoptic
charts

↓ Figure 9.1.2 Overturned cars are among the debris caused by flash floods in Derna, eastern Libya.



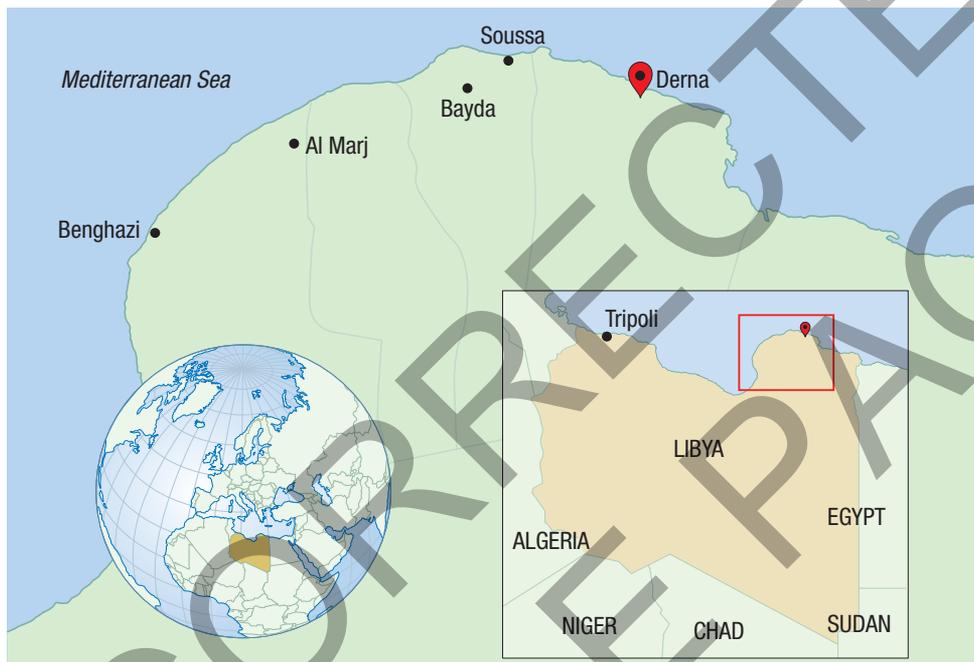
The impacts were disastrous. The city was inundated by floodwater and homes, buildings and even entire neighbourhoods were swept away. Over 4000 of Derna's 100 000 residents are confirmed to have died in the flood or its aftermath and an additional 10 000 people are unaccounted for. More than half the city's population

were **displaced**, unable to return to their homes due to the extensive damage.

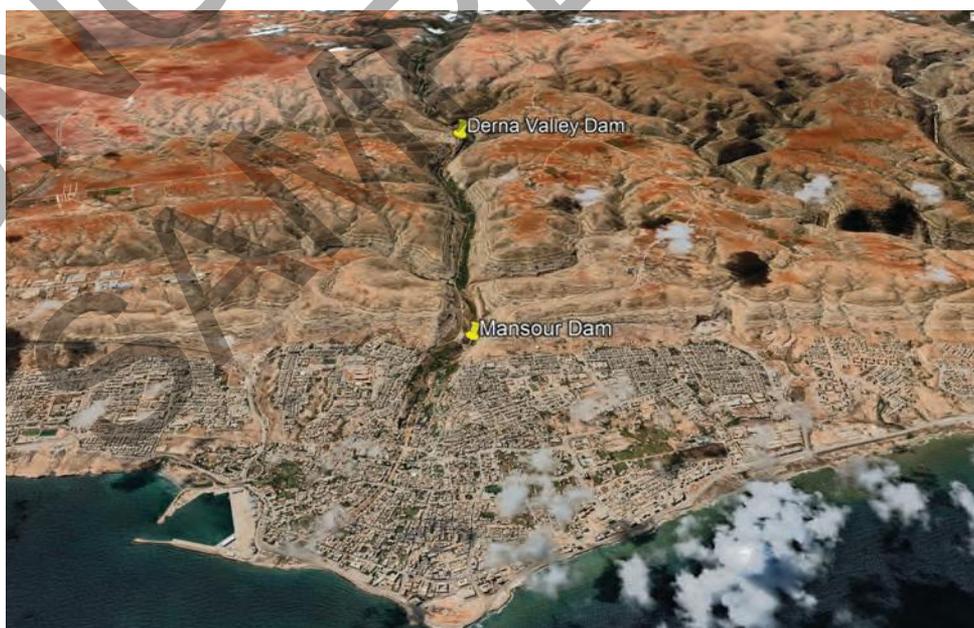
displaced forced to leave their home

Amazing but true...

Dozens of Derna's flood victims were washed into the sea while in their cars. One survivor was rescued from their car around 20 km from the coastline.



↑ Figure 9.1.3 The location of Derna, northern Libya



↑ Figure 9.1.4 The location of the Derna Valley Dam and Mansour Dam, which collapsed on the night of 10–11 September 2023 due to torrential rainfall.



(a) 2022



(b) 2023

↑ Figure 9.1.5 An aerial view of Derna in August 2022 (a) and September 2023 (b) showing the destruction in the region surrounding the Wadi Derna River.

medicane a

Mediterranean tropical cyclone

frequency how often something occurs

infrastructure

the physical and organisation structure of a country such as buildings, roads and energy supplies

corruption

dishonest behaviour by people in power, often involving bribery

A combination of factors contributed to the severity of Storm Daniel's disaster.

The storm was classified as a **medicane**, a tropical cyclone that forms in the Mediterranean Sea. Some scientists believe that climate change is leading to an increase in heatwaves that raise sea surface temperatures and increases the **frequency** and intensity of these storms. Storm Daniel was particularly disastrous in Libya due to a lack of flood management **infrastructure**. Libya lacks the facilities needed to forecast storms accurately and has only a limited ability to warn and evacuate its residents when flood waters approach. However, the largest contributing factor to the disaster

in Libya was a lack of maintenance and structural repairs on the two dams that failed. In 2022, researchers found that the dams were in urgent need of repairs after years of neglect following Libya's civil war. Government **corruption** meant money allocated to repair the dams was never spent, leaving the dams in a vulnerable condition. Following the disaster, several government officials responsible for the lack of maintenance were arrested while an inquiry took place. Scientists have warned that they expect heavy rainfall events to become more common as the world warms and that communities need to plan how they will adapt to these extreme hydrometeorological events.



Go online to access the interactive lesson review and more!

Lesson 9.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



9.1 Review questions

- 1 **Define** the following terms:
 - a low-pressure system
 - b medicane
- 2 **Recall** why Derna flooded in September 2023.
- 3 **Describe** the scale of the destruction.

What are hydrometeorological hazards?



Learning intention

In this lesson, we will explore hydrometeorological hazards with a particular focus on different types of floods and the factors that cause them.

Lesson starter



Complete the following activity to kick-start this lesson.

Thinking about storm damage

- 1 Think back to the last time there was a heavy storm in your home town or city. **Describe** what you heard or saw.
- 2 Was there any damage to your property or the properties in your street or suburb?
- 3 **Suggest** a reason why you think some places are more prone to storm damage and flooding than others. Consider their location, design, or management.

↓ [Figure 9.2.1](#) A taxi driving through Queensbridge Street in Melbourne during a flash flood.



Hydrometeorological hazards are extreme weather events involving water. These events cause severe environmental, economic and social impacts and in some cases lead to large-scale disasters in which lives are lost and cities are destroyed.

The main types of hydrometeorological hazards are summarised in Table 9.2.1. Most of these hazards are caused due to the presence of too much water, while drought occurs when there is not enough.

Table 9.2.1 The main types of hydrometeorological hazards

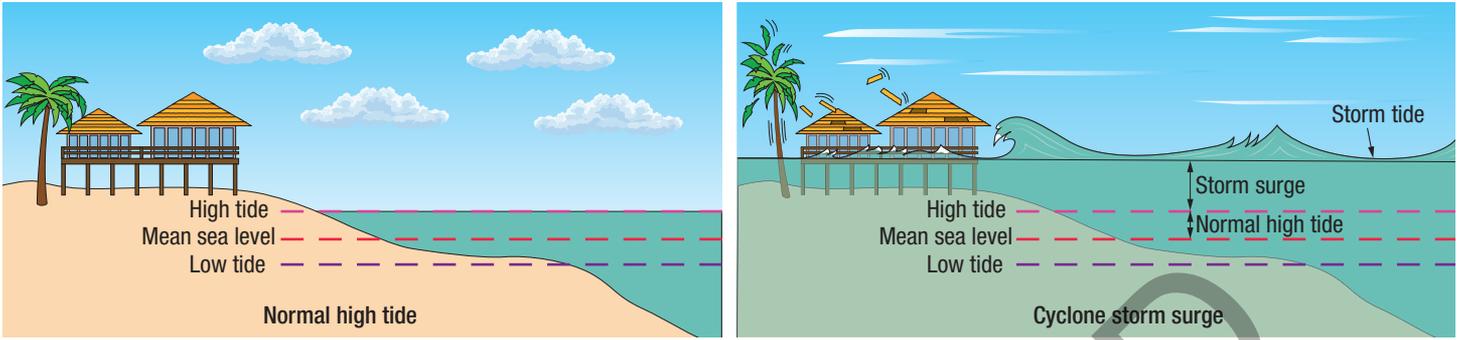
Hydrometeorological hazard	Description
Flood	When water submerges land that is normally dry. They can last anywhere from a few hours to several months and can affect individual places, entire towns, or vast regions. They commonly occur near rivers and dams, in the valleys between mountains and in coastal regions.
Tsunami	A series of very high waves that form out at sea due to a disturbance underground such as an earthquake or volcanic eruption. In deep water, they can travel at speeds of up to 800 km/h. They slow as they approach the coast but increase in height, reaching as high as 30 metres.
Tropical cyclone	A rapidly rotating storm system that forms over warm tropical oceans. They cause strong winds and heavy rain. In extreme cases, winds can reach 240 km/h.
Storm surge	A rise in sea level due to large storms, such as tropical cyclones, which can inundate coastal regions (see Figure 9.2.3). High winds push water up against the coast, causing water to rise above the normal high tide level.
Drought	A prolonged period of low rainfall in which there is insufficient water for crops, ecosystems, and industrial and residential uses. While some droughts only last a few months, others last several years. Australia's Millennium Drought lasted from 1997 to 2009.

Amazing but true...

Tropical cyclones are known as 'hurricanes' in the United States and 'typhoons' in Asia.

↓ Figure 9.2.2 This satellite image shows Tropical Cyclone Ingrid in the Coral Sea just off the coast of northern Australia in 2005.





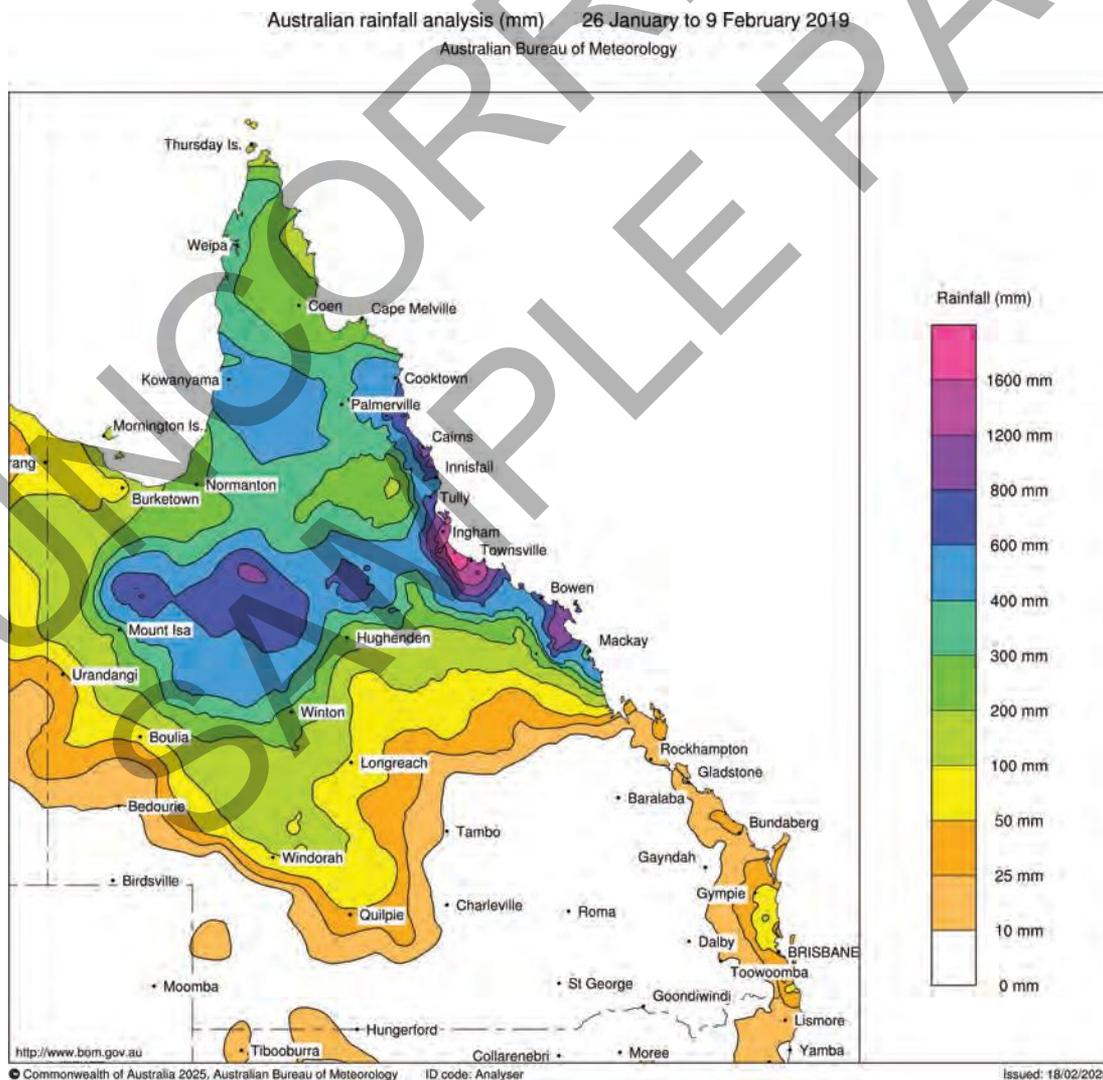
↑ Figure 9.2.3 A storm surge leads to a temporary increase in the height of the sea level. This illustration shows the sea level in a coastal area before a storm surge (left) and during the surge (right).

Factors affecting flooding

Floods are the most common hydrometeorological hazard. They vary in size, speed and impact based on the factors that cause them. Some of these factors are outlined below.

High rainfall

High rainfall is the most common cause of flooding. Heavy rainfall in urban areas can cause flash flooding, while sustained periods of rainfall can cause widespread slow-onset flooding (see page 287).

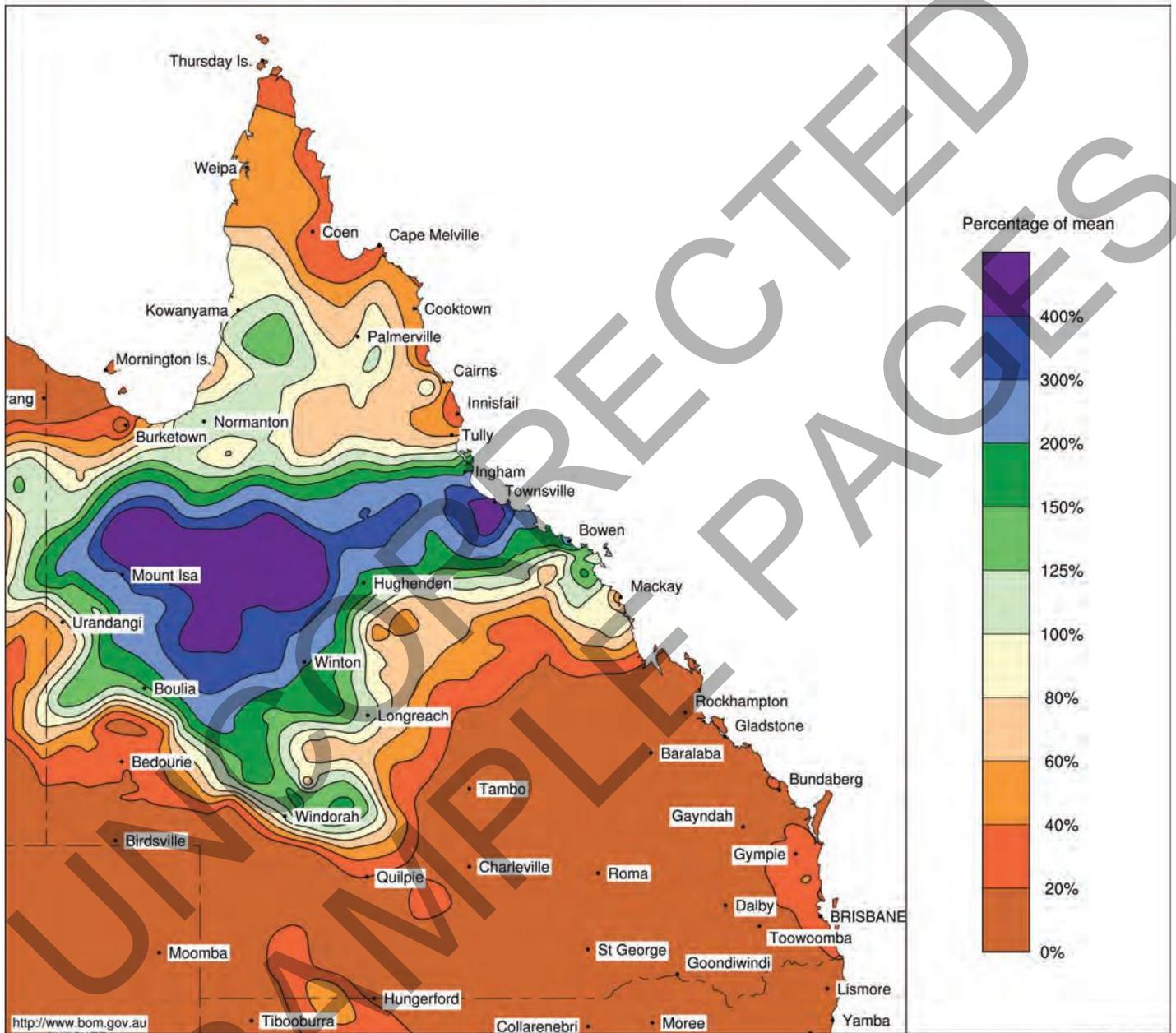


↑ Figure 9.2.4 The amount of rainfall that fell in Queensland from 26 January to 9 February 2019

One of the most devastating floods in Australia's occurred in Queensland in 2019. Figure 9.2.4 shows the rainfall during this period while Figure 9.2.5 shows how much

this was compared to the normal February average. In some places, the rainfall was 400 per cent higher than the average, which is five times the usual amount!

Rainfall totals 1-9 February 2019 as a percent of February mean rainfall
Australian Bureau of Meteorology



↑ Figure 9.2.5 The amount of rainfall from 1 to 19 February 2019, compared to Queensland's February average.

low-lying area an area that has a very low elevation close to sea level, usually located near the coast

confluence the point at which two or more rivers meet and join to form a single channel

Location and physical features

The shape of a landscape can determine the extent of flooding as the physical features of the land control where water flows. **Low-lying areas** are particularly vulnerable because water flows downhill

to reach these places. Similarly, places located at the **confluence** of large rivers have a higher likelihood of flooding due to increased water flow. Coastal regions are also vulnerable because of the potential for storm surges, tsunamis and rainfall from tropical cyclones.

Poverty

A less obvious reason why some places are vulnerable to floods is because of poverty. While many wealthy nations can build structures and infrastructure to prevent flooding, many poorer regions, particularly those with a high population

density, do not have this luxury. Libya's 2023 flood disaster (see lesson 9.1) would not have occurred to the same extent if the country had adequate weather forecasting and flood warning infrastructure and if their dams and other flood infrastructure were adequately maintained.

Classifying floods

There are three main types of floods: flash floods, slow-onset floods and quick-onset floods.

Flash floods

Flash flooding is caused by a large amount of rain falling over a short period of time (see Figure 9.2.1). They are the most rapid type of flood, typically occurring within six hours of an intense rainfall event. This means that flash floods pose the greatest threat to life as there is little time to warn people to evacuate. **Urban areas** are particularly vulnerable. Once drains fill, flood waters rise as rain is not able to **infiltrate** into the ground through hard city surfaces such as roads and concrete footpaths.

Slow-onset floods

When rain falls, some of the water infiltrates or seeps into the soil, some of it **evaporates**, and some of it flows into rivers and creeks (referred to as **runoff**). During large rainfall events, such as large storms, soil can become **saturated**, meaning that it can no longer absorb any more water. This causes more water to run into river systems. Eventually, the rivers become so full that the water flows out over the floodplain, submerging the land and causing a slow-onset flood. Slow-onset floods build up over several days or weeks. This gives residents plenty of warning, allowing them to prepare and evacuate. However, these floods are often very costly, causing damage to roads, railway lines, bridges and farmland.

urban areas built-up environments such as cities or large towns
infiltrate to seep into the ground so that water is absorbed by the soil
evaporation the process of a liquid changing to a gas by heating
runoff water that is not absorbed by the land and flows from high areas to low areas
saturate to reach a point where soil cannot absorb any more water



Quick-onset floods

Quick-onset floods tend to occur more frequently in steep mountainous areas of high rainfall where rivers flow quickly. They can be caused by high rainfall events or snowmelt. Quick-onset floods also occur in coastal areas where rivers have the largest volume of water flowing in them, or where there is the risk of tropical cyclones. These types of floods only last for a short period of time and the land is typically submerged for a few days. Quick-onset floods are very dangerous as they occur with little warning and the floodwaters often move rapidly, leaving people caught unprepared.

↑ Figure 9.2.6 In December 2017, Euroa, north-eastern Victoria, received a record-breaking 146 mm of rainfall in 24 hours, which led to widespread flooding of the town. There were 1500 requests for help from the State Emergency Service.

Concepts and skills builder 9.2



Summarising information in a table

Tables are used to summarise a large amount of text into a condensed and organised format. Use a template like the one below to **summarise** the features of the three main types of floods. Undertake your own research to find one example from Australia and another from a different country.

	Flash flood	Quick-onset flood	Slow-onset flood
Description			
Cause			
Impacts			
Example (Australia)			
Example (international)			

Geographical concepts and skills: collect, organise and process information



Go online to access the interactive lesson review and more!

Lesson 9.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



9.2 Review questions

1 **Define** the following terms:

- inundate
- infiltrate
- saturate
- confluence
- evaporation
- runoff

2 **Explain** the link between a tropical cyclone and a storm surge.

3 **State** whether each of the following is an example of a flash flood, a slow-onset flood, or a quick-onset flood.

- A tropical cyclone brings very heavy rainfall to a coastal town over a 24-hour period. Local rivers immediately begin to overflow onto the floodplain.
- A thunderstorm causes heavy rainfall from 4.00 pm until 7.00 pm, which leads to rapid flooding in a suburb of Melbourne.
- Consistent rainfall over a three-day period in one of Victoria's rural areas causes rivers to slowly rise and flood over several kilometres.

4 **Explain** why poverty is a factor contributing to flood risk.

5 **Justify** whether flash, slow-onset or quick-onset floods are the most hazardous. **Compare** your justification with a classmate.

Floods: A natural process or a natural disaster?



Learning intention

The last lesson focused on the causes and types of floods. This lesson considers the positive and negative impacts of flood events.

Lesson starter



Complete the following activity to kick-start this lesson.

Thinking about flood damage

One of the major impacts of floods is damage to agricultural land. The effects of this destruction are felt not only in the affected region but can extend across a country or even into other countries.

List the impacts that might result from the destruction shown in Figure 9.3.1. Consider direct impacts for the farmer and indirect impacts that may affect other places. For example, how will it affect the economy of the farming region? How will it affect people in the nearest capital city? Will the impacts be short or long term?

↓ **Figure 9.3.1** This farmer in Innisfail, Queensland, is assessing the damage to his banana crop following a flood caused by a tropical cyclone.



The impacts of floods

floodplain the area of flat, low-lying land beside a river which is prone to flooding

sediment solid material that is moved by rivers and deposited in a new location

heavy metals dense metals such as iron and lead

displacement moving something or someone from its original place to somewhere else

agricultural sector the sector of the economy to do with farming such as crop and animal production

livestock domesticated animals raised on a farm for production

Floods are a naturally occurring part of the water cycle and are essential in maintaining the health of many environments. This is a positive impact. However, when floods meet civilisation, they can wreak havoc and be very costly, often leading to natural disasters and a range of negative impacts.

In geography, an impact refers to a positive or negative change or consequence. Geographers often classify impacts into three categories:

- Environmental impacts: impacts on both natural and human environments
- *Social impacts*: impacts on people including their wellbeing or safety
- *Economic impacts*: impacts involving money including income or costs.

Environmental impacts

Floods are a process essential in maintaining the health of river environments. They have a very important role as an interconnection or link between river channels and **floodplains**. By flowing over land, floodwaters recharge groundwater systems and replenish wetlands and forests with water, sediment and nutrients. Floods also lead some species of fish to breed or migrate. In 2010–11, flooding in the Barmah–Millewa Forest ended a drought that had lasted almost a decade. Floodwaters revitalised the wetland and forest, ensuring the survival of thousands of waterbirds (see Figure 9.3.2).



↑ Figure 9.3.2 Floods are essential in maintaining the health of wetlands such as the Barmah–Millewa Forest, the largest river red gum forest in Australia.

Although floods play an important role in maintaining natural environments, they can also damage places, particularly environments that have been modified by people. During a flood, **sediment** from floodplains is collected by floodwater. This can contain pollutants, such as harmful chemicals from houses, farms and factories, and **heavy metals**. The pollutants are washed into rivers and become part of the water system, contaminating water supplies and degrading water quality.

Social impacts

When floodwaters inundate human environments, such as urban areas, they have the potential to threaten the physical safety of people, destroy people's homes and possessions and spread waterborne diseases. These impacts are often greater during flash or quick-onset floods, such as those that occur in highly populated and dense cities. Although slow-onset floods often provide enough time for people to evacuate, they still have the potential to cause longer-term impacts. These include the **displacement** of people for extended periods, disruptions to power and clean water supplies and damage to buildings and essential infrastructure such as sewage and electricity.

Economic impacts

Floods are the most expensive disasters we experience in Australia. Geoscience Australia has estimated that flooding in Australia has a direct annual cost of \$943 million and have totalled \$42.6 billion between 1967 and 2017. The total cost of the severe flooding that occurred in 2023 was estimated to have cost \$5 billion. The largest proportion of flood expenditure is used for repairing and rebuilding infrastructure such as roads, bridges, buildings and railway lines. Damage to the **agricultural sector** is also often extensive as floodwaters wash away crops and kill large numbers of **livestock**.



↓ Figure 9.3.3 Volunteers helping flood victims clear out their houses, dump damaged and contaminated possessions, and clean what can be salvaged.

Concepts and skills builder 9.3



Classifying impacts

Classify the following flood impacts as environmental, social, or economic. **Explain** the reasons for your classifications. Note that some impacts can have more than one classification.

- 1 The 2024 flash floods in Dubai, United Arab Emirates, inundated roads, destroyed houses and closed the airport.
- 2 The 2023 flood in Derna, Libya, washed contaminated waste from industrial areas and medical facilities out towards the coast.
- 3 Hundreds died when heavy rains caused a dam to burst in Kenya in April 2024.
- 4 The 2023 flooding in the Murray–Darling Basin rejuvenated some wetlands for the first time in 60 years, providing a boost to plant and waterbird species in the region.

Geographical concepts and skills: collect, organise and process information

Lesson 9.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

9.3 Review questions

- 1 **Explain** why floods can be described as both a natural process and a natural disaster.
- 2 **Describe** how flooding can both benefit and damage a natural environment.
- 3 **Suggest** a reason why flooding is more economically costly than other forms of natural disasters.
- 4 **Investigate** a recent flood in Australia or elsewhere in the world. Using a table, **summarise** the impacts using appropriate classifications. **Investigate** the cause of the flood and what is being done to ensure the negative impacts are reduced in the future.

How are flood risks managed?



Learning intention

In the last lesson, we learnt about the positive and negative impacts of different types of floods. In this lesson, we will consider different ways in which flood risks can be managed to reduce their likelihood and impact.

Lesson starter



Complete the following activity to kick-start this lesson.

Researching Tokyo's solution for floods

The eastern side of Japan is vulnerable to floods. Tokyo is a city built on a floodplain; more than 1.5 million people live below the sea level there. To protect the city, the Tokyo government built the Metropolitan Area Outer Underground Discharge Channel (Figure 9.4.1).

Undertake research and write brief answers to the following questions:

- 1 Where is the discharge channel built within Tokyo?
- 2 How long and deep is the discharge channel?
- 3 How much did the channel cost to construct and how long did it take?
- 4 Has the discharge channel been successful in protected Tokyo from flooding?

↓ [Figure 9.4.1 Tokyo's Metropolitan Area Outer Underground Discharge Channel](#)

Although floods are an essential process within the natural environment, they have the potential to cause widespread damage to the human environment. Land managers living in flood-prone areas use a variety of management strategies to reduce these hazards. Some of these

strategies are *preventative*, which means that they aim to reduce the likelihood of a flood. Others are *adaptive*, which means that they try to reduce the impact of floods when they occur. Four common types of responses are presented in Table 9.4.1.

Table 9.4.1 Different ways in which flood risks are managed

Management response	Description	Example
<p>Alterations to building designs</p>	<p>In areas that flood regularly, houses are often built on stilts so that they are not damaged by floodwaters. The exterior of houses can also be sealed to prevent water from entering. Landscaping around homes can also be designed to drain and absorb water.</p> <p>Houses in Phnom Krom, Cambodia, are built on stilts to reduce flood damage.</p>	
<p>Dams and levees</p>	<p>Dams are built in the upper sections of rivers to contain water and control flow downstream. Spillways control the release of water from dams. Levees are artificial walls that block water from flooding cities and agricultural land.</p> <p>The Bonnet Carré Spillway in Louisiana, United States, diverts floodwater from the Mississippi River so that it flows out to the Gulf of Mexico rather than towards New Orleans.</p>	
<p>Computer modelling and forecasting</p>	<p>Meteorologists can track the possible development of rain cells and storms to predict how much rain will fall over an area several days in advance. They also use satellite images and radar to track storms to help predict the likelihood of a flood.</p> <p>FloodCheck Queensland is a computer modelling and forecasting software providing information about flood risk.</p>	
<p>Evacuation</p>	<p>As with most hazards, the safest way to avoid danger is to evacuate. This is often done with the help of emergency services. Unfortunately, if the scale of the flood is too large or the flood rises too rapidly then this might not always be possible.</p> <p>On 23 January 2019, residents in Makassar in Indonesia had to be evacuated to avoid dangers from floods and landslides.</p>	

meteorologist a person who studies the atmosphere, especially the weather, and makes predictions for weather forecasts

Many of the responses outlined in Table 9.4.1 are interconnected. For example, places that build houses on stilts might also construct dams for added protection. **Meteorologists** use modelling and forecasting data to determine whether a dam can contain floodwaters. Meteorologists also inform

emergency services of the need to evacuate. Unfortunately, despite these responses, extreme and unexpected events such as flash floods are still largely unpredictable. Also, while evacuation can keep people safe, it does not protect valuable infrastructure from being destroyed.

FPO

Figure 9.4.2
Flood Awareness Map's introductory video

Concepts and skills builder 9.4



Using a Geographic Information System

A geographic information system (GIS) is a form of geospatial technology used to gather, manage and **analyse** spatial information such as hydrology data. This can include river and flood water heights, elevation data and the location of previous flood events. Geographers use this data to better understand how floods work, to model future flood events and to **analyse** which areas are most vulnerable. Brisbane's Flood Awareness map is a GIS that can be used to explore the likelihood of a flood occurring in the suburbs of Brisbane. Visit <http://cambridge.edu.au/redirect/11153> to take a look. Select 'I want to search the Flood Awareness Map' to access the map.

- 1 Watch the introductory video and use the information to define river, creek, overland flow and storm tide floods.
- 2 Find 'The Gabba' (Brisbane Cricket Ground). Use the 'Flooding – all types' layer and the legend to determine the likelihood of this stadium flooding.
- 3 Determine which area of Brisbane is the most prone to flooding. **Suggest** a factor that might be responsible for this vulnerability.
- 4 Open the layers toolbar by selecting the Layers icon on the top right of screen. **Compare** the extent of flooding in February 2022, January 2011 and January 1974.
 - Which flood covered the greatest area?
 - Does this vary across different parts of Brisbane?
- 5 Select the Menu on the top right of screen and access the Flood Information Hub. Explore this website and **list** three things that residents or community organisations can do to manage flood risks.

Geographical concepts and skills: interpret and analyse information and data

Go online to access the interactive lesson review and more!

Lesson 9.4 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



9.4 Review questions

- 1 **Describe** how houses can be constructed to reduce the risk of flooding.
- 2 **Explain**, with the use of an example, how the use of computer modelling software can help to manage flood risks.
- 3 Think back to the Libya flood disaster at the start of this chapter (lesson 9.1). **Explain** how dams can both prevent but also increase flood risks.
- 4 Refer to the four responses **outlined** in Table 9.4.1. Rank these four responses from most effective to the least effective in terms of reducing the negative impacts of floods. **Justify** your reasoning.

Case study: What were the impacts of the 2022 Lismore floods?



Learning intention

In this lesson, we will learn about the causes, impacts and management of the 2022 floods across eastern Australia, with a focus on the Lismore Flood.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- See:** How extensive is the damage?
- Think:** Consider the cause of the destruction.
- Wonder:** How about the way the flood managed and what is the likelihood of it happening again?



↑ Figure 9.5.1 Flooding in the main street of Lismore, 31 March 2022

In 2022, a series of catastrophic floods led to disasters across eastern Australia, combining to become the largest natural disaster Australia has experienced since Cyclone Tracy in 1974. From February to May, a series of floods hit southern Queensland and northern New South Wales, with some regions receiving more

than a year's worth of rainfall in just one week! When combining both short- and long-term impacts, this disaster is estimated to be Australia's most costly. Although this disaster affected several regions across eastern Australia, this lesson focuses on the impacts in Lismore, NSW.

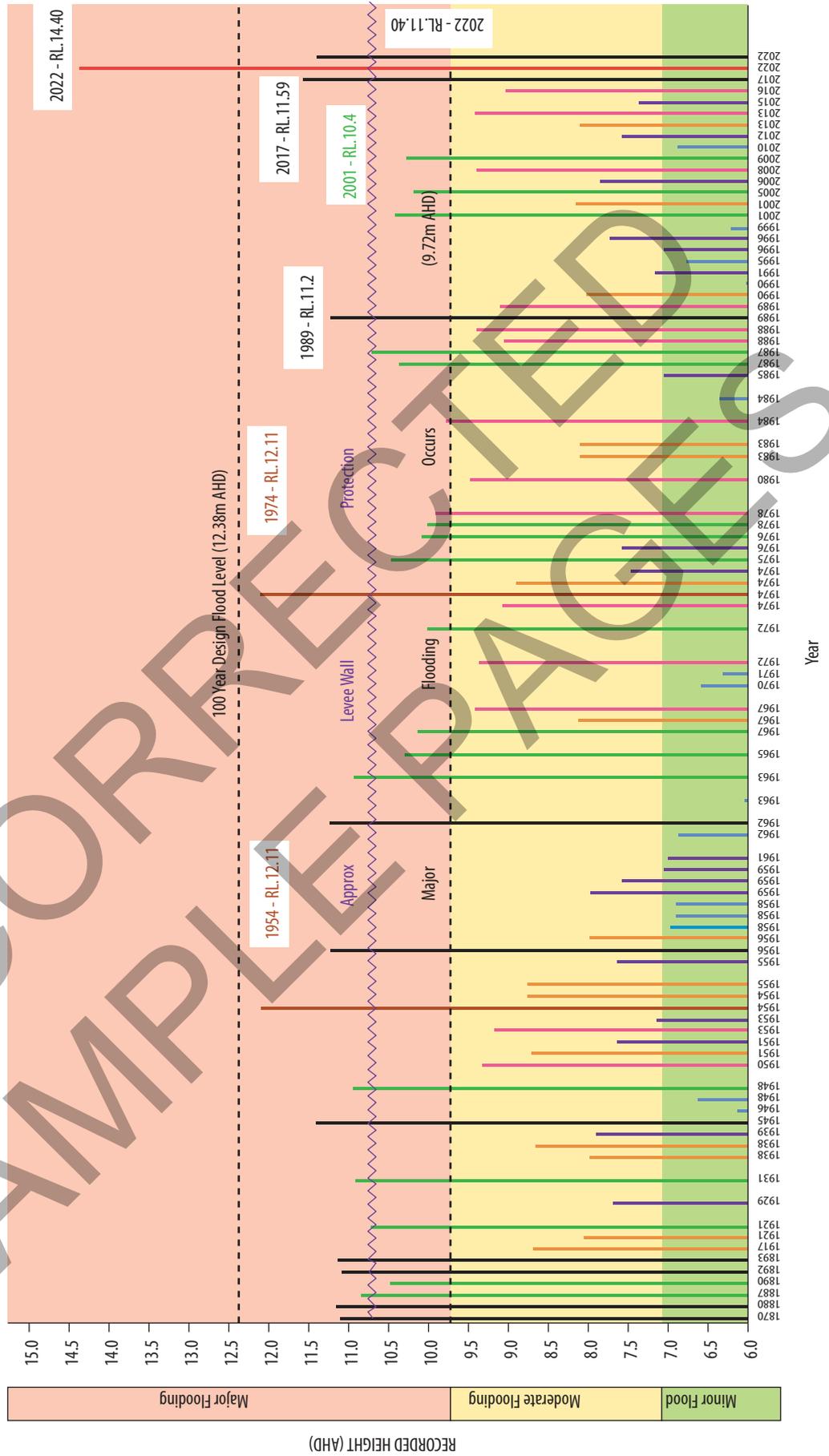


**HISTORY OF LISMORE FLOOD EVENTS
1870-2022**

FOR EVENTS HIGHER THAN 6.0m AHD

- 6m to 7m
- 7m to 8m
- 9m to 9m
- 9m to 10m
- 10m to 11m
- 11m to 12m
- 12m to 13m
- 13m to 14m
- 14m to 15m

- Minor Flood - App. 4.2m
- Moderate Flood - App. 7.2m
- Major Flood - App. 9.7m



Source: Lismore City Council (2023)

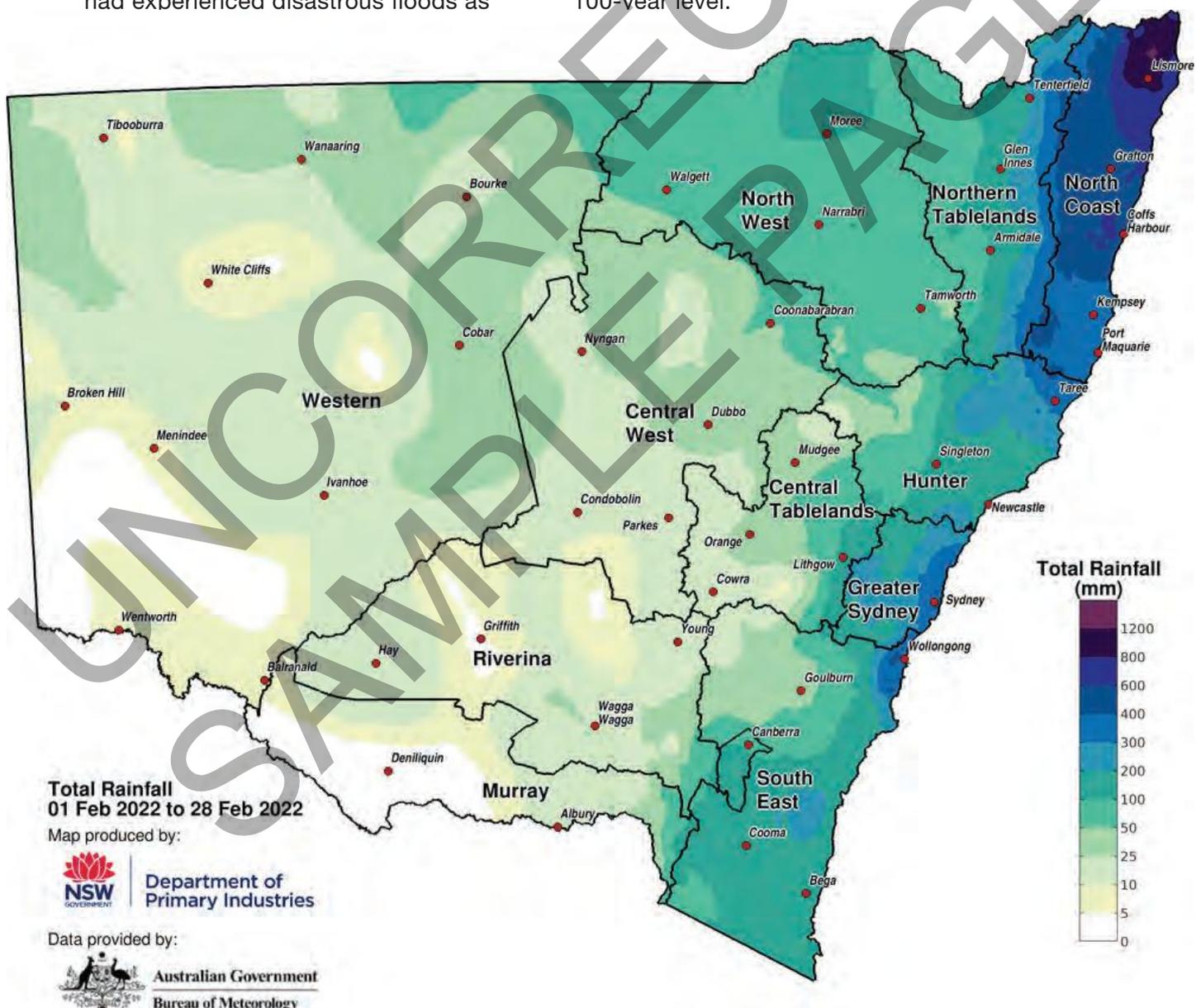
↑ Figure 9.5.2 The history of Lismore flood events from 1870 to 2022

Causes of the Lismore flood disaster

Lismore is located in the centre of the Northern Rivers region at the north-eastern tip of New South Wales. It is located on a floodplain at the confluence of the Wilson River and Leicester Creek and is considered one of Australia's most flood-prone locations. Since records began in 1870, the Lismore region has experienced over 30 major floods, with the 2022 floods reaching an unprecedented height of 14.4 metres (see Figure 9.5.2 on the previous page).

Although Lismore's 44 000 residents had experienced disastrous floods as

recently as 2017, they were not prepared for the scale of the 2022 floods. The Bureau of Meteorology were unable to accurately forecast the extent of the rainfall. On February 27, it was predicted that Dunoon, upstream of Lismore, had a 10 per cent chance of receiving rainfall of above 113 mm. In the 24 hours that followed, Dunoon received a torrential downpour of 775 mm. At 9.30pm on Sunday February 28, Lismore's residents were ordered evacuate with only half an hour of notice. Floodwaters peaked more than two metres above the 1-in-100-year level.



↑ Figure 9.5.3 The total rainfall for February 2022 across New South Wales. Lismore is located in the north-eastern tip of New South Wales.

Concepts and skills builder 9.5



Analysing change over time

The bar graph in Figure 9.5.2 shows the height of all large flood events since 1870. The height of the bar refers to the recorded height of the flood water. The bars are colour coded based on their height and floods are grouped into minor, moderate and major events. The horizontal purple line shows which floods will be protected by the levee while the black dashed horizontal line shows the level of 1-in-100-year floods. That is, a flood which occurs on average every 100 years and has only a 1 per cent chance of occurring each year.

Use the information in Figure 9.5.2 to answer the following questions:

- 1 How many major floods occurred between 1870 and 2022?
- 2 How high was the flood in 2022 and how much higher was it than the previous highest?
- 3 Has the number of major floods changed much since 1870? **Suggest** a reason for your answer.
- 4 **Predict** how the graph might look if it is continued to 2050. **Justify** your prediction.

Geographical concepts and skills: change

The extent of the impacts

insurance premiums the amount of money an individual pays for their insurance policy

The impacts of the 2022 Lismore floods were extensive. Despite the call for evacuation, thousands of people were left stranded on rooftops while those in remote areas were cut off due to flooded roads. Four people perished in the February flood while another

died in a second flood in March. Tens of thousands of homes were damaged or destroyed, many of which were not insured. **Insurance premiums** are far more expensive in disaster-prone regions and were unaffordable for many residents.

↓ Figure 9.5.4 Lismore's houses were surrounded by water, leaving many residents stranded on rooftops awaiting rescue.





↑ Figure 9.5.5 Piles of damaged goods lined the main street of Lismore as the cleanup began.

In addition to personal losses, the damage to council assets is estimated at \$350 million. This includes damage to roads and bridges, community spaces, and waste and water infrastructure. The total cost of rebuilding the city is estimated to be around \$1 billion. Personal financial losses combined with damage to businesses threatens the economic sustainability of the region. In the 16 months following the disaster, Lismore's economic productivity was down 15 per cent. Future losses are predicted as future development projects in the region are halted.

Many of the impacts have remained long after the floodwaters receded. By the end of 2022, around two-thirds of those affected said they were not coping with the stress and challenges of the recovery. While waiting for housing assessments and insurance payouts, more than half of victims were still living in damaged homes, one-quarter in temporary accommodations such as caravans and sheds, 20 per cent in insecure accommodation such as tents and 4 per cent had left the region.

Planning for the future

Following the 2022 floods, the New South Wales government undertook a flood inquiry. Recommendations have been made to ensure that a disaster of this scale is avoided in the future. These include:

- investing in infrastructure to reduce flooding, such as levees, as well as investing in improving weather forecasting equipment such as river and rain gauges and weather radars
- development of the 'Hazards Near Me' phone app to help residents receive crucial information during emergencies
- increasing funding for the State Emergency Service to assist during disasters
- ensuring reconstructed houses and buildings are resistant to flooding
- ensuring that insurance premiums are as affordable as possible for people living in flood-prone regions

- considering climate change projections in future planning decisions
- constructing permanent relief housing across Australia to provide short- and long-term temporary housing to those affected by natural disasters
- identifying existing buildings across Australia that could be used as evacuation and relief centres such as schools and halls
- managing retreat – abandoning buildings in high-risk areas and rebuilding in safer locations.

Managed retreat occurs when homes classified as being very vulnerable to disasters are purchased by the government and bulldozed, allowing people to relocate to safer locations. Although this sounds like a sensible approach, it is a very controversial

strategy. While many are grateful to sell their houses and move to safer ground, others dispute the amount of money offered by the government. Despite the payment, some people are reluctant to leave their houses, while others refuse to leave. As people are inevitably forced to move away, local populations decline and businesses suffer from a loss of customers, causing an economic decline. However, if managed retreat does not occur, families will continue to build houses in vulnerable locations where insurance is becoming increasingly costly and sometimes unavailable. Meanwhile, taxpayers across Australia are forced to pay the growing rescue and relief costs. The Northern Rivers Reconstruction Corporation are expected to purchase over 2000 of Lismore's properties as part of a managed retreat scheme.



Go online to access the interactive lesson review and more!

Lesson 9.5 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



9.5 Review questions

- 1 Use Google Maps to find the location of Lismore. **Describe** its location within New South Wales.
- 2 **Explain** why Lismore is considered to be one of the most flood-prone places in Australia.
- 3 Refer to Figure 9.5.3.
 - a How much rainfall did Lismore receive in February 2022?
 - b Undertake research to find the average rainfall for February in Lismore. How much higher was the rainfall in 2022 **compared** to the February average?
 - c **Name** three other places that received more than 300 mm of rainfall during this period.
- 4 Using a table, **summarise** the impacts of the Lismore flood disaster. Classify your impacts as short- and long-term.

End of investigation review: Water in the world



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorcher timed competitive quiz.

Making thinking visible



I used to think that ...

Now I understand that ...

This exercise in visible thinking asks you to track the difference between what you knew about water resources, water management and flooding before starting this unit, and what new understandings you have acquired since reading the chapter. Use the following sentence stems to write one or more sentences demonstrating your understanding of these concepts. Refer to examples from the unit wherever possible.

1 a I used to think that the amount of water on the earth was ...

b Now I understand that ...

2 a I used to think that drinking recycled water was ...

b Now I understand that ...

3 a I used to think that most of our water resources were used for ...

b Now I understand that ...

4 a I used to think that flooding was caused by ...

b Now I understand that flooding can be caused by ...

5 a I used to think that flooding only had negative impacts because ...

b Now I understand that flooding can have positive impacts because ...

6 a I used to think that flooding was dangerous because ...

b Now I understand that flooding is also dangerous because ...

Using geographic concepts



Geographers use key geographic concepts to help frame their thinking and **analyse** different situations and ideas. Choose one of the following statements and write a paragraph discussing the extent to which you agree or disagree with them. In your answer, refer to one or more examples studied in this unit and make use of at least one geographic concept.



↑ Figure 9.6.1 An aerial view of irrigation around the Murray–Darling basin

- 1 The most significant factor determining whether a place is affected by water scarcity is climate.
- 2 Water allocated for irrigation should be prioritised over environmental and cultural flows within the Murray–Darling Basin.
- 3 Preventative responses are far more effective than adaptive responses in reducing the impacts of flooding.
- 4 A country's wealth is a major factor in determining whether it is able to reduce the risk and impacts of floods.

Reminder of geographic concepts: place, space, change, scale, interconnection, environment and sustainability.

Solving geographical problems



- 1 Design a type of construction that will help to prevent flooding, or a style of building that would reduce the impact of flooding. Draw a labelled diagram demonstrating how your design works and explain how it could be used in a specific place.
- 2 Undertake further research about the way water is allocated within the Murray–Darling Basin. Consider the competing needs of this limited resource and **outline** what you think is the fairest and most effective way to allocate and manage water resources. Consider whether the lessons learnt from the United Arab Emirates could be applied and whether environmental and cultural needs outweigh the agricultural demand and economic potential.

Research tasks



- 1 Choose one of the following research questions, undertake research to help answer the question and prepare a report, oral presentation, or multimedia presentation to **demonstrate** your findings.
 - Is solar, wind, hydro, fossil fuel, or nuclear energy the most viable and sustainable option for the future of energy production in Australia?
 - What are the impacts of salinity due to irrigation in Australia? Find out how much of Australia is affected, the main causes of the problem and the ways that Australians are trying to reduce the impacts.

- To what extent are dams in Australia, or elsewhere in the world, impacting the environment, people and local economies? Do the benefits outweigh the consequences?
- What are some of the specific impacts of the management of the Mekong River in downstream communities? Is this likely to change in the future? How could the river system be managed more sustainably?

2 Managing water within the Murray–Darling Basin is one of the greatest resource management challenges in Australia. Choose one of the following perspectives:

- A farmer who withdraws water to irrigate crops
- A local resident in a farming town such as Goulburn or Renmark
- An environmentalist concerned with the health of wetlands and river environments
- A First Nations person wanting to support the continuation of connection to Country for the next generation.

Research the challenge of water scarcity from this perspective including some specific examples of its impacts within the region.

Identify an improvement that could be made to water management to ensure there is an adequate supply.

3 Undertake research to find a list of places around the world, or within a country, which are prone to severe flooding.

- Create a map that shows where this flooding occurs and where it is most severe.
- **Identify** any patterns in your map. Why does flooding occur in some places and not others?
- Try to find exceptions. Are there any places where flooding does not occur despite being located in a vulnerable region?



↑ Figure 9.6.2 People wading through floodwaters caused by heavy monsoon rains in Bangladesh.

4 Research a major flood that has occurred somewhere outside of Australia. Prepare a case-study that includes the following:

- The location and geographic characteristics of your chosen place
- The cause of flooding
- The economic, social and environmental impacts over short- and long-term periods
- A summary of responses that either aimed to prevent the flooding or reduce the flood's destruction
- An evaluation of the effectiveness of these responses.

INVESTIGATION 2

Place and liveability

OVERVIEW

Place and liveability explores how the characteristics of the places in which we live influence our lives in different ways and the various influences on people's perceptions of liveability, including the access to services and facilities, environmental quality, social connectedness and community identity needed to support and enhance our lives. Students consider the ways that the liveability of a place is enhanced and how sustainability is managed. The sub-strand concludes with an investigation of ways to improve the liveability of the local area, which provides opportunities for local fieldwork.

Source: VCAA, Victorian Curriculum V2.0, 'Geography', 'Band description – Levels 7 and 8'

CURRICULUM GOALS

- How can people influence the liveability of the places in which they live?

Source: VCAA, Victorian Curriculum V2.0, 'Geography', 'Band description – Levels 7 and 8'

CHAPTER 10

How do the characteristics of places influence our lives?



LESSON	TITLE
10.1	Setting the scene: How has careful urban planning helped make Melbourne a very liveable place?
10.2	What is a place?
10.3	Why do people live where they do?
10.4	Why do we measure liveability?
10.5	How does access to facilities and services vary between places?
10.6	How are wealth and liveability interconnected?
10.7	How does social connectedness affect liveability?
10.8	How does environmental quality affect liveability?

Setting the scene: How has careful urban planning helped make Melbourne a very liveable place?



Learning intention

In this lesson, you will be introduced to some of the features and themes that we cover when studying place and liveability.

infrastructure the physical structures and facilities needed within a community such as roads, buildings and pipelines

central business district (CBD) the centre of business in a town or city

pedestrian people who are walking rather than travelling in a vehicle

urban planning the process of planning the layout and infrastructure of a place

sustainability the wise use of resources so that they are available into the future

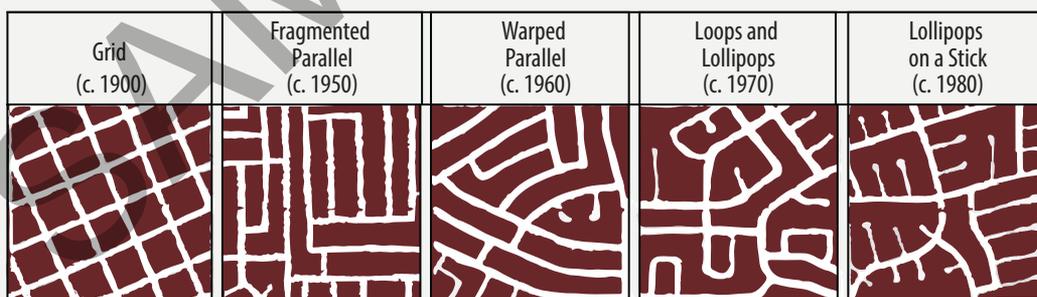
accessibility resources or services are available and affordable for all people to use

Melbourne often ranks as one of the world's most liveable cities. But what is it about our capital city that makes it so popular for residents and visitors alike? Have you ever wondered how Melbourne was first designed? Or how the city keeps evolving to meet our changing needs?

Melbourne's consistent livability ranking is due to its safety, education, healthcare, **infrastructure** and employment opportunities. The city's **central business district (CBD)** plays a major role in its appeal. The CBD is easy to navigate, thanks to its grid system, where streets are distributed in a grid pattern, see Figure 10.1.1. Easy

travel within the city is also enhanced by Melbourne's iconic tram network and **pedestrian**-friendly laneways. All these features are not accidental; they exist because of **urban planning**.

Urban planners shape the world we live in as they design our cities and plan our infrastructure. Urban planning has significantly influenced Melbourne's evolution. Historically, cities used grid systems from the seventeenth to nineteenth centuries, adapting later to accommodate cars in the twentieth century. Today, urban designs prioritise **sustainability** and **accessibility**, reflecting modern needs and trends.



↑ Figure 10.1.1 Types of street patterns in urban planning during the twentieth century.

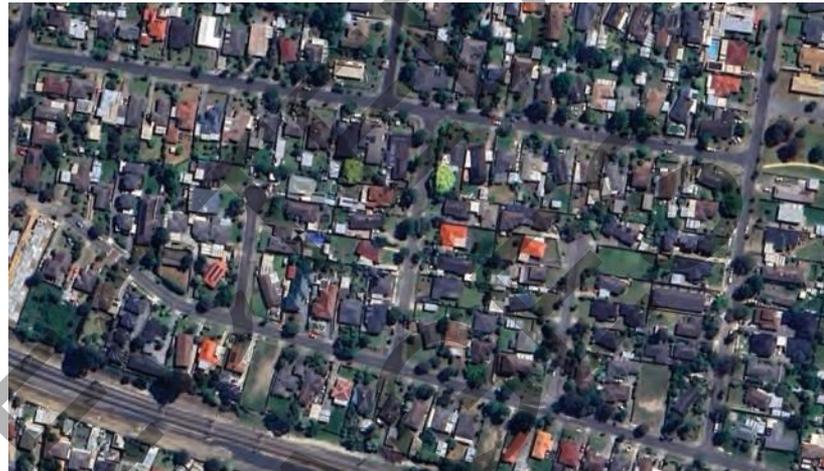
While the layout of Melbourne’s CBD has not changed, the use of the space and the **sense of place** has evolved. Transport has continued to improve and serve the population as it grows to nearly five million residents, and streets have become more

accessible for pedestrians. The value and meaning of various places in the CBD have also changed, reflecting shifts in values and historical events, such as the renaming of Stephen Street to Exhibition Street after the 1880 International Exhibition.

sense of place the meaning that a person or group attaches to a specific area or space



↑ Figure 10.1.2 An aerial view of Melbourne’s grid system.



↑ Figure 10.1.3 An aerial view of Berwick, Victoria. Which of the street patterns (shown in Figure 10.1.1) best represent the pattern you can see here in Berwick?

Some public spaces, like Federation Square, hold **heritage status** and cultural importance. Initially criticised for being expensive, Federation Square has become an

important social place in Melbourne. Similarly, Bourke Street Mall, pedestrianised since 1978, connects many arcades and serves as a hub for retail and cultural activities.

heritage status a status given to a building or area to protect it from future development and preserve its past

Lesson 10.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



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10.1 Lesson review

Imagine if you could plan the City of Melbourne from scratch.

- 1 **Identify** ways you could make it effective? (work well)
- 2 **Identify** ways you could make it efficient? (easy to use; fast to use)
- 3 **Propose** ways you could make it ethical? (good for the community; easy to share; safe; fair for all types of people)
- 4 **Propose** ways you could make it beautiful?

What is a place?



Learning intention

In this lesson, you will learn about the important geographic concept 'place' and how this concept helps geographers interpret the world around them.

Lesson starter



Complete the following activity to kick-start this lesson.

Analysing the meaning of different places

Examine Figures 10.2.1–10.2.3 to answer the following questions:

- 1 **Name** the place in each image.
- 2 **Discuss** what each of these places might mean to people.
- 3 **Discuss** how these places may change over time.



↑ Figure 10.2.1



↑ Figure 10.2.2



↑ Figure 10.2.3

What is a geographic concept?

A geographic concept is an idea that helps us understand the world and the places around us. Geographers use these concepts to explore, study and explain different features of Earth. Some key geographic concepts are place, space, environment, scale, change and sustainability.

Each concept helps answer questions about our world. For example:

- Place helps geographers understand what makes a location special or unique.

- Space is about where things are located and how they relate to each other.
- Environment looks at how humans and nature interact with each other.

Geographers use these concepts to ask questions, make observations, and organise information. This helps them understand how different parts of the world work together and how they change over time. In this lesson we will focus on the place concept.

What is a place?

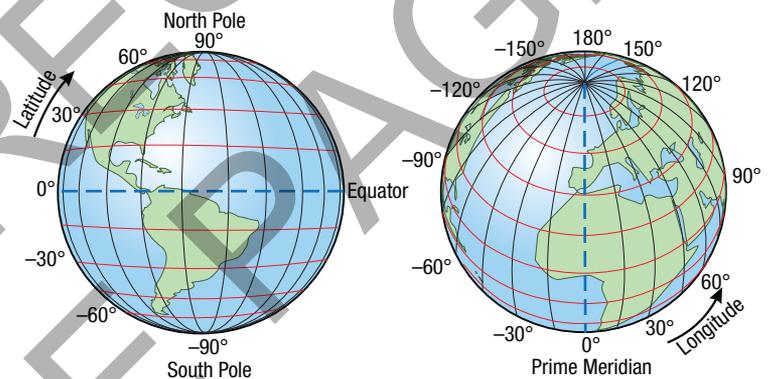
A place can be defined as follows:

- 1 Places are physical locations on Earth's surface.
- 2 Each place has a unique set of characteristics that distinguish it from other places, although these can change over time.
- 3 Places have special meaning to the people who live there.

How do geographers describe places?

In Geography, we use **absolute location** to describe the exact position of a place on Earth using latitude and longitude. Latitude lines run east to west and measure the degrees of a place from the Equator, while longitude lines run north to south and measure the degrees from the Prime Meridian. Latitude is written first, followed by longitude. For example, the location of Melbourne is 37°S, 144°E.

A place can also be described by its **characteristics** - the things that make them unique. Natural characteristics include features like landforms, climate and plants. Human characteristics refer to things created or influenced by people, such as buildings, roads, or language. Together, these help us understand what a place is like and how it is different



↑ Figure 10.2.4 The imaginary lines of latitude (the lines in red) and longitude (the lines in black) create a grid which help geographers pin-point places with accuracy.

from other places. These characteristics can change over time due to natural processes, such as a volcanic eruption, or human activities, such as migration.

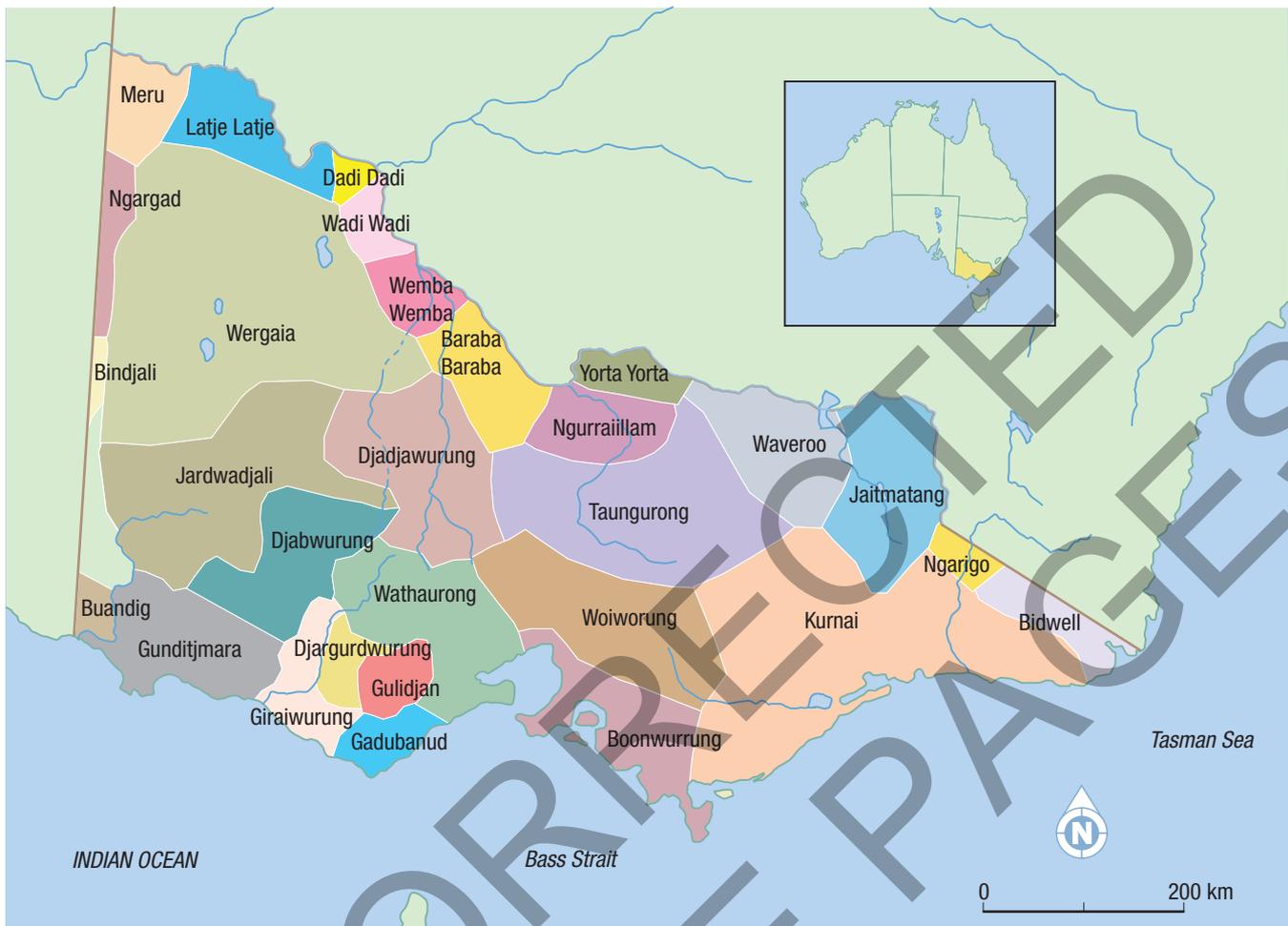
Places hold deep significance for the people who belong to them. For First Nations Peoples, connection to place is central to identity, knowledge, and cultural practices.

For Torres Strait Islander Peoples, place encompasses land, sea, and sky, woven together through ancestral and spiritual connections. For Aboriginal Peoples, Country is belonged to and cared for, with special places for ceremony, learning, and healing, as well as landmarks linked to ancestor spirits and stories that connect places and people.

characteristics the unique natural and human features of a place

absolute location the latitude and longitude of a location, also known as co-ordinates

These places are culturally significant and hold ongoing responsibilities for care, protection, and respect.



↑ Figure 10.2.5 Traditional names of Victorian places, as referred to by Aboriginal Australians. [Adapted from the VACL Aboriginal Languages of Victoria Map with permission from The Victorian Aboriginal Corporation for Languages (VACL)]

Concepts and skills builder 10.2



Applying the place concept using relative location

relative location
the location of a place in relation to another place or feature

In addition to the ways described above, geographers can also use the **relative location** to describe the position of a place relative to another place or feature.

To determine the relative location between two places on a map, you will need to refer to the compass to determine direction and the map scale to determine the distance.

To measure distance on a map:

- 1 Find the map scale. This is shown in Figure 10.2.6 as a line marked with distances.
- 2 Measure the distance: Use a ruler to measure the distance between two points on the map.
- 3 Convert using the scale: Multiply the measured distance by the scale to find the actual distance. For example, if 1 cm on the map equals 1 km in real life, and you measured 2.5 cm between the two places, the actual distance would be 2.5 km.

To determine the directions on a map:

- 1 Refer to the compass on the map to determine where north is. The north arrow is often, but *not always* pointing towards the top of the page, so it is important to check this.
- 2 The compass in Figure 10.2.7 will also help you **interpret** the direction.

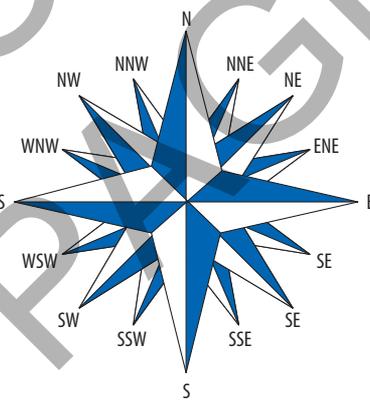


↑ Figure 10.2.6 Map of Victoria, Australia

A typical written statement about the relative location would look like this: *Princetown is located 230 km south west of Melbourne.*

Using Figure 10.2.6 as your reference, write your own relative location statements for the following:

- Lakes Entrance is located ... kilometres ... of Melbourne.
- Hamilton is located ... kilometres ... of Shepparton.
- Colac is located ... kilometres ... of Echuca.
- Kalimna is located ... kilometres ... of Narm. Note: this question uses original place names and you may need to do some research to answer this question.



↑ Figure 10.2.7 The 16 points on this compass rose can help you determine direction.

Geographical concepts and skills: place, scale

Lesson 10.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



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10.2 Review questions

What is a geographic concept?

- Define** the concept place.
- List** the four different ways of describing place mentioned in this topic.
- Using Figure 10.2.5 as a reference, **identify** the Traditional Custodians of the place where you live. Conduct research using reliable sources, such as local Aboriginal organisations, Traditional Owner groups, or cultural institutions, to learn about the significance of this place for them. Write a short paragraph respectfully acknowledging their deep and ongoing connection to Country, including the cultural, historical, and spiritual meanings this place holds.

Why do people live where they do?



Learning intention

Last lesson, we learnt about the concept of place. In this lesson, you will be introduced to the term liveability, and you will learn some of the reasons why people live where they do.

Lesson starter



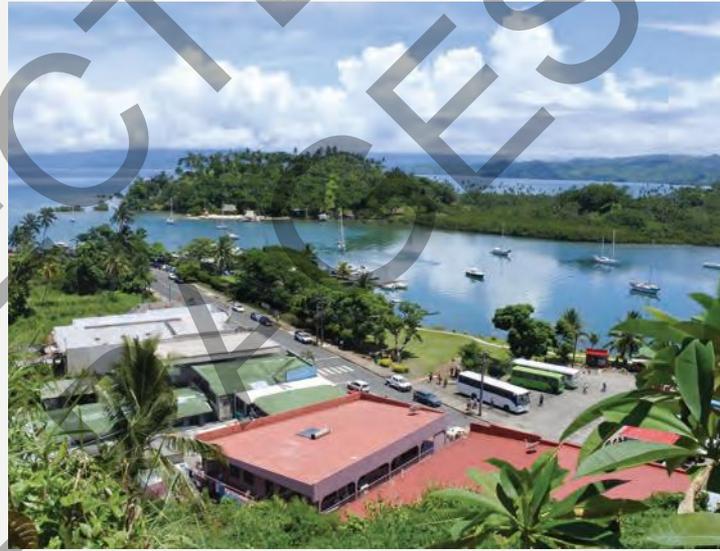
Complete the following activity to kick-start this lesson.

Discussing the liveability of different places

- 1 **Examine** Figures 10.3.1–10.3.3. Which place would you rather live in? **Justify** (give reasons) for your choice.
- 2 What do you think would be the benefits and drawbacks of living in each of these places?



↑ Figure 10.3.1 Manhattan, New York



↑ Figure 10.3.2 Savusavu, Vanua Levu, Fiji



↑ Figure 10.3.3 Alsace, France

What is a place?

As we discussed in Lesson 10.2, the word place refers to both the physical location of an area and what the location means to people who live there. Different people can have different **perceptions**

of the same place. This is because an individual's sense of place can be shaped by the positive and negative experiences they have there, based on factors such as a person's background, age and culture.

perception the way something is viewed or understood

What is liveability?

The term 'liveability' refers to how good the quality of life is for the people who live in a particular place. To measure whether a place has a high or low level of liveability, we look at the quality of living conditions in that place. Places

with high levels of liveability cater for people of many ages, backgrounds and physical abilities, as well as care for the environment. They are not just places where people survive, but where they can thrive, too.

Why do people live where they do?

People live in different places for a variety of reasons. Some people move for employment and education opportunities, some people move seeking safety and security, and some people stay in an area because of their connection to it.

to an area. These are positive motivations that will benefit the person who is moving to a place, such as better job opportunities, good quality education and living conditions.

push factor the reasons people move away from an area

access the right or ability to enter, look at, or use something

pull factor the reasons people move to an area

tangible things that you can physically see and touch

intangible something that exists but you cannot see or touch it

The choices people make about where they live are often based on push factors and pull factors. A **push factor** is a reason that causes a person to leave an area, such as war and conflict, unemployment, poverty, harsh climate, lack of **access** to services and limited opportunities for education. A **pull factor** is a reason a person moves to or is drawn

Different people value different things in a place and are drawn to those features. For example, young adults might be attracted to the excitement and opportunities of city life, while families might prefer quieter areas with more space and nature. People judge the liveability of a place based on **tangible** factors like infrastructure and services, as well as **intangible** factors like safety and culture.

Concepts and skills builder 10.3



Classifying push and pull factors

Classifying is the skill of organising ideas or information into categories. This process helps us understand similarities and differences among the classified items.

- 1 Consider the places shown Figures 10.3.4–10.3.8.
- 2 Create a table of push and pull factors that you identified for each place.
- 3 Write a question that you have about living in each place.
- 4 Which of these extreme places would you prefer to live in? **Justify** your reasons.

→ Figure 10.3.4 Coober Pedy, Australia, is home to approximately 1500 residents. Many people live in underground caves due to the hot climate. The town thrives due to its opal mining industry, where some of the world's most valuable opals are found. This industry provides well-paying jobs that keep the community alive.





↑ Figure 10.3.5 The residents of Kandovan, Iran live in 700-year-old house-caves carved into the volcanic rock. The first settlers arrived after fleeing the Mongol conquerors, and despite hot summers and sub-zero winter temperatures, people continue to live here and enjoy modern features such as the internet. The region has a tourist industry and produces honey, walnuts, almonds and warm woollen handmade clothes.



↑ Figure 10.3.6 The indigenous Inuit people who live in Kulusuk, Greenland face harsh Arctic weather. However, the seals in the surrounding islands and fjords provide a crucial livelihood. Seal hunting provides skins to make warm clothing, blubber to heat homes and cook food and meat needed to sustain life. The Inuit have lived and hunted in Greenland for 4500 years and have strong family and cultural ties to the place.



↑ Figure 10.3.7 Around 200 people live in Aogashima, Japan, despite its volcanic environment. Volcanic soil is often very fertile, making it easy to grow lots of nutrient-rich food.



↑ Figure 10.3.8 Huacachina, in Peru is a lush oasis located in the Ica desert sands. Originally built as a resort, its popularity stems from tourism. It is also renowned for the sport of sandboarding.

Geographical concepts and skills: place, environment



Go online to access the interactive lesson review and more!

Lesson 10.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



10.3 Review questions

- 1 **Define** the following terms: liveability, push factor, pull factor.
- 2 **Explain** why people have different perceptions of place?
- 3 Consider the push and pull factors that draw people to or from your town. **List** these in a push/pull table.
- 4 **Summarise** the information from your table above to write a paragraph using a similar structure to this: *My hometown is a desirable place to live for many people. Some of the pull factors that attract people to this place include. . . However, the town does have its drawbacks, such as . . . These drawbacks reduce the liveability of my town because . . .*

Why do we measure liveability?



Learning intention

Last lesson, we learnt about the concept of liveability. In this lesson, you will learn why and how geographers such as urban planners measure liveability.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

Examine the images and captions at <http://cambridge.edu.au/redirect/11154> and have a look at children and their toys from around the world. What do you **see**, **think** and **wonder** about the liveability of these children's places, based on these images?

Several organisations research the liveability of cities around the world. Every year, these organisations rank cities from the most liveable to least liveable based on specific criteria. Some criteria include physical (tangible) features like roads and public transportation, while others focus on what people think (intangible features), such as how safe they feel. Geographers and city planners use this information to

decide what makes a place good or bad to live in. They then use this knowledge to make our cities and towns better places to live in.

Organisations like Mercer and the Economic Intelligence Unit (EIU) measure liveability for different reasons, and can therefore get different results, as seen in Table 10.4.1.

Table 10.4.1 The top 10 liveable cities, according to Mercer and EIU

Mercer's top 10 cities 2024	EIU top 10 liveable cities 2024
1 Zurich, Switzerland	1 Vienna, Austria
2 Vienna, Austria	2 Copenhagen, Denmark
3 Geneva, Switzerland	3 Zurich, Switzerland
4 Copenhagen, Denmark	4 Melbourne, Australia
5 Auckland, New Zealand	5 Calgary, Canada
6 Amsterdam, The Netherlands	6 Geneva, Switzerland
7 Vancouver, Canada	7 Sydney, Australia
8 Frankfurt, Germany	8 Vancouver, Canada
9 Bern, Switzerland	9 Osaka, Japan
10 Basel, Switzerland	10 Auckland, New Zealand

Mercer looks at factors that affect how well foreigners can live and work in a new city. They focus on factors like how easy it is to adapt to a new place and the quality-of-life standards that affect how happy employees are and how long they might choose to stay in a foreign country. The Mercer list is intended to help companies decide where to open offices and factories, and how much to pay employees.

The EIU looks at a wide range of factors that affect how good life is for everyone in a city. This includes factors like culture, the environment, how well the economy is doing, and the quality of roads and buildings. Their research helps governments and city planners understand how cities can handle and plan for challenges over time.

Despite some differences, many surveys measure liveability against the criteria outlined in Figures 10.4.1–10.4.5.



↑ Figure 10.4.1 Stability: Political stability, crime rates, and the likelihood of civil unrest or conflict



↑ Figure 10.4.2 Healthcare: Quality and accessibility of healthcare services, including hospitals, clinics and healthcare professionals



↑ Figure 10.4.3 Culture and environment: Availability of cultural amenities such as museums, theatres and restaurants, as well as environmental factors such as pollution levels, green spaces and access to nature



↑ Figure 10.4.4 Education: Quality of schools, universities and educational resources, as well as opportunities for lifelong learning



← Figure 10.4.5 Infrastructure: The quality and reliability of transportation networks, utilities (water, electricity, gas), communication systems (internet, mobile networks), and housing

Concepts and skills builder 10.4



Classifying liveability factors

E	T	N	R	N	S	N	C	S	G	U	E	S	K
C	N	P	T	O	T	E	O	E	W	N	C	C	R
R	A	Y	E	I	A	E	N	I	I	I	H	A	
I	T	E	N	T	B	M	F	T	L	V	L	O	P
M	U	T	R	U	I	T	L	I	D	E	O	O	S
E	R	A	E	L	L	N	I	L	L	R	P	L	A
R	E	M	T	L	I	E	C	I	I	S	G	L	N
O	R	I	N	O	T	M	T	T	F	I	N	I	I
A	E	L	I	P	Y	Y	I	U	E	T	I	B	T
D	A	C	K	H	V	O	O	E	L	Y	S	R	A
R	A	W	N	R	L	L	M	I	U	S	U	A	T
L	H	L	A	T	I	P	S	O	H	P	O	R	I
T	N	I	P	M	R	M	E	T	I	A	H	Y	O
R	L	A	M	U	S	E	U	M	R	L	U	O	N

In this task, you will continue building the skill of classifying. Classifying is the skill of organising ideas or information into categories.

- 1 Complete the liveability word search. There are 21 words to find. When you have found them all, create five columns titled: stability | healthcare | culture and environment | education | infrastructure, and classify the words from the wordsearch under the right heading.
- 2 Choose one of the five liveability criteria and create a poster. Write the name and definition of the criteria in the centre, e.g. 'Healthcare', and surround it with examples, e.g. doctors, hospitals, nursing homes.

Geographical concepts and skills: place, space, environment

Lesson 10.4 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



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10.4 Review questions

- 1 Referring to Table 10.4.1, **identify** how many of Australia's cities ranked in the world's top 10 in both the Mercer and EIU rankings.
- 2 **Explain** why there are differences between the Mercer and EIU rankings?
- 3 **Suggest** what you think geographers and urban planners learn from looking at the liveability of cities from around the world?

How does access to facilities and services vary between places?



Learning intention

Last lesson, we learnt about measuring liveability. In this lesson you will learn how access to services and facilities influences how people feel about a place's liveability.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- See:** Watch <http://cambridge.edu.au/redirect/11155>.
- Think:** Do you think that people living in different places around Australia can get the same medical care?
- Wonder:** What do you think would be some of the other challenges Jed might face, living where he does? What might be some of the reasons Jed spelling to live where he does?



↑ Figure 10.5.1 In some parts of Australia the only emergency medical team available is the Royal Flying Doctor Service, who sometimes have to use roads as airstrips to land.

Facilities and services

Facilities and services are both essential for a community's wellbeing, but what are they?

Table 10.5.1 The differences between facilities and services

Definition	Function	Examples
Facilities are physical locations or structures.	Facilities provide the space or equipment for activities.	Facilities include schools, hospitals, libraries, parks, sports centres
Services are activities or actions that help people.	Services provide direct help or benefits to people.	Services include healthcare services (doctors and nurses providing medical care), education services (teachers providing lessons), public transportation services (buses and trains running), waste collection services (garbage collection), emergency services (police, fire, and ambulance responses)

Access to facilities and services

Providing good access to facilities and services enhances the liveability of a place. Access needs to be available and **affordable**, and facilities and services

need to be environmentally, socially and economically sustainable, so that future generations can continue to enjoy living in a place. The availability and affordability of services and facilities are pull factors that attract people to a place.

affordability
the ability to afford a service or attendance of a facility; for example, going to the doctor

Spatial distribution of facilities and services

The concept of space is important to geographers. A key aspect of space is spatial distribution. This refers to how things are spread out or arranged across different areas. For example, the way facilities and services are spatially distributed can greatly affect people's access to them. Let's look at a few examples to understand this better:

Urban v rural areas

- **Urban areas:** Urban settlements have more than 10 000 residents and are often more compact. There is usually better access to services and infrastructure in urban areas. Cities usually have many facilities and services close by. For example, in a city, you might find several schools, hospitals and parks within a short distance. This makes it easy for people to access what they need.
- **Rural areas:** Rural settlements are found in the countryside and have fewer than 10 000 residents.

They are often large spaces with low populations. This makes it difficult for governments and businesses to provide services and facilities. Therefore, facilities and services can be far apart. There might be only one school or hospital serving a large area, meaning people might have to travel long distances to get there. This makes access more difficult.

Wealthier v poorer areas

- **Wealthier areas:** Places with more money often have better and more numerous facilities. For example, a wealthy neighbourhood might have many well-maintained parks, libraries and healthcare centres.
- **Poorer areas:** Areas with less money might not have as many facilities, or the ones they have might not be in good condition. This means people living there might struggle to access good quality services.

Why spatial distribution matters

- 1 **Health:** If hospitals are far away or overcrowded, it can be hard for people to get medical help quickly, which can be dangerous in emergencies.
- 2 **Education:** If there are not enough schools nearby, children might have to travel a long way to learn, or the schools might be too crowded, making it harder for them to get a good education.
- 3 **Daily life:** Everyday activities like shopping for groceries or going to the park can be more challenging if facilities are not easily accessible.
- 4 **Inequality:** If services and facilities are only accessible to a few people, such as those who can drive, it can create inequality. Opportunities are less available to those without access.

Concepts and skills builder 10.5



Reading and interpreting topographic maps

In this activity, you will practise the geographic skill of reading a topographic map, as well as looking closely at the **interconnections** between man-made and natural environments.

Topographic maps have grid lines that can help us locate and **explain** where different features of the map are found.

Finding an area reference

We can find larger features, such as the township of Anglesea, by finding its area reference (AR). An AR is made up of four numbers. The first two numbers are called eastings. Eastings are the vertical lines running from the top to bottom and divide the map from west to east. The numbers increase in an easterly direction along the map.

The following two numbers are called northings. Northings are the horizontal lines running left to right and divide the map from north to south. These numbers increase in a northerly direction along the map.

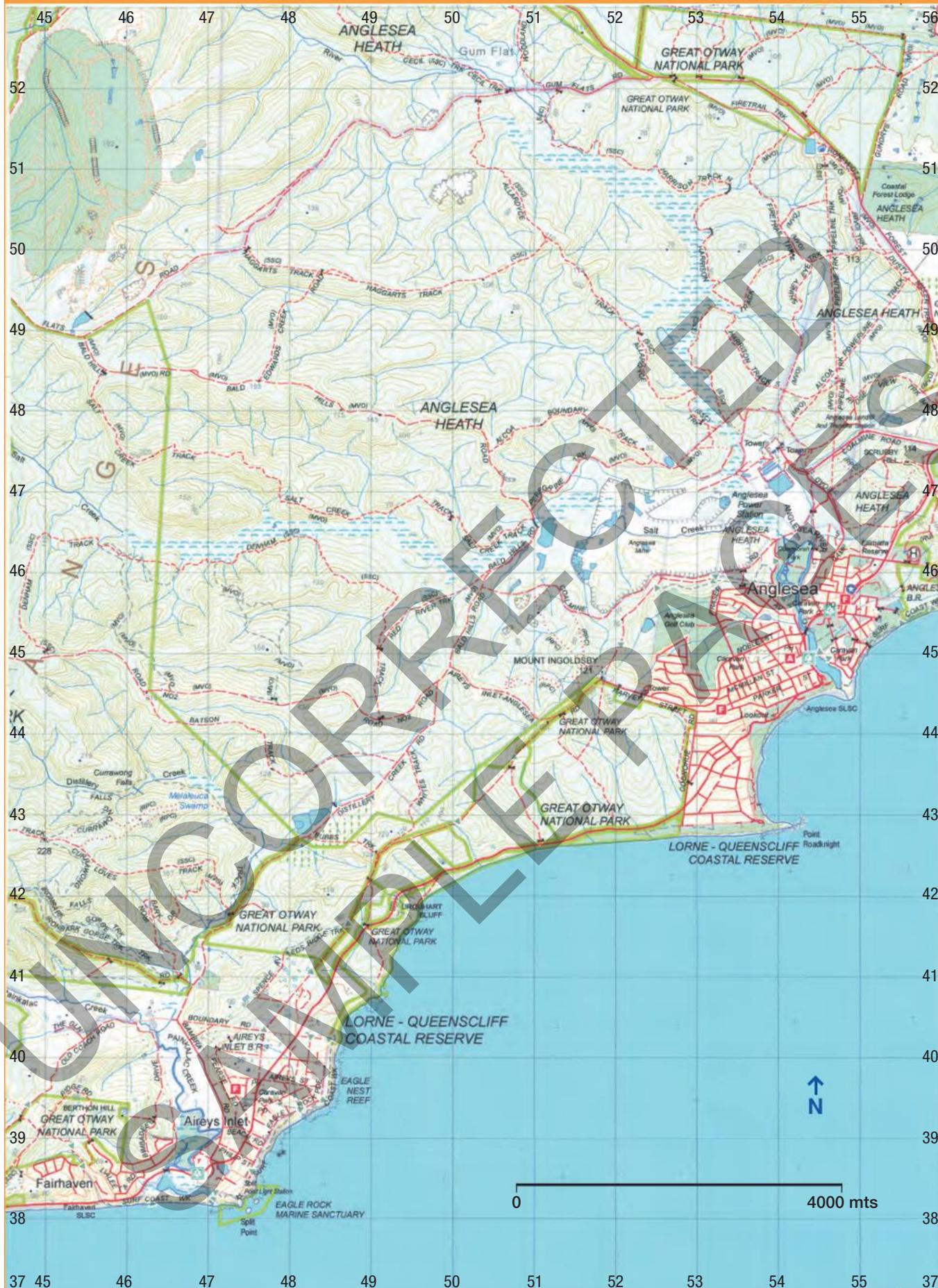
Let's test this out: Look at the map and find the Anglesea Surf Lifesaving Club (SLSC) on the coast. To find the AR of the SLSC, we first look to the easting number to the left of the club. In this case the number is 54. We then find the northing number directly below the club. This makes up our second two-digit number, 44. The AR for Anglesea SLSC is therefore 5444.

Reading symbols on a map

Symbols are often used on maps to represent the features of a map. These symbols are found in the *legend*. They often try to look like the feature that they are trying to represent. For example, can you find the symbol for a lake in the legend? Can you find a lake on the topographic map? What is the AR of this lake?

- 1 **Identify** one natural characteristic located at AR 4741 and 5250.
- 2 **Identify** the type of community facility located at AR 5344.
- 3 **Identify** the recreational facility found at 5245.
- 4 What is the AR of Anglesea's Police Station?
- 5 Using the map scale, estimate the distance between Anglesea's two fire stations.
- 6 Choose one of the natural and one of the human characteristics that you identified above and **explain** how each of these might improve or reduce the liveability of Anglesea.
- 7 What assumptions could you make about the liveability of this town, based on the services and facilities this place has to offer? What may be some of the benefits and drawbacks of living here?

<p>Built-up area.....</p> <p>Freeway, route marker, highway, bridge.....</p> <p>Secondary road: sealed, unsealed.....</p> <p>Vehicular track: 2WD, 4WD.....</p> <p>Walking track or bicycle track.....</p> <p>Private access, proposed road.....</p> <p>Great Dividing Track.....</p> <p>Road Restrictions.....</p> <p>(MVO) (SSC) (SHWL)</p> <p>MVO Management Vehicles Only</p> <p>SSC Subject to Seasonal Closure</p> <p>SHWL Subject to Height or Weight Limits</p> <p>RPC Roads Permanently Closed</p> <p>RU Road Unmaintained</p> <p>DWO Dry Weather Only</p> <p>Gate or Cattlegrid, levee bank.....</p> <p>Embankment, cutting.....</p> <p>Railway, tramway.....</p> <p>Railway station, railway siding.....</p> <p>Railway/tramway: disused, dismantled.....</p> <p>Railway bridge, railway tunnel.....</p>	FEATURES	<p>Building, post office, church, public hall.....</p> <p>School, police station, fire station, ambulance.....</p> <p>SES, hospital.....</p> <p>Neighbourhood safer place, emergency marker.....</p> <p>Pipeline, disappearing underground.....</p> <p>Power transmission line.....</p> <p>Trigonometric station, spot elevation.....</p> <p>Landmark area: quarry.....</p> <p>Landmark object: tank or well, tanks to scale.....</p> <p>Mine, helipad.....</p> <p>Landmark area, recreation area.....</p> <p>Tree cover: scattered or medium, and dense.....</p> <p>Plantation.....</p> <p>Orchard or vineyard.....</p> <p>Contours, rocky outcrop, hill shading.....</p> <p>Depression contours.....</p> <p>Cliff.....</p> <p>Sand.....</p> <p>Sand dunes.....</p>	VEGETATION	<p>PO C PH</p> <p>S F A</p> <p>S +</p> <p>MOR119</p> <p>Gas Water</p> <p>Transmission line</p> <p>83 34</p> <p>Silo Oil</p> <p>PH</p>	HYDROGRAPHY	<p>River, creek, crossing, adit.....</p> <p>Aqueduct, channel, drain.....</p> <p>Lake: perennial, intermittent.....</p> <p>Dam or weir, dam carrying road.....</p> <p>Falls, rapids.....</p> <p>Rapids in large river.....</p> <p>Lock.....</p> <p>Waterholes, swimming pool.....</p> <p>Water well or water point, spring.....</p> <p>Land subject to inundation.....</p> <p>Swamp or marsh.....</p> <p>Shoreline with mud or sand flats, mangroves.....</p> <p>Rock: bare or awash, rocky ledge or reef.....</p> <p>Exposed wreck, lighthouse.....</p> <p>Breakwater, pier or jetty, boat ramp.....</p> <p>Navigation beacon, wharf.....</p> <p>Parks under National Parks Act.....</p> <p>Crown land, restricted area.....</p> <p>Local Government Area boundary.....</p> <p>State boundary.....</p> <p>1:50 000 double format index.....</p>	ADMINISTRATION	<p>Drain</p> <p>Falls</p> <p>Rapids</p> <p>Lock</p> <p>MELTON SHIRE</p>
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↑ Figure 10.5.3 A topographic map of Anglesea

Geographical concepts and skills: place, space, scale, interconnection, environment



Go online to access the interactive lesson review and more!

Lesson 10.5 review

Online quiz



Review questions



Research task

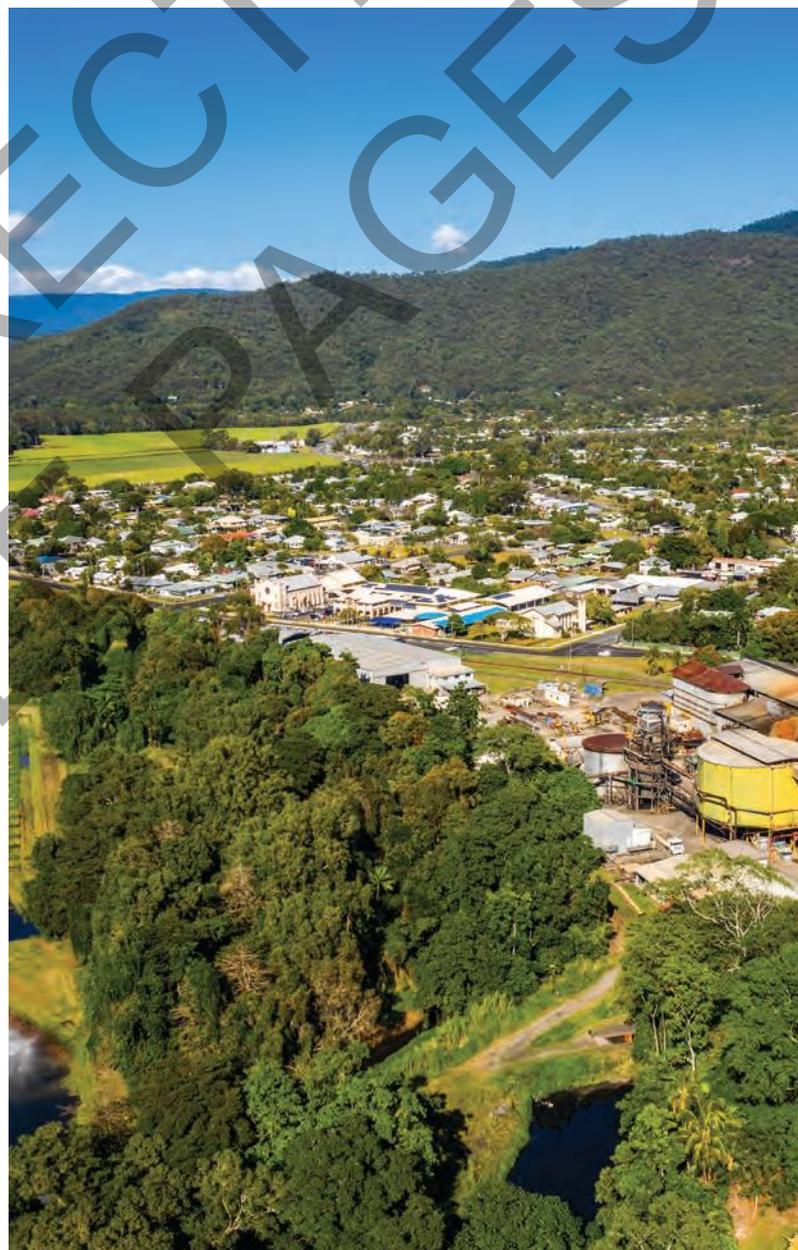


Teachers can assign tasks and track results



10.5 Review questions

- 1 **Explain** the difference between facilities and services, and support this with one example.
- 2 **Describe** the difference between rural and urban settlements.
- 3 **Explain**, in a paragraph, why the distribution of facilities and services matters to the liveability of a place.



↑ Figure 10.5.3 How might facilities and services differ if you moved from Victoria to either London in England, or up to Cairns in Queensland?

How are wealth and liveability interconnected?



Learning intention

The concept of interconnections in geography refers to the relationships and links between people, places and environments, showing how they affect and influence each other locally and globally. In this lesson, you will learn that wealth and liveability are deeply connected, each influencing the other in various ways. Understanding this relationship helps us work towards creating more equitable and thriving communities for all.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See: Examine** Figure 10.6.1.
- 2 **Think:** What differences in living conditions do you see between the communities to the left-and right-hand side of this image? **Identify** as many as you can.
- 3 **Wonder:** In what ways do you imagine these differences would affect the lifestyles of the people living in each community?

↓ [Figure 10.6.1](#) Wealth disparity in São Paulo, Brazil

FPO

resource anything that people need or use (for example, water, metals, oil and gas, trees)

asset property (for example, a house or car) that can be exchanged for cash

Wealth and liveability are closely linked, each influencing the other in significant ways. As we know, liveability refers to the overall quality of life in a particular place, considering factors such as safety, healthcare, education and the

environment. Wealth, on the other hand, relates to having a lot of valuable **resources**, **assets**, or income within a community. Understanding how these two concepts are interconnected is important.

The impact of wealth on liveability



↑ Figure 10.6.2 The parks, public transport and clean streets around the southeastern edge of the Melbourne CBD can indicate that it is an area of both high liveability and wealth.

Wealth can greatly influence liveability. In wealthier communities, residents typically have better access to high-quality healthcare, education and public services. For instance, affluent areas often feature well-maintained parks, clean streets and efficient public transportation, all of which enhance the quality of life. Additionally, wealthier communities tend to offer better job opportunities, leading to higher incomes and improved living standards for their residents.

How liveability attracts wealth

Conversely, high liveability can attract wealth to a region. When an area is known for offering a high quality of life, it tends to draw businesses and skilled workers. Companies often choose to operate in locations where their employees will enjoy living. This influx

of businesses and talent can boost the local economy, increasing the wealth of the area. For example, a city with excellent schools, low crime rates and abundant recreational activities may see a rise in property values and business investments.

The challenge of inequality

However, it's important to recognise that this connection between wealth and liveability can also lead to inequalities. Not all communities have the same level of wealth, which can result in differences in liveability. Poorer areas may face challenges such as inadequate

healthcare, lower-quality education and limited public services, making it difficult to improve their quality of life. Addressing these inequalities is crucial to ensure that everyone can live in a healthy and prosperous environment.

Concepts and skills builder 10.6



Evaluating data

Evaluating means making a judgement by using information (data) and criteria to consider arguments and evidence for and against different ideas or opinions. In this activity, we will use photographic and video data and criteria to judge the liveability of places around the world.

Welcome to Dollar Street!

Go to the following website <http://cambridge.edu.au/redirect/11156>. You will see a webpage that shows a row of family photos. Each row of families is scaled from the poorest of the four families to the left, to the wealthiest of the four families to the right. The dollar figure at the bottom of each family tells you how much money the family has to live off every month.

Choose one family to **investigate** and **analyse** their liveability.

By clicking on the family, then clicking the link to the right that says 'Visit this family' you will get to explore the everyday life of this family.

Questions to answer (you can use the template online)

- 1 How many people live in this family and what is their family name?
- 2 What continent of the world do they live in?
- 3 How much money does this family live off each month?
- 4 **Describe** this family's living conditions. Make sure that you mention what you can see in their homes when you are describing their living conditions (this is also called 'referencing the data'). This table can help you answer this question.

Do they seem safe? Why/why not?	Do they seem healthy? Why/why not?	Do they seem happy? Why/why not?

- 5 Overall, rate this family's liveability from 0 (low) to 5 (high) and in one paragraph **justify** why you rated it this way. Make sure that you refer to your evidence in your paragraph.

Geographical concepts and skills: interconnection, place, environment

Lesson 10.6 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



Go online to
access the
interactive
lesson review
and more!

10.6 Review questions

- 1 **Define** the term wealth.
- 2 **Outline** how wealth typically affects liveability in a community?
- 3 **Identify** ways high liveability can attract wealth to a region?
- 4 **Propose** a key challenge associated with the interconnection between wealth and liveability?

How does social connectedness affect liveability?



Learning intention

In this lesson, you will learn how social connections and community identity influence how people feel about places and their liveability. You will also learn about how First Nations Peoples are connected to Country and place.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Watch <http://cambridge.edu.au/redirect/11157>.
- 2 **Think and wonder:** What are ways that the Bunurong People are connected to Pt Nepean?

↓ **Figure 10.7.1** Smoking ceremonies are often performed by Aboriginal people as part of a traditional ceremony like a Welcome to Country.



Social connectedness and community identity are important factors that influence how people perceive the liveability of

places. These contribute to a sense of belonging, security and wellbeing, which are essential for a high quality of life.

Social connectedness

Social connectedness refers to the relationships and bonds people have with others in their community. Strong social connections can make a place feel more welcoming and supportive. When people have friends, family and neighbours they can rely on, they are more likely to feel happy and content. Communities with active social networks often have various activities and events that bring people together, fostering a sense of unity and shared purpose. This can enhance the liveability of a place by making it feel more inclusive and vibrant.

Community identity

Community identity is about the shared values, traditions and characteristics that define a group of people living in a particular area. This identity can be shaped by historical events, cultural practices and common goals. When people feel a strong connection to their community's identity, they are more likely to take pride in their surroundings and work together to maintain and improve them. This collective effort can lead to cleaner, safer and more attractive neighbourhoods, boosting liveability.

Cultural connectedness of First Nations Peoples

For First Nations Peoples, cultural connectedness to Country and place is significant. Country refers not just to the physical land but also to the spiritual, cultural and historical connections and the cultural responsibility that First Nations people have in relation to their lands. Colonial practices forcibly removed many First Nations Peoples from their Country, causing immense harm to individuals and

communities. Connections are maintained through practices such as sharing oral histories, ceremonies and caring for Country. The strong cultural connections and respect for Country contribute to a profound sense of identity and belonging.



↑ Figure 10.7.2 A community that organises and celebrates cultural events, like the Indian community in Narimba Fields in Sydney celebrating the Diwali or the 'Festival of Lights', demonstrates social connectedness and strong relationships between the people within it.



↑ Figure 10.7.3 Making activities accessible improves social connectedness.

This cultural connectedness influences the perception of liveability for Aboriginal and Torres Strait Islander peoples, as living on or near traditional lands provides a sense of continuity, heritage and spiritual wellbeing. It emphasises the importance of preserving cultural sites and living in sustainable ways with the natural environment.

Disconnection from communities

Some community members feel disconnected because they cannot physically access their local area. This leads to social isolation. Improving physical connections through public transport and ramps for those with disabilities enhances social connections.

Organisations working with marginalised people also foster social connections, enhancing liveability and wellbeing.

Improving connections

Community groups and activities offer opportunities to connect with like-minded people. Traditionally, these connections formed through organised clubs, like sporting teams, but now a wider variety of ways exist to create connections. Events like pub choirs, 'No lights, no lycra' dance classes, and 'Men's sheds' provide platforms for socialising, bonding and sharing interests. These groups help increase confidence and foster connections within local communities.

Concepts and skills builder 10.7

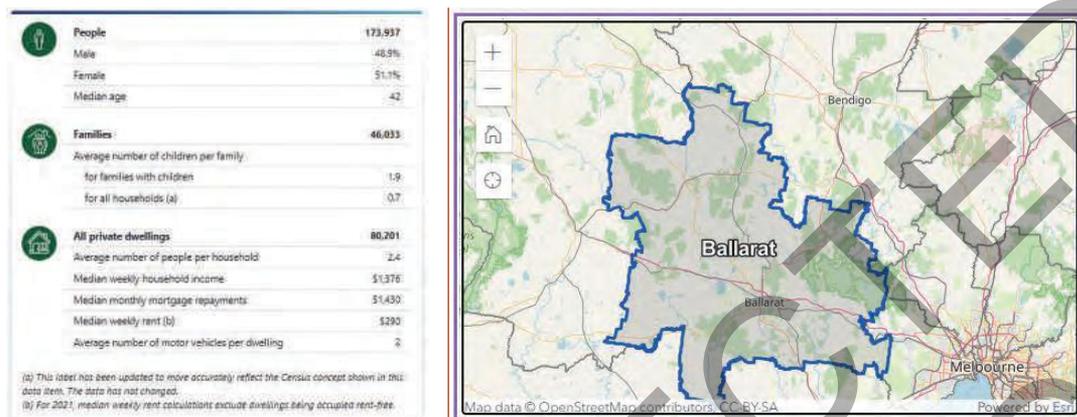


Using data to create a strategy to improve social connections

Using data to create a strategy means analysing information to make decisions, set goals and plan actions. In this lesson, you will use statistics to understand the demographics of your local area and plan a strategy to improve connections in the community.

- 1 Go to the Australian Bureau of Statistics website and look up the QuickStats census data for your suburb/town.
- 2 Research how many people live alone, how many are young, middle-aged and elderly, and what diversity of countries residents come from. Write these statistics in a table.

- 3 Imagine that you are an event planner for your local council. Create an initiative (it could be anything from a festival to a weekly activity, or a service or facility) that helps to build connections between different groups of people in your community. Write your strategy proposal by addressing the following:
- **Describe** your activity.
 - **Explain** why your initiative would be appealing to members of your community (reference your statistics here).
 - **Explain** how your activity would encourage connections between different members of your community.



↑ Figure 10.7.4 Census results for Ballarat. A census counts the amount of people living in an area, as well as other details about people, such as their income and age.

Geographical concepts and skills: space, place, interconnection

Lesson 10.7 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

10.7 Review questions

- 1 In your own words, **describe** the terms social connectedness and community identity.
- 2 **Explain** some reasons why it is important for people to feel a social connection to their community.
- 3 **List** some ways that Aboriginal and Torres Strait Islander Peoples are connected to Country.
- 4 **Analyse** this list of benefits that result from social connection and having a community identity. Categorise each benefit as either economic, social, or environmental.
 - a Businesses giving back to the community (for example, a business giving free coffees to homeless people or a business supporting the local football team)
 - b Loneliness is combatted
 - c Community gardens are created
 - d Mental health is improved
 - e Safety in the community is increased because people keep an eye out for each other
 - f An economy is shared through online marketplaces and physical markets
 - g Resources, such as a local toy library, are shared
 - h People work together to improve the local environment
 - i Businesses are supported by the people in the community

How does environmental quality affect liveability?



Learning intention

The geographic concept of environment looks at how humans and nature interact and affect each other. In this lesson, you will learn how environmental quality can affect people's health, happiness and liveability.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Look closely at Figures 10.8.1 and 10.8.2.
- 2 **Think:** Why might the young woman in Figure 10.8.2 need to wear a mask during periods of poor air quality?
- 3 **Wonder:** Can you think of other ways that environmental quality affects people's liveability?



↑ Figure 10.8.1 Urban smog in New Delhi, India



↑ Figure 10.8.2 A young woman wearing an anti-pollution mask in New Delhi.

Environmental quality directly affects our liveability. Clean air and water, green spaces and reduced pollution make our surroundings healthier and

more enjoyable. By taking care of the environment, we can ensure a better quality of life for ourselves and future generations.

What is environmental quality? _____

Environmental quality refers to the condition of the natural environment around us, including the air, water and

land. It also involves features like green spaces, pollution levels, and how clean and safe our surroundings are.

Why is environmental quality important? _____

A good environment makes our lives healthier and happier. Here are some reasons why.

are less likely to suffer from respiratory (breathing) problems like asthma.

1. Clean air

Breathing easy: Clean air is essential for good health. When the air is free from pollutants, we can breathe easily and

Better concentration: Fresh air helps us think clearly and concentrate better. On the other hand, exposure to poor air quality can have negative effects on brain development and even increases the risk of psychiatric disorders.

Amazing but true...

Sydney company 'Clean and Green' are cashing in on China's pollution woes by selling bottled air from iconic Australian locations including the Blue Mountains, Bondi Beach, the Yarra Valley and Tasmania for \$18.80 a pop!



FPO

↑ Figure 10.8.3 Clean and Green is but one company in the new 'air farming' industry. One cannister is said to provide you with 'upward of 255 breaths'.

2. Clean water

Staying healthy: Access to clean water is crucial for drinking, cooking and cleaning. It helps prevent diseases and keeps us hydrated. Contaminated water and poor **sanitation** are linked to transmission of diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid and polio.

sanitation a system for protecting people's health by removing dirt and waste

Enjoying nature: Clean rivers, lakes and oceans are beautiful and provide places for fun activities like swimming and fishing.



↑ Figure 10.8.4 Access to lakes, rivers and beaches can improve liveability.

3. Green spaces

biodiversity the number and types of plants and animals that exist in an area

ecosystem a geographic area where plants, animals and other organisms, as well as weather and landscape, work together to form a community of life

Relaxing and playing: Parks and gardens offer places to relax, play and exercise. They provide a break from busy life and help reduce stress.

Wildlife homes: Green spaces are habitats for many animals and plants. Protecting these areas helps preserve **biodiversity**.

Temperature control: Trees provide shade, which cools surfaces and reduces the amount of heat absorbed by buildings and roads. Trees also release moisture through a process called transpiration, which cools the air and lowers overall temperatures.



↑ Figure 10.8.5 Singapore has beautiful gardens and parks. Gardens by the Bay has large metal structures covered with greenery that connect a 'sky' path. Visitors can walk this path to gain a bird's-eye view of the surrounding trees.

4. Clean soil and ecosystems

Healthy living: Some litter, such as batteries and electronic waste, contain toxic chemicals that leach into the air, soil and water, posing long-term health risks. Litter can also end up in waterways, contaminating drinking water sources with harmful chemicals and bacteria.

Protecting natural environments: Litter can harm **ecosystems** and wildlife, which can become trapped or poisoned by litter and toxic waste.



↑ Figure 10.8.6 Chemicals leaching from clothes, plastics and other waste causes pollution.

Concepts and skills builder 10.8



Interpreting a choropleth map

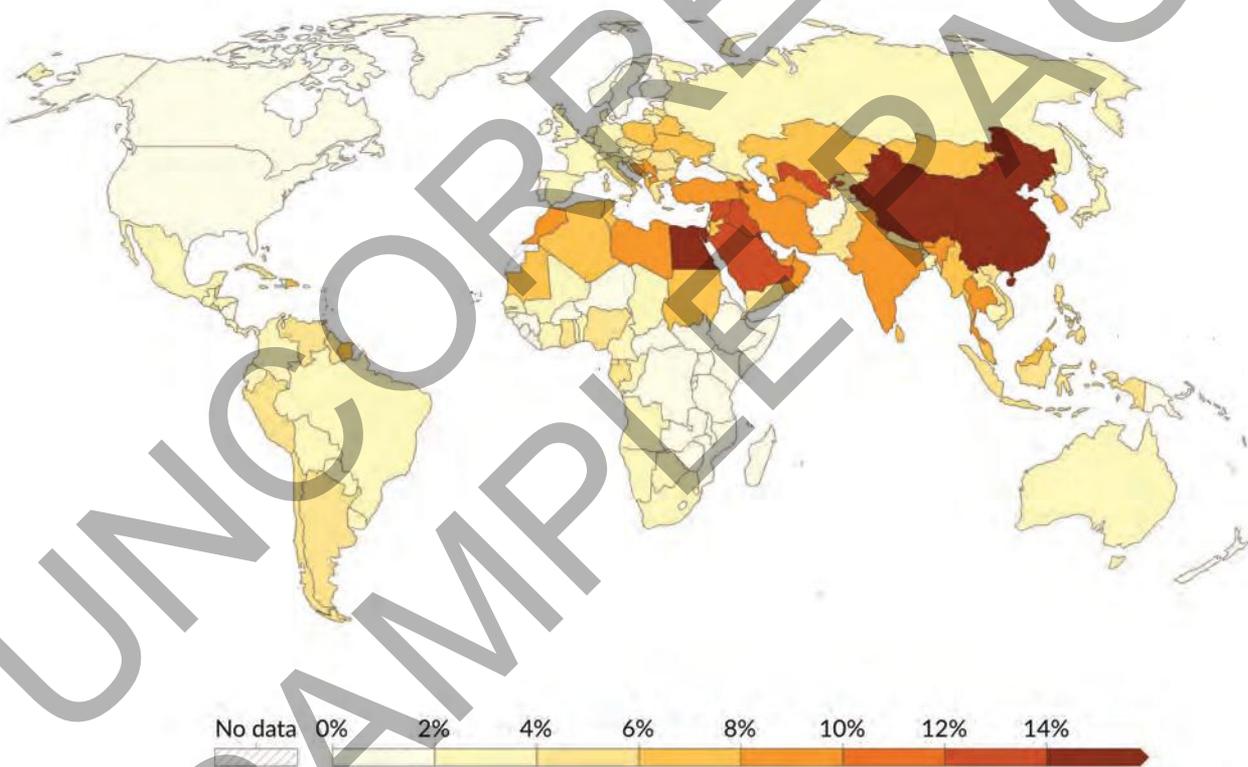
Choropleth maps represent data by shading or colouring areas, such as countries, based on a data value. In Figure 10.8.7, the colours represent how much of the country's deaths are attributed to outdoor air pollution. Use Figure 10.8.7 to answer the following questions. The interactive map at <http://cambridge.edu.au/redirect/11158> will help you.

- Name** three countries that have low and high proportions of outdoor air pollution. Use an Atlas, world map or Google Maps to help name the countries.
- Which world regions still have a large proportion of outdoor air pollution? A world region is a large group of countries. Examples include Latin America, sub-Saharan Africa, South Asia and northern Europe.
- Suggest** two reasons why some countries have high levels of outdoor air pollution, and some do not.
- How do you think varying levels of outdoor air pollution might affect the liveability in different countries?

Share of deaths attributed to outdoor air pollution, 2021

Our World
in Data

Share of deaths, from any cause, where ambient particulate matter air pollution is a risk factor.



Data source: IHME, Global Burden of Disease (2024)

OurWorldinData.org/outdoor-air-pollution | CC BY

↑ [Figure 10.8.7](#) Choropleth maps use shades of a colour to represent data. [Source: Our World in Data]

Geographical concepts and skills: space, scale, environment



Go online to access the interactive lesson review and more!

Lesson 10.8 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



10.8 Review questions

- 1 **Explain** the term environmental quality.
- 2 Why is clean air important for our health?
- 3 **List** three benefits of green spaces.
- 4 Visit the 'Our World in Data' website and click on 'browse by topic'. Choose a topic and then a map. Read your map and answer the following questions:
 - a What is the topic/feature of your map?
 - b **Name** three places (continents, world regions, or countries) where there are high levels of your chosen feature.
 - c **Name** three places (continents, world regions, or countries) where there are low levels of your chosen feature.
 - d What is one piece of information from this map that surprised you?

↓ Figure 10.8.8 Pollution, such as poor air quality, can reduce liveability.



CHAPTER 11

What are some strategies used to improve the liveability of different places?



LESSON	TITLE
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11.1	Setting the scene: How does air pollution affect liveability in Mongolia?
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11.2	How can we improve liveability?
------	---------------------------------

11.3	Case study: How is overtourism managed in Spain?
------	--

11.4	What strategies can be used to enhance liveability?
------	---

11.5	Fieldwork: Evaluating the liveability of your neighbourhood
------	---

11.6	End of investigation review: Place and liveability
------	--

Setting the scene: How does air pollution affect liveability in Mongolia?



Learning intention

This lesson is an introduction into the responses to liveability challenges that are occurring around the world.

Mongolia is well-known for its natural beauty. However, air pollution is one of the biggest threats to Mongolia's future. While children, pregnant women and the elderly are the most affected, air pollution harms everyone.

Although the air in Mongolia's rural places is cleaner, only 30 per cent of the population lives there, and this number is decreasing. Many rural residents depend on farming, but short summers and sudden frosts make growing food difficult, leading to harvest losses of 10 to 30 per cent. These challenges push many Mongolians to move to Ulaanbaatar, the capital city, in search of better opportunities.

However, housing in Ulaanbaatar is expensive, so many **internal migrants** live in gers, tent-like structures not suited

for the region's harsh winters, where temperatures can drop to -45°C . Without electricity, residents burn raw coal to stay warm. The widespread coal-burning releases smoke and ash, worsening air quality and causing severe health problems, especially for children. Poor insulation in many buildings means that even those not living in gers are affected by poor air quality.

Addressing this problem requires tackling various issues, such as improving rural opportunities so that fewer people need to move to the city, and improving urban infrastructure like electricity and shelter. In this chapter, we will explore responses to these interconnected challenges and learn how to improve liveability worldwide.

internal migrant
people who have moved from one part of a country to another

↓ Figure 11.1.1 An eagle hunter in rural Mongolia. Mongolia is known for its majestic natural environment.





↑Figure 11.1.2 Inside a Mongolian *ger*, where the stove sits in the centre of the room, providing warmth in extremely challenging conditions.



↑Figure 11.1.3 On the coldest days of the year, the daily average pollution levels in Ulaanbaatar reach 687 micrograms per cubic metre; 27 times the level WHO recommends as safe. This has prompted the Mongolian government to identify improving air quality as a key development priority.

Lesson 11.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

11.1 Review questions

Organising sentences demonstrate interconnections

The interconnection concept helps us understand that nothing on Earth exists in isolation – places, events and people are always connected in some way. Geographers use the interconnection concept to understand these relationships. With a greater understanding, geographers can then provide more effective solutions to challenges.

The following statements are all out of order. Practise finding the interconnection between the climate in rural Mongolia and poor health in urban Mongolia by unjumbling the following statements.

- 1 However, it is hard to make a living in rural Mongolia as the climate makes growing food challenging.
- 2 The health problems are not limited to the people living in tents. Some buildings have very little insulation, so poor air quality is felt by many inside their houses too.
- 3 Because they arrive with little money, they can only afford to live in *gers* that do not have electricity. This is inadequate because Mongolia has very cold winters.
- 4 All the raw coal burning creates a lot of pollution in the city.
- 5 Many people living in rural Mongolia (where the air is quite clean) are farmers.
- 6 So, some farmers move to the capital city of Ulaanbaatar to find work.
- 7 To stay warm, they burn raw coal, which is all they can afford.
- 8 The solution to this problem needs to address a range of issues, including creating more opportunities for rural people and improving infrastructure.
- 9 This is causing severe health problems, especially for children.

How can we improve liveability?



Learning intention

This lesson provides an introductory overview of some ways that liveability can be improved.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Look closely at both images (Source 11.2.1 and 11.2.2).
- 2 **Think:** What are the liveability challenges shown in both these images?
- 3 **Wonder:** What could be potential solutions to improve liveability in both these circumstances?



↑ Figure 11.2.1



↑ Figure 11.2.2

Geographers not only play a vital role in measuring liveability – they also create solutions to liveability challenges. Here

are some examples of the many initiatives taking place around the world to improve liveability.

Ways that liveability can be improved

Enhance public services

Investing in good public services like healthcare, education and transportation can make a big difference. When people have access to good hospitals, schools and easy ways to get around, their quality of life improves.

Increase green spaces

Parks and recreational areas provide places for people to relax and enjoy nature.

Green spaces also improve air quality and provide habitats for wildlife, making the environment healthier for everyone.

Ensure safety

Safety affects our sense of place and community connection. We can enhance social connection, community and safety by promoting cultural understanding and celebrating cultural diversity, as well as using **passive** and direct security measures.

passive letting things happen without taking action or being directly involved

Case study: Improving safety in Melbourne

Urban planners use passive measures, like CCTV, street lighting, safety mirrors and encouraging outdoor seating, to improve public space safety. These measures deter threats and make monitoring easier. For example, when lots of people are eating and socialising in the streets at night, they are also helping to monitor activity and prevent illegal behaviour. This is called passive surveillance.

More direct security measures, such as safety bollards, prevent antisocial behaviour and physical threats. Concrete bollards in Melbourne's CBD ensure people's safety by preventing cars from entering pedestrian-only areas and providing refuge during security incidents. Bollards were introduced after someone drove a car through the Bourke Street Mall, killing six people in 2017. Bollards, street furniture and planter boxes in Melbourne improve safety and the city's visual appeal.

↓ Figure 11.2.3 Metal bollards on Bourke Street Mall give pedestrians a safe, secure area to walk.



Promote affordable housing: Ensuring that there is enough affordable housing helps everyone have a place to live. This can reduce homelessness and make communities more inclusive.

Support local businesses: Encouraging local businesses can boost the economy and provide jobs.

Vibrant shopping areas and markets can also make neighbourhoods more lively and attractive.

Improve infrastructure: Fixing roads, bridges and public buildings makes a community more functional and pleasant. Good infrastructure supports daily activities and keeps people safe.

Case study: Improving infrastructure in Oslo, Norway



↑ Figure 11.2.4 Oslo's City Trees absorb pollution, taking the pollution out of the air.

Oslo, the capital city of Norway, is one of the most sustainable cities in the world. The town planners of Oslo have improved air quality by using 'CityTrees'. These are park benches covered in a living wall of

moss, which absorb pollution. One CityTree cleans the air more effectively than 275 real trees. Oslo has also added 1000 charging stations to encourage electric vehicle use, and their buses are powered by biogas produced from city sewerage.

Smart technology is also playing a part in keeping Oslo sustainable. Rubbish bins send alerts when they are ready to be emptied, and Oslo uses tech to monitor air quality and traffic. This helps them react quickly to environmental issues and make sustainable choices.

Town planners have also redesigned the spaces of Oslo, turning previously busy streets into car-free zones to promote walking and cycling. Moreover, town planners have revitalised the rivers and created parks that not only serve as natural water storage areas, absorbing excess rainwater during heavy rains, but also act as beautiful natural spaces for people to enjoy.

Concepts and skills builder 11.2



Interpreting a graph

To read a graph, start by looking at the labels on the axes. The bottom (x-axis) usually shows what is being measured, and the side (y-axis) shows how much. Look at the data points, lines, or bars to see patterns and trends. Check the legend or key for extra information. And, finally, take your time. Reading graphs gets easier the more you practise!

- 1 What time period is shown in these graphs?
- 2 What is meant by the title 'The world as 100 people?' How is this represented in the graphs?
- 3 Which graphs show a decline over 200 years? Does this mean that liveability has increased or decreased over time for this liveability factor?

Case study: How is overtourism managed in Spain?



Learning intention

In this lesson, we will look more closely at the interconnections between tourism and liveability. We will also examine the importance of balancing tourism growth with the well being of local residents.

Lesson starter



Complete the following activity to kick-start this lesson.

See, wonder, connect

Watch the videos at the following links:

- <https://cambridge.edu.au/redirect/11159>
- <https://cambridge.edu.au/redirect/11160>

- 1 **See:** Watch the videos closely: What do you notice? Make many observations.
- 2 **Wonder:** What questions do you have about what you have **seen**? What do you **wonder** about?
- 3 **Connect:** How do these videos **connect** to our topic of liveability?
- 4 **Connect:** How does the overtourism issue connect to you personally? Have you had any experience of this, either as a tourist or as a resident?

↓ [Figure 11.3.1](#) A message for tourists from a local resident



Spain is one of the world's top tourist destinations. It attracts millions of visitors each year with its rich history, vibrant culture and beautiful

landscapes. However, this popularity has led to challenges, particularly in maintaining the liveability of places facing overtourism.

Impacts on liveability

Overtourism occurs when the number of tourists overwhelms a place, leading to negative impacts on the environment, infrastructure and local residents' quality of life. In Spain, cities like Barcelona and Madrid regions like the Balearic Islands and Costa del Sol have experienced significant issues due to the influx of tourists.

The surge in tourism has resulted in overcrowded streets, strained public services and increased pollution. Local residents often find it hard to access housing due to rising prices driven by short-term rental platforms like Airbnb. Noise pollution and congestion are common complaints, and the character of neighbourhoods can change as local shops and services are replaced by tourist-focused businesses.

Managing overtourism

To address these challenges and improve liveability, Spanish authorities have implemented several strategies.

Regulating accommodation

Cities like Barcelona have introduced **regulations** to limit the number of short-term rental properties. Licences are required for renting out apartments to tourists, and fines are imposed for illegal holiday rentals. This helps ensure more housing remains available for residents.

Community engagement

Authorities have involved local communities in decision-making processes. Town hall meetings and surveys allow residents to voice concerns and suggest solutions. This ensures that tourism development meets the needs of the local population.

Promoting sustainable tourism

Efforts have been made to promote lesser-known places and **off-peak travel** to spread tourists more evenly throughout the country and year. Advertising campaigns highlight rural areas, small towns and cultural festivals to offer more diverse tourist places.

Improving infrastructure: Investment in public transportation and infrastructure is very important. Expanding train lines, improving bus services, and creating pedestrian-friendly zones help manage the flow of tourists and reduce traffic congestion.

Environmental protection: Spain is trying to protect natural resources and reduce pollution by enforcing stricter regulations on waste management, water usage and conservation of natural parks and beaches. Sustainable practices are encouraged among both tourists and businesses.

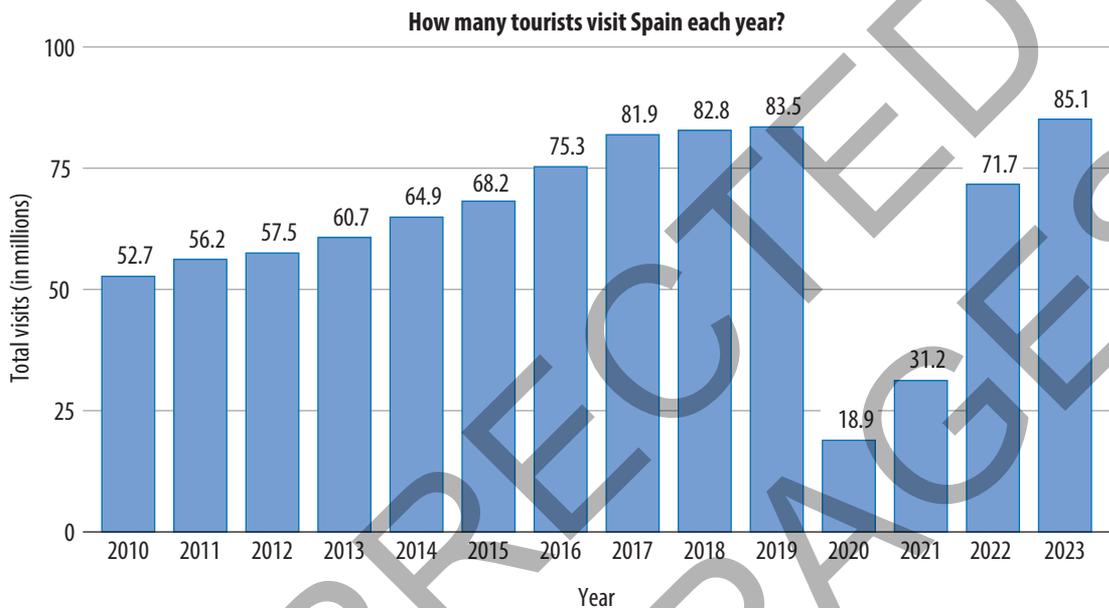
regulation rules or laws
off-peak travel travel that occurs during less popular times of the year

Concepts and skills builder 11.3



Drawing and interpreting bar graphs

A bar graph is a chart that uses rectangular bars to represent data (see Figure 11.3.4 as an example). In Figure 11.3.4, the bars represent the years and the length of the bars represent the number of tourists visiting Spain each year.



↑ Figure 11.3.2 Number of visitors (in millions) to Spain: annual data

To create a bar graph, start by labelling the x-axis (the bottom horizontal axis) with the categories you want to **compare** and the y-axis (the side vertical axis) with the values. In this case, the categories we want to **compare** are countries, and the values are how many tourists come to Spain from these countries. Then, draw a bar for each category, making sure the height or length of the bar matches the value for that category. Ensure the graph is neat and labels are clear.

- 1 Draw a bar graph using the data from Table 11.3.1.
- 2 Which country has the most tourists visiting Spain?
- 3 Which of the top five countries have similar amounts of tourists visiting Spain?
- 4 Which continent are all the top five countries from?
- 5 Why do you think most of Spain's tourists come from this continent?

Table 11.3.1 Top 5 number of international tourists in Spain in 2023, by country of residence

Country	France	Italy	UK	Netherlands	Germany
Amount in millions	11.7	4.8	17.2	4.3	10.9

Geographical concepts and skills: scale, space, interconnection

Lesson 11.3 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



Go online to
access the
interactive
lesson review
and more!

11.3 Review questions

- 1 **List** some reasons that make Spain a popular tourist destination.
- 2 **Define** the term overtourism.
- 3 **Describe** some interconnections between tourists, locals and the environment by outlining three challenges that overtourism is creating for the residents and environment of Spain. To extend yourself, aim to write these as statements which show the links between each step. e.g. Overtourism causes ... which then leads to ...
- 4 Which management strategy mentioned in this topic do you think would best help local residents stay in their towns? Give reasons for your answer.
- 5 **Identify** which of the management strategies outlined you think would best reduce the environmental impact of tourism in Spain. **Justify** your answer.
- 6 Read the graph labelled Figure 11.3.2.
 - Between the years 2010 and 2019, was tourism in Spain increasing or decreasing?
 - How many tourists visited Spain in 2020, and why was this number so low?
- 7 As mentioned, Spain is trying to reduce the amount of tourists visiting at peak times by spreading the movement of tourists throughout the country and encouraging them to visit at different times of the year. Search online to find a calendar of events and festivals in Spain. Then use this research to create a poster advertising a variety of tourist activities in Spain. Ensure that you are advertising events and celebrations that are spread out over the year and occur in different regions of Spain.

↓ Figure 11.3.3 Women seen holding a banner during a demonstration in Barcelona against gentrification and short-term holiday rentals like Airbnb. Some locals have to move to other cities or leave their neighborhoods due to the increasing prices brought on by overtourism.



What strategies can be used to enhance liveability?



Learning intention

In this lesson, you will learn how geographers can improve liveability through urban planning.

Lesson starter



Complete the following activity to kick-start this lesson.

Comparing places and spaces

Examine Figures 11.4.1 and 11.4.2.

- 1 **Compare** the place and spaces within Port Melbourne Secondary College with your own school. What characteristics are similar and different?
- 2 What questions or observations do you have about access to facilities at this school?
- 3 How do you think a school like this could increase the liveability of the Port Melbourne community?

↓ Figure 11.4.1 Port Melbourne Secondary College incorporates high-tech amenities for 1100 students.

FPO

Facilities at Port Melbourne Secondary College

- Fabrication lab
- Robotics workshop
- 200-seat lecture theatre
- Gymnasium with competition-grade basketball and netball facilities
- Food technology area with commercial-grade kitchen and canteen
- Performing arts amenities
- Outdoor terraces
- Urban garden with recreational ball sports areas
- Kitchen garden

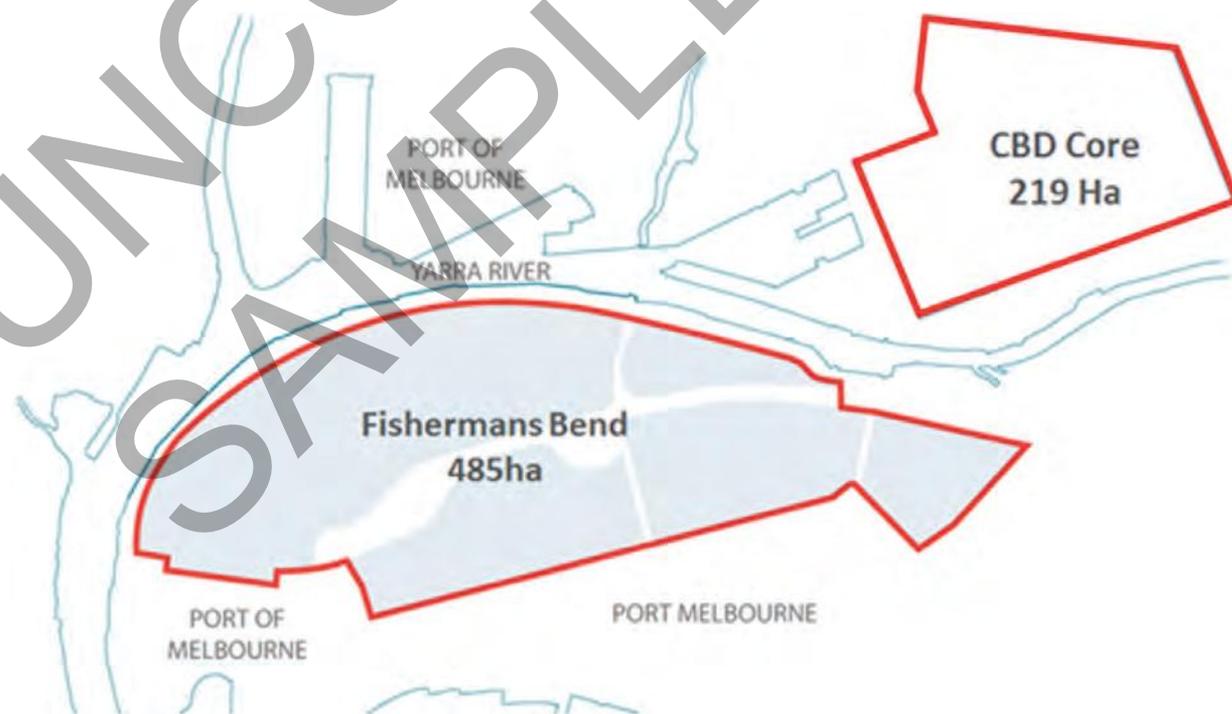
↑ Figure 11.4.2 Facilities at Port Melbourne Secondary College. These facilities are shared with the community, fostering community connection.

Many cities are trying to become more sustainable and reduce **urban sprawl**. One way they're doing this is through a process called **urban consolidation**. Urban consolidation means that new houses, apartments, and other developments are built within areas that already exist as part of the city. This helps stop cities from spreading out into rural areas or natural spaces. Instead of expanding outward, cities focus on improving and redeveloping areas within their boundaries. These areas are often

called brownfield sites. They're parts of the city that may have been used for something else before, like factories or warehouses. By redeveloping brownfield sites, cities can make these areas more liveable, with better connections to transport, shops, and services. A good example of urban consolidation in Victoria is the Fishermans Bend area in Melbourne, where old industrial land is being changed into a new urban neighborhood.

urban sprawl when a city's buildings and houses spread into areas outside its main centre, often taking over rural land

urban consolidation keeping residential development and population growth restricted to the urban areas that already exist



↑ Figure 11.4.3 The location of Fishermans Bend in relation to Melbourne's CBD

Concepts and skills builder 11.4



Applying the concept of change

Geographers use the change concept to understand how places and environments evolve over time. By studying changes, like shifts in climate or population growth, they can see patterns and **predict** future trends.

Activity

Read the information about Fisherman's Bend in this activity, then **explain** the change that has occurred using the two following methods:

- 1 Create a timeline. In your timeline:
 - a Provide dates and an annotation of the significant land use at each time.
 - b Between each of the dates, add an explanation as to why the land use changed.
- 2 **Compare** Figures 11.4.5 and 11.4.6 and write a short paragraph explaining the changes that you can see between the two images. In your paragraph, include:
 - a The location of the change.
 - b The dates of each image (date range of when the change occurred).
 - c The distribution of the change (e.g. what approximate percentage of land in the image has changed).
 - d Description of change (the differences that you can see between the two images).

The history of Fishermans Bend

Fishermans Bend has a rich history, starting with the traditional owners, the Bunurong and Woiwurung People, who valued the Yarra River's sand flats and delta for hunting and harvesting food.

From the mid-1800s to the 1940s, a small community lived here, including fisherfolk of British, German, and Chinese origin. The land was used for farming vegetables and animal grazing.

Due to industrialisation in the late 1900s, farming declined, and the land use changed to support manufacturing and maritime industries, including loading, unloading, and repairing ships. Fishermans Bend became a vital port, connecting Melbourne's industries to local and international markets. During World War II, industrial use became more intense, housing factories where many women worked in traditionally male roles.

In 2018, the Victorian Government released the final Fishermans Bend Framework, a plan for parks, schools, transport, and other services to ensure the precinct's liveability. Covering 480 hectares, the project is set for completion by 2050. It will house 80 000 residents and create 80 000 jobs. Benefits of the project are outlined in Table 11.4.1.

As part of the land use change, Port Melbourne Secondary School opened in 2022. It is designed like a ship to honour the area's maritime heritage. With a focus on **STEAM** subjects, the school offers high-tech facilities to support careers in design, engineering, and manufacturing, aligning with Fishermans Bend's key industries.

↑ Figure 11.4.4 Land use change at Fishermans Bend



↑ [Figure 11.4.5](#) Aerial satellite image of Fisherman's Bend in 2000



↑ [Figure 11.4.6](#) Aerial satellite image of Fisherman's Bend in 2022



↑ Figure 11.4.7 The education and community precinct at Ferrars Street



↑ Figure 11.4.8 A cross-section view of the high-rise interior designed for Port Melbourne Secondary College at Fishermans Bend

Geographical concepts and skills: place, space, change, scale, sustainability, environment

Amazing but true...

'The Falls' was the name given by early white settlers to a rocky bar across the Yarra River, opposite Queen Street, where there was a small waterfall. This point in the river marked the separation of the salt water and the fresh water and determined the location of the settlement at Melbourne. The Falls was dynamited by the Victorian government in the late 1880s to aid shipping.

A plan for liveability and sustainability

One way that geographers can evaluate the liveability of a place is to measure its sustainability. Using this geographic concept, geographers look for actions that reduce negative impacts on the environment, help maintain biodiversity, and promote a balanced relationship between human needs and natural

ecosystems. Sustainability focuses on making responsible choices to protect resources and keep the natural environment healthy long-term. The new development at Fishermans Bend has set eight sustainability goals. These are detailed in Table 11.4.1.

Table 11.4.1 Fishermans Bend's eight sustainability goals

Goal	Description
An inclusive and healthy community	Fishermans Bend will have different types of housing to suit a variety of living needs. It will also develop community infrastructure such as schools, health services, public spaces and sports facilities to support liveability.
A prosperous community	Education for all levels – primary, secondary, and university – will be available, and there will be many job and industry options nearby.
A low-carbon community	To keep carbon emissions low, Fishermans Bend will use renewable energy and encourage people to walk, bike, or use public transport instead of cars.
A water-sensitive community	Water use will be carefully managed to reduce waste. Recycled and rainwater will be used for things like watering gardens, helping conserve drinking water.
A climate-adept community	The development will be designed to handle climate challenges like flooding, droughts, heatwaves and storms, keeping people safe during extreme weather.
A connected and liveable community	Fishermans Bend aims to be a walkable and connected development. It will include links such as walkways, cycling paths and public transport. Shopping centres and community services will be near public transport. This will provide accessibility and discourage the use of private transport.
A low-waste community	Waste will be reduced with recycling systems and composting to reduce landfill. Household and business recycling will be encouraged to cut down on waste.
A biodiverse community	Public spaces will encourage biodiversity by providing habitats for native plants and animals. Native vegetation will be planted in public spaces and parks. Wildlife corridors will ensure animals are able to move around safely.

walkable an area that can be accessed by walking
biodiversity variety of plant and animal life
wildlife corridors natural paths that allow animals to move safely between areas

Lesson 11.4 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



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11.4 Review questions

- 1 **Define** urban sprawl, and **explain** how it affects rural or natural areas.
- 2 **Distinguish** between urban consolidation and urban sprawl.
- 3 **Describe** the purpose of the Fishermans Bend Framework released in 2018.
- 4 **Propose** how you think the land use change of Fishermans Bend, including developments like Port Melbourne Secondary School and urban consolidation, will impact the liveability and sustainability of the area for future residents?

Fieldwork: Evaluating the liveability of your neighbourhood



Learning intention

Fieldwork in geography consists of practical activities that are completed away from your classroom. In this lesson, you will have the opportunity to apply fieldwork techniques to evaluate the liveability of your neighbourhood.

Fieldwork is an essential part of studying geography. It allows you to investigate many of the concepts studied in the classroom while out in the real world. It also provides you with the opportunity to apply your knowledge to answer a

research question based on issues in your area. In this investigation, your aim is to determine whether your local neighbourhood meets certain liveability criteria. The following structure will help to form the basis of your study.

↓ [Figure 11.5.1](#) Time to do fieldwork in your own local neighbourhood!

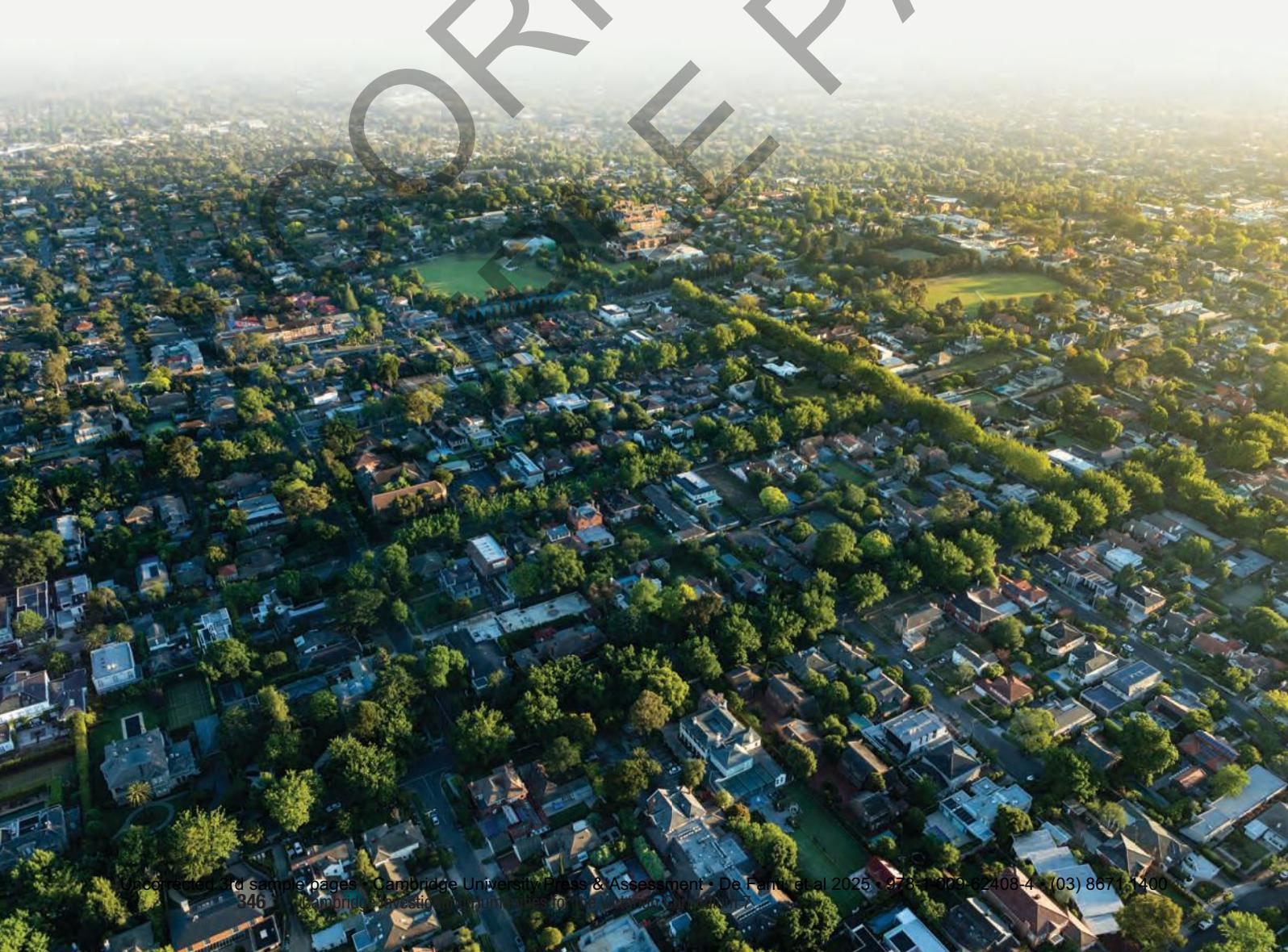


Table 11.5.1 Structure of a typical fieldwork report

Section	Explanation	Examples and prompts
Title and introduction	Write a brief introduction explaining what liveability is and how it is measured.	<ul style="list-style-type: none"> • Liveability refers to . . . • Geographers measure liveability using criteria such as . . .
Research question	Write a research question that you intend to answer using the data that you collect.	<ul style="list-style-type: none"> • What are the best and worst liveability features in my neighbourhood?
Hypothesis	A hypothesis is your predicted answer to your fieldwork question. It is something that can be tested using your fieldwork techniques.	<ul style="list-style-type: none"> • The best liveability features of my neighbourhood are . . . • The worst liveability features of my neighbourhood are . . .
Primary data collection	Primary data is data you collect yourself in the field specifically for your investigation.	<ul style="list-style-type: none"> • Walk through your neighbourhood and complete the survey provided in Table 11.5.2. • Where possible, support your observations with photos or field sketches. For example, you may take photos that demonstrate the good or poor quality of green spaces, playgrounds or sporting facilities.
Secondary data collection	Secondary data is data that other people have collected that you can use as part of your investigation.	<ul style="list-style-type: none"> • Search online and use Google Maps to answer some other parts of your survey, such as how many childcare centres are in your town. • Save the URL of each website you use, as you will need this for your bibliography.
Presenting and analysing your data	Summarise your findings in visual formats that are easy to read and understand.	<ul style="list-style-type: none"> • Use your data to create bar or pie graphs for the different liveability criteria in your survey. • Include photos and field sketches. Annotate these to explain what they show in the context of liveability. • Provide an annotated map of your neighbourhood
Discussion, conclusion and evaluation	Use your primary and secondary data to answer your research question. Provide a concise summary of your major findings. Evaluate the success of your data collection and your overall investigation.	<ul style="list-style-type: none"> • Identify the extent to which your hypothesis has been supported or disproven. • Write an answer to your research question. • Outline the positive and negatives of your data collection techniques and how they can be improved
References	Include a bibliography of any sources used.	<ul style="list-style-type: none"> • For example: Australian Bureau of Statistics 2021, <i>Community Profiles</i>, Australian government, accessed 5 September 2023, https://www.abs.gov.au/census

How to complete the survey

In this fieldwork task, you will visit your neighbourhood and assess it in terms of some criteria. These questions will form a class survey about the local neighbourhood. Here are the steps to take.

- 1 As a class, discuss the criteria to make sure that you understand what each criterion is asking you to look for. You can write notes on

the survey to help you remember what each criterion means.

- 2 Complete the survey form, based on the suburb or town that you live in.
- 3 Compare your completed survey with people in your class who live in the same neighbourhood as you.

Table 11.5.2 Fieldwork survey template

Criteria	Score:				
	1	2	3	4	5
Environment					
• Average weather conditions	1	2	3	4	5
• Access to parks, gardens and green space	1	2	3	4	5
• Access to sports and entertainment facilities	1	2	3	4	5
• Quality of green spaces and appearance of streets	1	2	3	4	5
Culture					
• Quality of recreational facilities	1	2	3	4	5
• Access to and diversity of places of worship	1	2	3	4	5
• Diversity of restaurants and shopping	1	2	3	4	5
• Access to libraries and historical sites	1	2	3	4	5
Economy					
• Broad range of job opportunities	1	2	3	4	5
• Affordable housing	1	2	3	4	5
• Access to goods and services	1	2	3	4	5
Infrastructure					
• Quality of roads	1	2	3	4	5
• Quality and availability of public transport	1	2	3	4	5
• Telephone and internet coverage	1	2	3	4	5
• Quality of housing	1	2	3	4	5
• Water, sewage and electricity availability	1	2	3	4	5
Education					
• Quality and availability of public schools	1	2	3	4	5
• Access to vocational and higher education facilities	1	2	3	4	5
• Access and availability of childcare and kindergartens	1	2	3	4	5
Healthcare					
• Quality and availability of public healthcare	1	2	3	4	5
• Quality and availability of aged care facilities	1	2	3	4	5
Law and order					
• Lack of petty crime (theft)	1	2	3	4	5
• Lack of violent crime	1	2	3	4	5
• Level of vandalism	1	2	3	4	5
• Sense of personal security	1	2	3	4	5

End of investigation review: Place and liveability



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorcher timed competitive quiz.

Making thinking visible



Headlines routine

This routine helps you **identify** the essence – or the core idea – of what’s being discussed and encourages you to pay attention to the key themes. This is a good way to reflect on what you have studied and make deeper connections between all the place and liveability topics.

- Look back over the topic headings that you studied from Chapters 10 and 11.
- Write an article headline that captures the most important core idea for each of these topics.

Using geographic concepts to understand a place



Geographers use key geographic concepts to help frame their thinking and **examine** different situations and ideas. The geographic concepts are place, space, change, scale, interconnection, environment and sustainability.

Create a geographic profile of your school by **applying** geographic concepts.

1 Place:

- **Describe** the place of your school, using absolute and relative location, and **describe** the meaning it has for people in your community.

2 Space: Examples of spaces in your school may include the library, Year 7 area and canteen.

- Add a map of your school and colour different spaces in different colours. Add BOLTSS, including a legend that identifies what spaces the different colours refer to.

Then **list** at least three different spaces in your school, and **explain** how these are used.

- 3 Change:
 - Create a timeline or a paragraph explaining how your school has changed over time.
 - Look up your school on Google Earth and use the historical imagery tool to see if there are satellite images from earlier years. Include these contrasting images from the past and present and **describe** the changes that you can see between each image.
- 4 Scale:
 - **Explain** the scale of your school by **listing** how many students the school has, as well as how large the school is in land size.
- 5 Interconnection:
 - How is your school interconnected with the community? **List** the ways different people are connected to this place.
- 6 Environment:
 - **Describe** the natural environment (plants, animals, climate and natural resources) and human environment (infrastructure and the built landscape) that you have at your school.
- 7 Sustainability:
 - Explore your school for evidence of sustainable practices. **Explain** how these reflect the sustainability concept.
 - Brainstorm ways that the school can improve its sustainability.

Solving geographical problems



Imagine you are part of a planning team tasked with designing a new community in an area of your choice. Your goal is to create a place where people can live comfortably, stay healthy and enjoy a good quality of life.

- 1 Choose your location: Select a location for your community. You can choose between a coastal area, a mountain town, a rural region, or an urban city.
- 2 Key factors: Think about the following factors that make a place liveable. Rank them from most important to least important in your design:
 - access to public transport
 - availability of green spaces (parks, nature reserves)
 - access to education (schools, libraries)
 - employment opportunities (factories, businesses)
 - healthcare services (hospitals, clinics)
 - clean water and air quality
 - safety and low crime rates
 - social spaces (community centres, sports clubs).
- 3 Design your community: Using your rankings, create a simple map or diagram of your community. Label the key areas that show where people would live, work, study and relax. Make sure to highlight spaces like parks, public transport routes and essential services.

4 Reflection questions:

- Why did you choose these factors to make the community liveable?
- How would the natural environment affect the way you design the community?
- What challenges might you face in creating this ideal community, and how could you overcome them?

Research-based task



Using Google Earth or Google Earth Pro, search Bendigo and Elmhurst, two places in Victoria. Explore these places to complete the table of facilities. Write down how many of each facility is located in each place. The last three rows are blank. Fill these by choosing your own liveability features to **investigate**.

	Bendigo	Elmhurst
Urban or rural?		
Hospitals		
Schools		
Universities		
Shopping centres		
Fire stations		
Rivers, lake and/or ocean % of town		
Green spaces % of town		

↓ Figure 11.6.1 Bendigo is a town about 185 km from Melbourne and was a key site of the Victorian gold rush. The Traditional Owners of the area are the Dja Dja Wurrung People. Elmhurst is a town in the Pyrenees region of western Victoria. The Eastern Maar People are the formally recognised Traditional Owners for the area.





Part 3

Economics & Business



FPO

Watch the video for an introduction to Economics & Business in Year 7 and the skills and concepts you will be working with.

INVESTIGATION

What can households do to improve their wellbeing?

OVERVIEW

[In Year 7 Economics and Business students will] ... investigate the nature and purpose of informed and responsible economic decision-making by individuals, with attention to the basic economic problem of scarcity. They also examine the rights and responsibilities of consumers.

Source: Adapted from VCAA, Victorian Curriculum V2.0, 'Economics & Business', 'Band description – Levels 7 and 8'

CURRICULUM GOALS

- What is economic decision-making and why is it required?
- How do markets influence the economic decision-making of consumers?
- What are my rights and responsibilities as a taxpayer?
- What legal rights and ethical responsibilities do individual consumers have?
- What is a financial scam and what types of financial scams are currently being used?
- What is financial planning and why is it important?

Source: Adapted from VCAA, Victorian Curriculum V2.0, 'Economics & Business', 'Band description – Levels 7 and 8'

CHAPTER 12

What can households do to improve their wellbeing?



LESSON	TITLE
12.1	Setting the scene: Why and how do households trade?
12.2	What is material wellbeing?
12.3	What does 'relative scarcity' mean?
12.4	What makes a decision economic?
12.5	What are market prices?
12.6	What is the price mechanism?
12.7	What is the purpose of taxation?
12.8	What is smart spending?
12.9	What are the rights and responsibilities of consumers and businesses?
12.10	How does budgeting work for a household?
12.11	Research task
12.12	End of investigation review: What can households do to improve their wellbeing?

Setting the scene: Why is the 'national pie' unfairly shared?



Learning intention

national pie the total quantity of products available to people in a nation (e.g. Australia)

Household people who live together and seek to maximise their material wellbeing

communities grouping of households living in a local region and interacting with each other

Society the population of a nation interacting with one another in many different ways

Material wellbeing happiness or satisfaction from consuming goods and services

consumption the use of final goods and services by households

business organisation formed and operating to make maximum profit

This introductory lesson looks at household trading of goods and services. It also introduces the investigation task regarding unfair product sharing.

The 'national pie'

Products are goods and services. These are items such as food, clothing motor vehicles, televisions and medical services. They are being made every day. The total quantity of products made over a year in a nation can be referred to as the '**national pie**'. Pies are for sharing! So, what is a fair share between households in this case?

Households

A **household** is a house in which people live together. Different numbers of adults and children can live in households. There are more than 10 million households in Australia, with an average number of 2.5 residents in each.

Households near each other in local areas form **communities**, such as a suburb of Melbourne. Communities across Australia combine to form a national **society**. Households interact with each other so that their members can enjoy a decent level of wellbeing. A major part of a householder's wellbeing is the material aspect. **Material wellbeing** comes from the use of material goods (e.g. bread) and services (e.g. medical services). This is known as **consumption**.

Underlying such consumption is the millions of trade interactions. Trade is the commercial exchange between households and **businesses** of material goods and services in return for spending.



↑ Figure 12.1.1 Buying goods compared to buying services

Spending in product markets

Trade is the exchange of a good or service for money. Some examples of trade include spending on food, clothing or medical services. These trades take place in **product markets**. Businesses produce and sell the products. Households buy the products to consume, and thus raise material wellbeing.

A member of a household who spends money on buying a good or service is referred to as a **consumer**. When a consumer acts on behalf of a household, the consumer is its representative or **agent**.

The money for such spending by a consumer may be financed from:

- a a household's **income**
- b selling assets
- c borrowing from others.

Figure 12.1.2 illustrates trades in goods and services taking place in Australia. These trades occur in product **markets** between households and businesses. Households have the goal of maximum material wellbeing from consumption of products. Businesses have the goal of maximum profits from production and distribution of products.

trade the exchange of a product for money

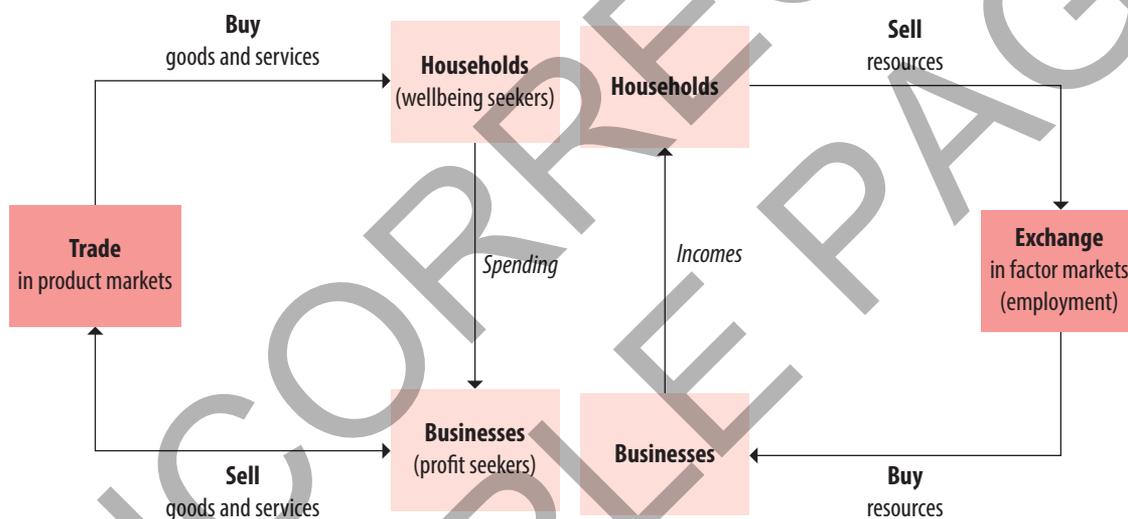
product markets markets where products are traded

consumer a member of a household who uses a good or service for happiness

agent a member of a household who acts on behalf of or represents that household

income (factor) money paid to the owner of a resource employed by a business as a factor of production

market the business or trade in a particular product or service



↑ Figure 12.1.2 Trades in goods and services taking place in Australia

These trades may occur face-to-face, such as in a supermarket, or online, perhaps from overseas, or even over the phone. Rather than buying goods and services in product markets, consumers may obtain some of their preferences

↑ Figure 12.1.3 Exchange of products and resources

from making them at home. Examples of home-made goods and services include householders living in their own house, making meals, washing clothes, painting the fence, growing fruit and vegetables, and sewing clothes.

Other ways

Besides trading in product markets, households can obtain products in other ways. For example, households might make certain products at home, such as growing their own vegetables. Another

way is where the government provides a good or service without any direct spending by consumers, such as defence services. The government also charges below cost for other services, such as

medical services, the railway network and schooling. These services add to

household consumption and, therefore, the material wellbeing of households.

Inequality

However, when the total quantity of products is shared for consumption, the least-advantaged households receive much less than the most-advantaged households. Their material wellbeing is

much lower than that of others. Is such inequality good for the nation? Is it fair to all individuals? You will have the opportunity to examine this issue closely in the research task at the end of this chapter.

The Victorian Curriculum lists a range of skills that you will need to develop. To help you practise and integrate these skills in Economics and Business, we have developed the **Q-CAFÉ** method of investigation. There are opportunities to apply this method throughout the lessons, as well as in a final research task (Lesson 12.11).

Q-CAFÉ method of investigation	
Q	Questions are formed to investigate an issue, problem or system. This leads to a definition of the problem.
C	Collect and compare data and information relevant to the problem.
A	Analyse and interpret data. Describe relationships using graphs, models or in writing. These relationships may be association, cause-and-effect or trend.
F	Findings and conclusions from the investigation are identified and summarised. Data sources are checked for authenticity.
E	Evaluate your findings against a chosen standard regarding benefits (advantages) and costs (disadvantages).
	Express your findings clearly and convincingly in the research task.

Note that the research task is designed to be completed over the duration of the unit, rather than in the final few weeks. Be sure to get started as soon as possible!



Go online to access the interactive lesson review and more!

Lesson 12.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



12.1 Review questions

- 1 **Recall** what 'householder' means.
- 2 **Recall** what 'consumer' means.
- 3 **Describe** how consumers trade products.
- 4 **Explain** the meaning of material wellbeing.
- 5 An agent for a household has \$200 per week to spend. **Discuss** which items you would buy to maximise the material wellbeing of your household.

What is material wellbeing?



Learning intention

The previous lesson considered trading of goods and services by Households. This lesson looks at the wellbeing of households as a result of consuming the goods and services purchased.

Lesson starter



Complete the following activity to kick-start this lesson.

Sharing differences: What makes you happy?

- 1 Write down your happiest times that you can remember.
- 2 Then share with a partner and **compare** your happiest times.
- 3 **Discuss** what the differences are in your experiences.



↑ Source 12.2.1 Not everyone is lucky enough to have a decent standard of living.

Material wellbeing

material wellbeing the happiness a person experiences from using goods and services

Non-material wellbeing

the happiness experienced from other sources rather than from using goods or services

capability what you or a household could do if given the opportunity to participate

Almost all the people in a region, such as Australia, live in a house of some kind. These households interact in many ways, such as trading goods or services. Their activities form a community in their local area and a society in a nation.

People wish to live well (be happy) now and improve their wellbeing over time. Individually and nationally, people wish to have a higher living standard.

Wellbeing is simply how well you live in a national society. This is determined by:

- material wellbeing:** i.e. the use or consumption of goods and services, and
- non-material wellbeing:** i.e. non-consumption activities, such as worker satisfaction, being free, and your emotions.

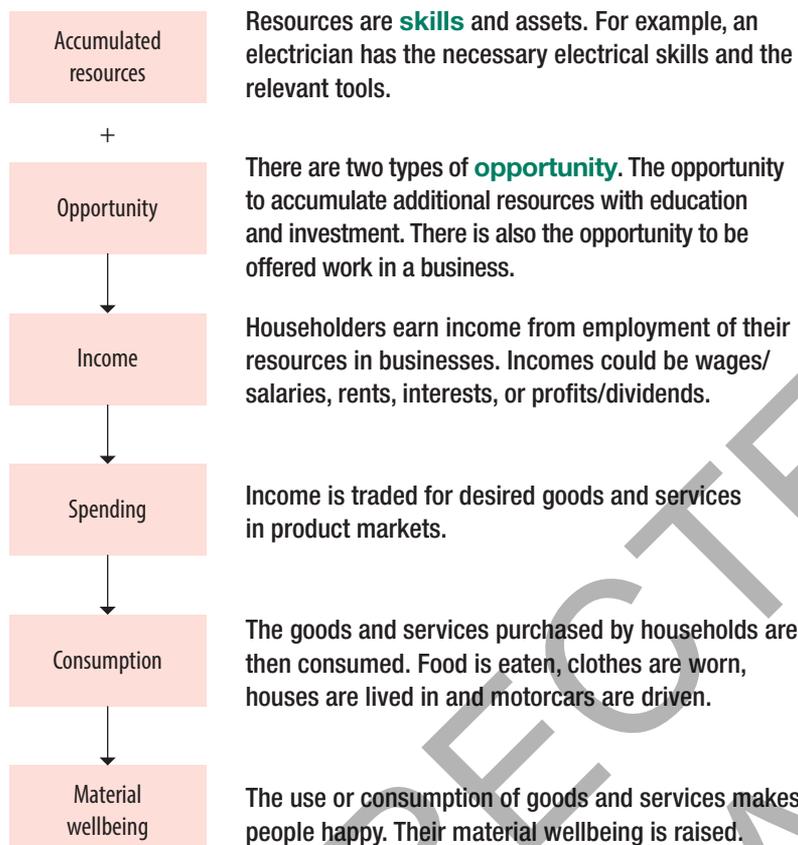
The focus here is on material wellbeing. Material wellbeing or happiness comes from using or consuming goods and services. Examples of goods are food, clothing, housing, furniture and electronic equipment. Examples of services are health services, hospitality services, insurance services and educational services.

Capabilities are the key to wellbeing

Capabilities refer to what a person or household *could* do with their resources (human skills and wealth). In addition, in order to participate in society by working or by spending, people or households need opportunities to do so.



↑ Figure 12.2.2 Some examples of things some people may consider to provide a sense of material wellbeing: food, clothing or housing



skills competencies learned through study or from life experience

opportunities chances or openings for the employment of human skills and/or assets

↑ Figure 12.2.3 The relationship between resources and material wellbeing or lifestyle

The flowchart in Figure 12.2.3 indicates the relationship between resources and material wellbeing or lifestyle.

Clearly, having the resources wanted by businesses is the first step to a high income and good material wellbeing.

Concepts and skills builder 12.2



Developing skills for material wellbeing

Consider the following stimulus and apply the Q-CAFÉ method of investigation (outlined at the end of Lesson 12.1) by answering the questions that follow.

Ethan is starting to think about his future career and how the skills he develops now might affect his material wellbeing later in life. He has noticed that households which invest in the right skills and qualifications tend to have better job opportunities and enjoy a higher standard of living. As he chats with family and friends, Ethan wonders how different types of qualifications – such as university degrees, trade certificates, VET certificates or trade licences – lead to different employment outcomes. He is curious to find out what steps households can take to build the skill sets that businesses value, and what role the government should play in guiding people towards the most useful qualifications.

- 1 **Q:** What can households do to develop the skills and qualifications that help improve their material wellbeing?
- 2 **C:** Search online to collect information about the various types of qualifications available in Australia and the kinds of jobs that correspond with each (for example, a university degree, a trade certificate, a trade licence or another type of VET certificate).

- 3 **A:** Analyse whether there are any differences in employment status or job opportunities between people with VET qualifications and those with university degrees.
- 4 **F:** Describe your findings about how different qualifications can affect employment opportunities and material wellbeing.
- 5 **E:** Evaluate where the government should focus its efforts to help Australians gain the qualifications that lead to the best job prospects and higher material wellbeing.

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Lesson 12.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



12.2 Review questions

- 1 **Define** in your own words what a person's 'material wellbeing' means.
- 2 **Outline** how additional resources can change a person's material wellbeing.
- 3 **Explain** the connection between a person's consumption and wellbeing.
- 4 **Discuss** how material wellbeing is only one type of wellbeing, and some other aspects of life that are also important.



→ Figure 12.2.3 Many Australians place a lot of value on material possessions.

What does 'relative scarcity' mean?



Learning intention

The previous lesson focused on wellbeing derived from consuming goods and services. This lesson highlights the scarcity of resources for obtaining produced goods and services. It also indicates the need to choose as a result of this scarcity.

Lesson starter



Complete the following activity to kick-start this lesson.

Musical chairs

- 1 Play a round of musical chairs.
- 2 This **demonstrates** the concept of relative scarcity as some students will miss out.

Resources

Goods and services are created with **resources**. Households own these resources, which comprise **human skills** and **assets**.

Human skills

Labour is the work hours that a person can contribute to a business.

Enterprise is the skill of taking risks and creating a successful business.

↓ Figure 12.3.1 Labour is the work done by employees, while enterprise means creating a business.

Resources things that can make goods and services

Human skills competencies and qualifications of people for making goods and services

Assets things owned by households and used for making goods and services

Labour a human skill used for a specific time in production

Enterprise the special skill of taking risks and creating a successful business



natural resources

things provided by nature that can make goods and services

produced resources

things produced by businesses that can make goods and services

financial resources

cash or credit that can finance the production of goods and services

Assets

Natural resources are the things given by nature. They include land, water, minerals, forests, fish and animals.

Produced resources are the things

created by human processes. They include buildings, machinery, equipment and motor vehicles. **Financial resources** are assets used for purchasing other assets. They include savings, loans (credit) and investments.



↑ Figure 12.3.2 Natural, produced and financial resources



↑ Figure 12.3.3 Various decisions to make

Relative scarcity

However, a household cannot buy all their desired goods and services. This is because the household has not earned enough income from their resources. The household's resources are scarce relative to the goods and services desired (**relative scarcity**).

But, while households do not have enough resources, these resources do have alternative uses. For example, you can learn different skills and be a truck driver or a crane operator when you work. You may inhabit your house or rent it out to someone else.

Choices

A household's resources are scarce relative to their desired goods and services. So, they have **household choices** to make. Some of the *choices* or decisions a household has to make involve the following:

- **Resources** – what qualifications will members seek?
- **Employment** – how much time to give to work and leisure?
- **Spending** – which goods and services to buy and in what order of preference?
- **Finance** – will cash or credit be used to pay for the desired goods and services?

- **Savings** – how much income to save for emergencies and for developing more resources?

Who makes these decisions in your household?

In making these decisions, households seek the most benefit from their limited resources. This means that they try to **maximise** the benefits after costs that they get from using their resources. In doing this, they are **being economic**.

relative scarcity
there are not enough resources to make all the desired goods and services

household choices
how to earn income from resources, how much to spend on desired goods and services, and how much to save?

employment the use of household resources by businesses in making goods and services

spending
money spent by a household in buying goods and services

savings income not spent on goods and services for consumption

maximise get the most material wellbeing or benefit from the use of resources

being economic
using resources to maximise material wellbeing

Concepts and skills builder 12.3



Investigating relative scarcity and its effects

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Many households face choices because not all the resources they need are available in unlimited amounts. This idea, known as relative scarcity, means that households must decide which goods and services to prioritise. For example, when water is in short supply or land is limited, families may need to change the way they spend their money or save for the future. Think about how these limits might affect the decisions households make every day.

- 1 Q:** What question can you develop about how relative scarcity affects household decision-making in Australia?
- 2 C:** Search online to collect information or examples that explain how the limited availability of natural resources (for instance, water or land) influences household choices in Australia.
- 3 A:** Analyse the information you found by constructing a simple diagram or line graph that shows how a specific scarce resource (e.g. water) impacts household spending or saving decisions.
- 4 F:** Describe your findings by summarising the link between the scarcity of the resource you chose and the household choices that are made.
- 5 E:** Evaluate the implications of this relative scarcity for households, and suggest ways that families might adapt their spending or saving strategies when faced with limited resources.

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Lesson 12.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



12.3 Review questions

- 1 Describe** the idea of relative scarcity.
- 2 Identify** the kinds of choices your household makes about income and spending.
- 3 Explain** the connection between relative scarcity and choices.

↓ Source 12.3.4 A produced resource example and a home-made product example.

What makes a decision economic?



Learning intention

The previous lesson drew attention to the need to choose as a result of the scarcity of available resources for producing goods and services. This lesson explains the method of benefit–cost analysis in making economic choices.

Lesson starter



Complete the following activity to kick-start this lesson.

Group discussion

- 1 Suppose that you can go to watch a football match. You do not have to pay for admittance, food, or travel. Alternatively, you can go to work at the local supermarket and earn \$100 in the same time.
- 2 Which would you choose?

Households have limited income. So, how are consumer decisions to buy products made? **Behaviour economics** studies the behaviour of consumers in making buying decisions.

Consumers are **agents** for, or representatives of, households. They make decisions about purchasing goods and services every day in product markets. There are many factors leading to such decisions. For example, a consumer may buy an item on impulse while waiting at the supermarket checkout. Another consumer may not buy a house, because of high interest payments on a loan.

If a consumer is economic, then the best way to make a purchasing decision is with a **benefit–cost analysis**. A benefit–cost analysis values the **net benefit** of each desired spending option. The option

chosen has the highest gap between its benefits and costs.

The opportunity lost when buying another product is the cost of buying this product. A buyer identifies the value (price) of the next-preferred opportunity for each option. This price provides the **opportunity cost** of the item purchased.



↑ Figure 12.4.1 Deciding which product to buy

Behaviour economics a new branch of Economics that looks at the psychological reasons behind consumer spending

agents members of organisations, such as households, who represent them in making economic decisions; consumers are agents of households

benefit–cost analysis investigation of the benefits and costs of activities, such as buying a product

net benefit the difference between the total benefit and total opportunity cost of an activity

opportunity cost the cost of an item measured by the value (price) of the next-preferred item

Assume that the benefit or value of each option is the same. The buyer, then, chooses the option with the lowest opportunity cost. Example 1 demonstrates this approach.

benefits to be equal. Opportunities costs are then calculated and net benefits compared. The buyer chooses the option with the highest net benefit. Example 2 demonstrates this approach.

Now consider the case where there are different benefits for each product. The buyer or consumer adjusts the

Note that most such calculations are mental – no need for pencil, paper, calculator, etc.

Example 1

Product	Benefit	Opportunity cost	Net benefit
	<i>Some measure of satisfaction</i>	<i>Price of next-preferred product</i>	<i>Benefit – Opportunity cost</i>
A (price \$10)	x	\$6 (LOWEST)	x – 6 (MAX)
B (price \$6)	x	\$10	x – 10

Economic decision
a decision based
on maximising net
benefits

In Example 1, both products A and B give the consumer equal satisfaction (x) or benefit. But their opportunity costs are different. The rational consumer will choose the product with the

lowest opportunity cost. This is product A in this case. The benefit of each is the same (x), while product A has the lower opportunity cost. Product A, then, is the **economic decision**.

Example 2

Product	Benefit	Opportunity cost	Net benefit
	<i>Some measure of satisfaction gained</i>	<i>Price of next-best product</i>	<i>Benefit – Opportunity Cost</i>
A (price \$10)	x	\$6	x – 6
B (price \$6)	2x	\$10 \$10/2 = \$5 (LOWEST)	2x – 10 = x – 5 (MAX)

In Example 2, product B gives the consumer twice as much satisfaction as product A does (2x compared with x). So, to compare opportunity costs, their benefits have to be made equal – divide B by 2. Product B has the lower opportunity cost and the higher net benefit. The rational consumer will choose product B over A. This is the economic decision.

In both examples, the consumer has limited income to pay for the product chosen. If the consumer's income is only \$8, then product A cannot be chosen. In both cases, product B at \$6 is the only possible option.

Thus, the lowest opportunity cost is the basis for economic decisions. Income or finance available to the consumer is also a consideration.

Concepts and skills builder 12.4



Investigating opportunity costs in everyday decisions

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Arjun is planning his weekend and has a limited amount of money to spend. He realises that every choice has an opportunity cost – for example, if he spends his money on a new video game, he cannot use that money to go out with friends or buy a book. Arjun wants to understand how opportunity cost affects his decisions and whether choosing the option with the highest net benefits is always the best choice.

- 1 Q:** Develop a possible question about how opportunity cost influences economic decision-making in everyday life.
- 2 C:** Collect information by searching online for a simple example that compares the opportunity costs of two alternatives (e.g. choosing between buying a snack or saving the money).
- 3 A:** Analyse the connection between opportunity cost and the net benefits of an option using the example you found.
- 4 F:** Present your findings that explain why consumers, when making economic decisions, tend to choose products with the highest net benefits.
- 5 E:** Evaluate a purchase you made for non-economic reasons and reflect on how its opportunity cost compares to that of a more economic choice.

Economics and Business concepts and skills: communicating, concluding and decision-making, evaluating, interpreting and analysing data and information, investigating

Lesson 12.4 review

Online
quiz



Review
questions



Research
task



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12.4 Review questions

- 1 Explain** how a benefit–cost analysis of two breakfast cereals would be undertaken.
- 2 Define** the term ‘opportunity cost’.
- 3 Discuss** the factors involved when consumers make decisions about the purchase of goods and services for their household.

What are market prices?



Learning intention

The previous lesson explained the method of benefit–cost analysis using prices. This lesson considers what determines the price of a product traded in a market.

Lesson starter



Complete the following activity to kick-start this lesson.

Cards

- 1 Twenty cards are created – 10 buyers and 10 sellers. Both sets of cards have values \$1 to \$10
- 2 A buyer and seller are chosen at random – they reveal their cards – then decide whether or not to deal. If they do not deal, then others may wish to deal – one only can do this.

↓ [Figure 12.5.1](#) Markets balance demand and supply.



Consumers use market prices to decide whether to buy a product. These prices enable the making of economic decisions. Such decisions will maximise the achievement of material wellbeing.

So, how are product prices determined? **Market demand** for, and **market supply** of, a product determines a product price. Government regulations also influence product prices in markets which are not free.

market demand
buyers plan to purchase a product in a market

market supply
sellers plan to offer a product in a market

Demand for a product

More consumers may wish to buy avocados. This may be for health reasons. Then, their demand for avocados is higher in total, and this extra demand will pull the market price up.

Suppose consumers now switch to avocados from oranges. This will increase the demand for avocados. The extra demand will increase the market price of avocados. At the same time, the demand for oranges will decrease and so pull

down their price. *Note the relationship between the prices of different products.*

Besides changing preference for a product, there are other reasons for changes in demand for it. The weather, for instance, changes from hot to cold. Different clothing will be wanted in each season. Further, if the price of cars increases, then this will not only reduce the demand for cars but also for petrol and diesel fuel.

Supply of a product

Suppose businesses want to produce and sell more avocados. The total supply of avocados in the market is higher, and this will pull down the market price.

If there is a drought and the avocado supply decreases, then businesses may only be able to supply the market with less avocados. This lower supply will pull the market price up and some consumers will not buy.

market shortage
the amount buyers plan to buy is greater than the amount sellers offer for sale

market surplus
the amount sellers plan to offer for sale is greater than the amount buyers plan to buy

Determining a price

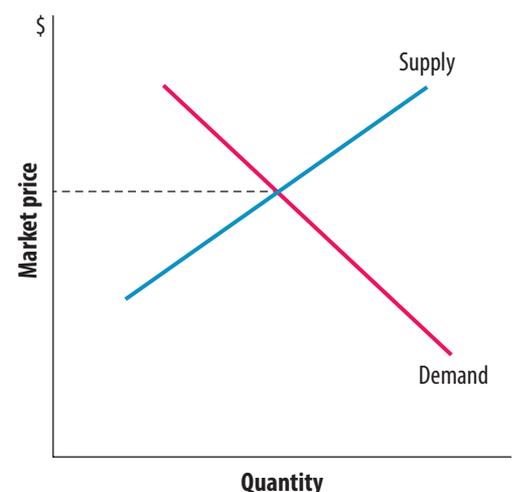
Consumer demand and producer supply interact to determine a price. When consumer demand is greater than producer supply, then there is a **market shortage** at the current price. Such a shortage will raise the market price. For example, a damaged tomato crop will lead to a shortage and a price rise for tomatoes. This higher price will provide an incentive of extra profit to businesses to produce and supply more. The shortage will be removed.

When producer supply is greater than consumer demand, then there is a **market surplus** at the current price. Such a surplus will reduce the market

price. For example, discount retail sales of winter clothing in summer. The surplus will be removed.

Consumers and producers determine a **free-market price** in a market free of government regulations. This is where demand and supply are equal in quantity, as illustrated in the diagram.

free-market price
the price in a market without government interference



↑ Figure 12.5.2 An illustration of price determination

Government regulations

transfer payment a gift of money to people who the government does not consider to have enough income

pension a regular transfer of money from the government to certain people due to their circumstances, e.g. old age

unemployment benefit a government transfer of money to those unemployed, e.g. the job-seeker allowance

Most product markets have government involvement. Governments adjust market prices with the goods and services tax (GST) on products. Most goods and services are 10 per cent higher due to the GST.

Governments also make **transfer payments** to low-income households. **Pensions** and **unemployment benefits** are some examples. These payments lead to increased demand for essential products and thus increase their prices.

Concepts and skills builder 12.5



Investigating market prices in everyday trade

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Jack has noticed that the price of bananas at his local supermarket seems to change often. He is curious about what influences these price changes and how they compare with the prices of other agricultural goods. Jack wants to understand how market prices are determined by supply and demand and what factors might be causing recent trends in the banana market.

- 1 Q:** Develop a possible question about how market prices for bananas are influenced by supply and demand.
- 2 C:** Collect information by searching online for an explanation of, and data about, the market price for bananas.
- 3 A:** Analyse the connection between the supply of and demand for bananas using the information you found.
- 4 F:** Present your findings by summarising what you conclude about the banana market in Australia in recent years.
- 5 E:** Evaluate how the price of bananas has changed compared with other agricultural goods and discuss possible reasons for these differences.

Economics and Business concepts and skills: communicating, concluding and decision-making, evaluating, interpreting and analysing data and information, investigating



↑ Figure 12.5.3 Many markets in a shopping centre

Lesson 12.5 review

Online quiz



Review questions



Research task



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12.5 Review questions

- 1 **Explain** how a price is determined in a free market.
- 2 **Define** the term 'government regulations'.
- 3 **Outline** the connection between supply and demand.
- 4 Copy Figure 12.5.2 and illustrate what happens to the product price when there is an increase in the demand for the product.
- 5 Copy Figure 12.5.2 and illustrate what happens to the product price when there is a decrease in the supply of the product.
- 6 **Propose** what happens to the product price if there is a simultaneous increase in demand with a decrease in supply?

What is the price mechanism?



Learning intention

In the previous lesson, the forces of supply and demand determine the market prices of consumer products. This lesson identifies the effects of the price mechanism on resource employment.

Lesson starter



Complete the following activity to kick-start this lesson.

Prices discussion

If there is only one seller in the market, does the market still determine the price?

Selected students should give practical examples to the class.

↓ Figure 12.6.1 A network of prices. Figure 12.6.1 illustrates the range of product prices in the economy and the connections between them. All prices can change together, such as increase when there is inflation. Relative prices stay the same and so there would be no change in resource allocation. However, each price changes for different reasons.

Prices of products change. Opportunity costs change. So, decisions of consumers and producers also change.

If consumers plan to buy more of a product, then market demand rises and pulls up the price. Businesses respond by making more of the product and employing more resources.

For example, the price of a certain motor car falls. More people wish to buy that car and market demand for it increases. The car producers see their stocks dropping and produce more cars. This requires employment of extra resources.

But in other motor car markets, the demand for those models falls. This is because some buyers have switched to the other model in response to a lower price.

So, product price changes cause changes in the production of different cars. This leads to the transfer of resources employed between the various car businesses.

In this simple example, there is no government involvement. It is the workings of the network of car prices that enabled the private decisions. The **price mechanism** is a network of all prices. When **relative prices** change, resource employment in businesses change. Resources are allocated differently.

Note that if all prices change by the same percentage, then relative prices stay the same. For example, a 4 per cent rise (**inflation**) in all product prices will mean that there is no change in relative prices. Thus, no change in resources used to make each product.

price mechanism
the working of relative prices to change the use of resources across the various businesses

relative prices one price compared to another price

inflation all or most prices keep rising

Consumers rule

Consumer demand for products drives market prices. If consumers want more of a product or a new product, then their demand will lead businesses to produce it. Businesses respond in this way to make profits.

If consumers demand less of a product, then businesses will produce less of it. Some businesses may shut

down, because they are not profitable. Consumers ultimately decide what is produced. They also decide, indirectly, which resources business employ.

So, consumers rule markets (**consumer sovereignty**). Their buying plans determine what to produce as well as the resources used (**resource allocation**).

consumer sovereignty
consumer demand for a product pushes businesses to make that product, and businesses then employ resources for that production

resource allocation
the spread and use of resources across the various businesses of a nation

↓ Figure 12.6.2 Consumers rule markets.



Case study: Ice-creams in summer

The weather is getting hotter. More consumers are demanding ice-creams. The price of ice-creams rises. Extra ice-creams will be needed as well as more workers and materials to make them.

The extra production and resource allocation are due to consumer sovereignty.

At the same time, there is a change in relative prices. The price of ice-creams rise while the price of cold drinks remains the same. So, over time, some consumers will switch to buying the cheaper cold drink. This extra demand for cold drinks will push up their price. This will again change the relative prices of ice-creams and cold drinks, but by a smaller amount. The process repeats until it runs out.

Concepts and skills builder 12.6



Investigating the price mechanism and inflation trends

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Olivia has noticed that the prices of many goods seem to be changing over time, and she wonders how these changes affect the economy. In her search for answers, Olivia learns that the price mechanism – the way prices adjust through supply and demand – plays a key role in resource allocation. She is also curious about how inflation, which is the general rise in prices over time, relates to this process, especially when comparing recent inflation rates with the acceptable standard of 2.5% per annum.

- 1 Q:** Develop a possible question that investigates how the price mechanism influences resource allocation and consumer behaviour.
- 2 C:** Collect information by searching online for an explanation of, and data about, inflation over the last decade.
- 3 A:** Analyse the connection between consumer sovereignty, the price mechanism and resource allocation using the information you gathered.
- 4 F:** Present your findings by summarising the trends in inflation over the past ten years and their impact on market prices.
- 5 E:** Evaluate how recent inflation in Australia compares with the acceptable rate of 2.5% per annum.

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Lesson 12.6 review

Online
quiz



Review
questions



Research
task



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12.6 Review questions

- 1 **Define** the term 'inflation'.
- 2 **Describe**, in your own words, the meaning of resource allocation.
- 3 **Outline** what an ice-cream business would need to do to prepare for a coming summer.
- 4 Does inflation change the allocation of resources?
- 5 **Explain** the meaning of consumer sovereignty.

↓ Figure 12.6.3 Price inflation, sometimes out of control



What is the purpose of taxation?



Learning intention

The previous lesson suggested ways of being a smart buyer in product markets. In this lesson, various taxes that a householder pays are considered.

Lesson starter



Complete the following activity to kick-start this lesson.

Calculation

Calculate the tax paid on a taxable income of \$95 000.

↓ [Figure 12.7.1](#) Sometimes there is an end-of-year refund.



Taxation in Australia

Governments in Australia tax people and businesses to get revenue. These taxes include the Commonwealth government taxes on income, State governments' tax on goods and services, and business payrolls, and local governments' tax on properties with council rates.

The Commonwealth government receives most of the tax revenue collected in Australia.

Personal income tax

The **income tax** system applies to individuals earning income in Australia. Income tax is set at different rates for different **tax brackets**. See Table 12.7.1.

Table 12.7.1 Marginal income tax rates for 2024–25

Taxable income bracket (\$ p.a.)	Tax rate (%)
0 – 18 200	0
18 201 – 45 000	16
45 001 – 135 000	30
135 001 – 190 000	37
190 001 +	45

In addition, there is a 2 per cent levy on taxable income for the Medicare health system, for those above the low-income threshold; i.e., above \$18 200 taxable income. There is also a Medicare surcharge of 1–1.5 per cent on taxable incomes of people who do not have sufficient private patient hospital insurance.

On the other hand, some work-related and other expenses may be deducted from gross income to reduce taxable income and tax paid.

GST

Besides income taxes, there are also taxes on the sale of most products – a

Goods and Services Tax (GST) on the purchase of nearly all consumer goods and services at 10 per cent of the purchase price. The price sellers are required to advertise is the price which includes GST.

While the Commonwealth government collects this tax revenue, it passed back to the State governments.

Payroll tax

The Victorian government has a **payroll tax** in which medium-sized businesses pay a tax of 4.85 per cent on the total wages and salary of their employees. Larger businesses pay higher rates.

Council rates

Local councils charge homeowners a percentage of the value of their house – referred to as **council rates**. Monies received pay for council works and rubbish collection.

Tax revenue

The three levels of government – Commonwealth, State and local – all collect taxes. The governments use their revenue from taxes to finance spending on their responsibilities. For example, the Commonwealth government:

- pays for their public servants in the various administration departments
- transfers money to the least advantaged, e.g., unemployment benefits
- pays interest on the national debt, which has grown larger over the years.

The Commonwealth government also uses its tax revenue for transferring monies to those struggling to survive through no fault of their own; for example, aged pensioners and unemployment payments.

income tax a commonwealth government tax on income less allowable deductions

tax brackets individuals pay different income tax rates; depends on which bracket of income that they receive

Goods and Services Tax (GST) a 10% tax on the sale of most goods and services. Businesses collect this tax and pay it to the Commonwealth government. The Commonwealth government transfers it to the State governments

payroll tax a State-government tax on the total wages paid by a business

council rates a tax paid by homeowners to the local council; calculated as a percentage of the value of the property



↑ Figure 12.7.2 Hospital service provided by state government

Concepts and skills builder 12.7



Investigating government taxation and its use

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Charlotte is curious about how the government uses taxes to fund public services. She has learned that both the Commonwealth and Victorian governments levy taxes, but they do so in different ways. Charlotte wants to understand why these governments have different types of taxes and why the Commonwealth transfers some of its tax revenue to the State governments.

- 1 **Q:** Write a question for an investigation connected to government taxation and its use.
- 2 **C:** Collect information by searching online for the different types of Commonwealth and Victorian government taxes.
- 3 **A:** Analyse why these governments have different types of taxes.
- 4 **F:** Present your findings on why the Commonwealth transfers some of its tax revenue to the State governments.
- 5 **E:** Evaluate whether, in your opinion, the total amount of tax paid by a household to the government is too much.

Economics and Business concepts and skills: communicating, concluding and decision-making, evaluating, interpreting and analysing data and information, investigating

→ Figure 12.7.3
Commonwealth
Parliament
House



Lesson 12.7 review

Online quiz



Review questions



Research task



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12.7 Review questions

- 1 **Define** the term 'taxation', and **describe** its purpose.
- 2 **Outline** what government transfer payments are and their purpose.
- 3 **Justify** why different tax brackets exist.



↑ Figure 12.7.4 State Parliament House, Melbourne, Victoria

What is smart spending?



Learning intention

In the previous lesson, you learned what the rights and responsibilities of traders of consumer products are. This lesson focuses on consumers being smart in their spending on goods and services.

Lesson starter



Complete the following activity to kick-start this lesson.

Home-made activities

Hold a class discussion about what goods and services students make at home.

↓ [Figure 12.8.1](#) A consumer comparing prices at a supermarket



How do households spend their money? _____

Households spend their income, after tax, or save it. Spending involves consumers buying goods and services for consumption by their household. Spending leads to activities such as eating food, wearing clothes and residing in a house.

Households without enough income choose between buying *essential and non-essential products*. **Essential products** enable survival, for example, food. **Non-essential products** aren't necessary for survival, for example, entertainment or luxury items.

Various reasons are behind household spending decisions. Sometimes the reason may be impulsive. Consider a consumer adding a chocolate bar while waiting in the supermarket queue. Other purchases may be for sentimental reasons. This is the case when buying a photograph album to store family photos.

Besides spending for emotional reasons, households buy goods and services for economic reasons. Being economic is to buy those goods and services that give the highest net benefit to a household. Of course, consumer purchases are limited by available finance.

In other words, it is logical to maximise the net material wellbeing of members of a household. This is being smart.

There are a number of smart ways to make economic decisions.

Smart option 1: Homemade

When the prices of fruit and vegetables are rising too much, some households decide to grow their own. Others may decide to make their own clothes. In the case of electricity, many households

have installed solar panels. These panels enable households to generate their own electricity.

These are examples of **homemade products** which replace spending on similar products.

Smart option 2: Discounts

Another smart move is to look or ask for discounts. For example, buy extra packets of an item at a supermarket when it is on sale at a reduced price. Look for specials. Take advantage of rewards and loyalty programs. For example, earn points for total spending over a period and receive cash back or a reward.

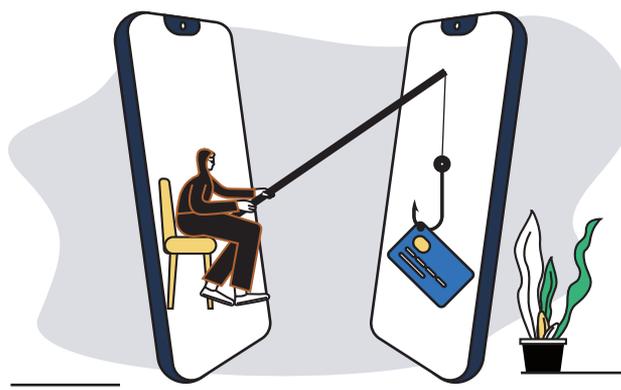
Smart option 3: Savings

Households base their economic decisions to buy products on prices and available income. This is especially important for low-income households. Low-income households spend more or all of their income on goods and services rather than save it. But savings are crucial. Small savings provide a safety net in times of emergency. For example, if next month your car breaks down, how will you pay for repairs? Using savings is better than increasing debt.

essential products goods and services needed for survival, such as basic food, clothing and shelter

non-essential products goods and services not essential for survival, such as luxury items, entertainment and travel

homemade products goods and services made at home and not purchased in a market, such as fruit, vegetables, cooking, knitting and cleaning at home



↑ Figure 12.8.2 Avoiding being hooked by debt is a key goal for smart consumers

scams a scheme or trick that steals your income or assets, such as a fake email from the tax department

Smart option 4: Avoiding scams

Unfortunately, there are **scams** when purchasing products online. For example, someone sends an email with a list of items for sale and purporting to

be a well-known company. Households lose their money if they order with credit card details. To avoid such scams, check the email address of the advertiser. If it is from an unknown person or some company and not the well-known company, then delete the message.

Another way is to go to the well-known official website. Check if the items are being advertised as 'on sale' and then place your order with them.

Another common scam is an email with an invitation to amend incorrect details. These scams pretend to be from a known company such as Telstra. Again, do not click on this site. Use the same strategies as above – check the sender's email address and go to the official company website.



↑ Figure 12.8.3 A scammer at work

Concepts and skills builder 12.8



Investigating disposable income spending and scams

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Aisha has noticed that managing disposable income can be challenging. She sometimes encounters scams when buying goods online or in stores, which not only affects her budget but also limits her ability to save money. Aisha is keen to find out how households can avoid scams and reduce non-essential spending to better manage their money.

- 1 Q:** Develop a possible investigation question that examines how households can manage disposable income to avoid scams and reduce non-essential spending.
- 2 C:** Collect information by searching online for examples of scams involving consumer spending and strategies for reducing supermarket spending.
- 3 A:** Analyse the connection between avoiding scams and reducing non-essential spending, and explain how these strategies can help households improve their disposable income management.
- 4 F:** Present your findings by summarising the effective strategies households can adopt to protect themselves from scams and manage their spending better.
- 5 E:** Evaluate how growing your own fruit and vegetables at home might help a household save money and avoid scams.

Economics and Business concepts and skills: communicating, concluding and decision-making, evaluating, interpreting and analysing data and information, investigating

Lesson 12.8 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



Go online to
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interactive
lesson review
and more!

12.8 Review questions

- 1 **Outline** some strategies to avoid scams.
- 2 **Propose** why it is better to invest your savings than keep it at home.
- 3 **Distinguish** between essential and non-essential products.



↑ Figure 12.8.4 A train service is government financed

What are the rights and responsibilities of consumers and businesses?



Learning intention

The previous lesson looked at the price mechanism. This lesson lists the rights and responsibilities of consumers and businesses when trading.

Lesson starter



Complete the following activity to kick-start this lesson.

Discussion

Discuss as a class what experiences students have had with faulty products purchased and what happened to resolve the situation.

↓ [Figure 12.9.1](#) What kinds of consumer protection do we have in Australia?

CONSUMER
PROTECTION

Rights and responsibilities

We live in a free and fair society – a *liberal democracy*. People have **moral rights** to **freedoms** and **fairness** when participating in society. But the exercise of these rights cannot affect others adversely.

Elected governments pass laws to protect the rights of all citizens (**legal rights**).

In trade, consumers are free to buy desired goods and services in product markets. These products must not harm

them or others, e.g. drugs. Further, such trade must be fair both to buyers and sellers, e.g. price discrimination is illegal.

The Australian Consumer and Competition Commission (ACCC) protects the legal rights of consumers. For example, there are **guarantees** from businesses when consumers buy personal and household goods and services.

moral right a claim to act according to the moral code of a culture, e.g. a right to own property

freedom a moral right to act in a chosen way, as long as it does not harm others

fairness a moral right to have access to, or share of, something so that there is no discrimination

legal right a claim to act according to the legal system of a nation

guarantee a guarantee is a commitment by a business that the product will perform as stated

warranty a warranty is a promise by a business that a faulty product will be repaired or replaced for a period of time, e.g. a five-year warranty on car parts

Guarantees for goods

- The good is of acceptable quality.
- The good will fit the stated purpose and be safe.
- The good matches the demonstration model or sample used in selling.
- Repairs and spare parts for the good will be available for a reasonable time in the future.
- Full ownership is going to the buyer.
- Nobody will try to reclaim the good.
- The previous owner does not owe money if it is a second-hand good.

Guarantees for services

- The business uses an acceptable level of care.
- The service is fit for the stated purpose (except for architects or engineers)
- The service is provided within a reasonable time.

There are exceptions to the guarantees given to consumers. For example, the ownership guarantee does not apply to hiring or leasing of goods, goods bought before 2011, and financial products (such as loans) as these are covered by other laws.

Complaints

If a buyer is not happy with their product purchase, then the seller should be approached in the first place. If still not satisfied, then the ACCC may be approached.

Besides legal guarantees from businesses to consumers, there are also

warranties, e.g., a five-year warranty on a new motor vehicle. A warranty is a written promise to a consumer from a business to repair or replace a faulty product.

Consumer responsibilities

Besides these consumer rights in trade deals and warranties, consumers have responsibilities to the sellers:

- 1 To understand the deal – read the contract or terms and conditions
- 2 To examine the product – physically inspect
- 3 To be informed – research product specifications and buyer reviews
- 4 To keep records of purchase, information booklets and financial details
- 5 To seek resolution if there is a problem with the product.

Concepts and skills builder 12.9



Investigating consumer rights and responsibilities

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Sometimes when William buys products online or in stores, things go wrong with his purchase. This has made him wonder what rights he has as a consumer and what responsibilities he should follow when buying goods. He wants to know how legal protections help him and how businesses are expected to act fairly.

- 1 **Q:** Develop a possible question for an investigation connected to consumer rights and responsibilities.
- 2 **C:** Collect information by searching the web for the role of the ACCC in protecting consumers.
- 3 **A:** Analyse what might happen if there were no legal protections for consumers and how a dishonest business could cheat customers.
- 4 **F:** Present your findings by summarising in 30 words the responsibilities of a consumer when buying a good.
- 5 **E:** Evaluate how a business might avoid refunding money paid for a faulty product, building on the ideas of consumer rights and business responsibilities.

Economics and Business concepts and skills: communicating, concluding and decision-making, evaluating, interpreting and analysing data and information, investigating



Go online to access the interactive lesson review and more!

Lesson 12.9 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



12.9 Review questions

- 1 **Explain** what makes Australia a liberal democracy.
- 2 **Outline** what a product guarantee is.
- 3 **Discuss** some responsibilities that consumers have.

How does budgeting work for a household?



Learning intention

The previous lesson pointed out various taxes that are paid by householders. In this lesson, you will learn about budgeting.

Lesson starter



Complete the following activity to kick-start this lesson.

Budget brainstorm

What receipts and payments go into a household budget?

↓ [Figure 12.10.1](#) Planning a monthly budget



budget plans for future income, spending and savings

Budgeting by householders is another way of being economic. It is the planning of:

- a the income that is available after tax is paid (disposable income)
- b spending on goods and services for consumption
- c savings.

A monthly **budget** is preferred in order to monitor the household's finances regularly. Sticking to a budget ensures the savings plan is achieved and future material wellbeing improved.

The items included in a household budget may be:

- Income – wages, rent, interest, business dividends/profit, government transfer payments, asset sales and borrowing.

- Spending – essential items of food, clothing and shelter as well as non-essential items of insurances, health services, medical services, motor car, etc.
- Savings – deposited in banks, shares in businesses, houses or offices for rent, etc.

An example of a household's monthly budget is provided in Figure 12.10.2. Note that rent is the largest spending item. It is over one-third of disposable income. If the household was owned, then the bank mortgage payment would be about the same.

Note also that the budget is balanced. This is always the case as any overspending is paid by more borrowing.

An example of a household's monthly budget			
Receipts	\$	Payments	\$
Income (after tax)		Spending	
Wages	6 000	Food	1 000
Rent	0	Clothing	200
Interest	10	Rent	2 500
Dividends	2	Insurances	50
Government	0	Medical	400
		Transport	600
Borrowing		Education	100
Credit card	500	Entertainment	262
HECS	0	Miscellaneous	1 000
Other	0		
		Savings	
Asset sales	0	Bank Deposits	400
		New shares	0
		New assets	0
Total receipts	<u>6 512</u>	Total payments	<u>6 512</u>

↑ Figure 12.10.2 Example monthly budget



↑ Figure 12.10.3 Preparing a budget

When budgeting it is advisable to:

- look for spending items that can be reduced, such as insurances
- watch the risk associated with income and the use of savings.

Concepts and skills builder 12.10



Managing household budgeting

Consider the following stimulus and apply the Q-CAFÉ method of investigation by answering the questions that follow.

Siti has been trying to balance her monthly budget, but she finds that her miscellaneous spending is too high. While she plans her essential expenses carefully, extra unplanned purchases make it difficult for her to save money. Siti wants to find ways to reduce these extra costs and create a more balanced, sustainable budget.

- 1 **Q:** What are some strategies to reduce miscellaneous spending and stick to a budget?
- 2 **C:** Collect information by reviewing the budget example in Figure 12.10.2 and identifying items that could be considered miscellaneous spending.
- 3 **A:** Analyse what factors would enable this household to maintain its budget every month for a year and suggest ways the household could earn more income in future months.
- 4 **F:** Present your findings by discussing whether enough is being done with savings in the budget.
- 5 **E:** Evaluate if the monthly budget is realistic by considering whether household members could comfortably survive on it.

Economics and Business concepts and skills: communicating, concluding and decision-making, evaluating, interpreting and analysing data and information, investigating



Go online to access the interactive lesson review and more!

Lesson 12.10 review

Online quiz



Review questions



Research task



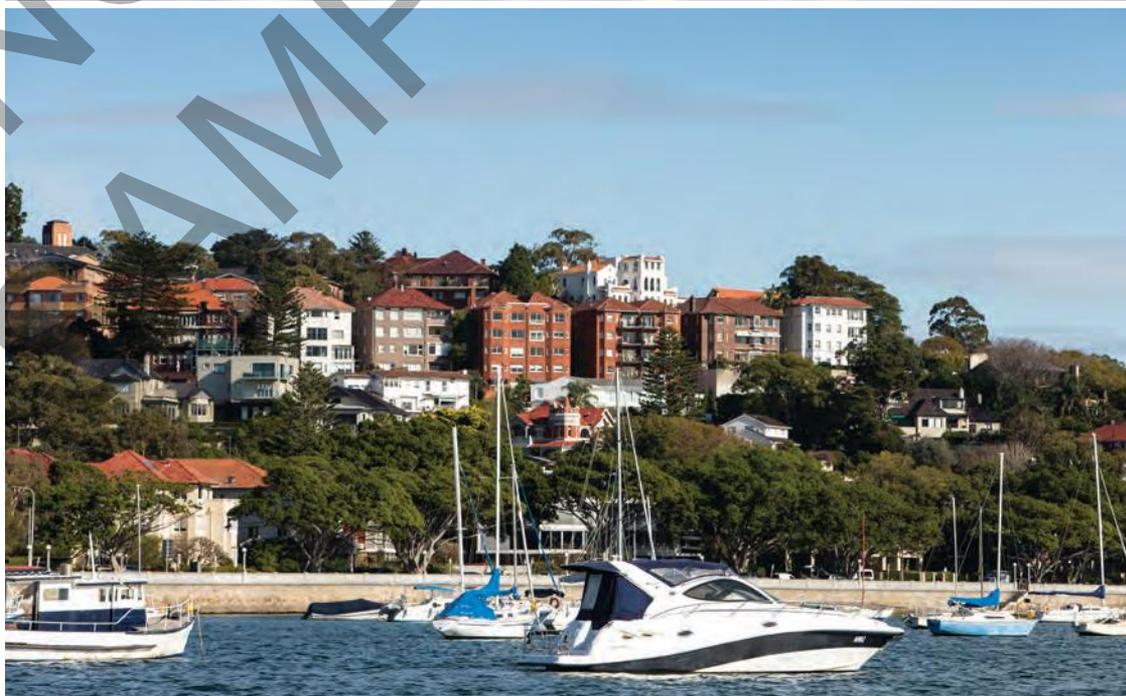
Teachers can assign tasks and track results



12.10 Review questions

- 1 **Explain** what a budget is and what its basic components are.
- 2 **Identify** the usual length of time a household budgets for.
- 3 **Define** the term 'disposable income'.

↓ Figure 12.10.4 Office buildings and apartments for renting

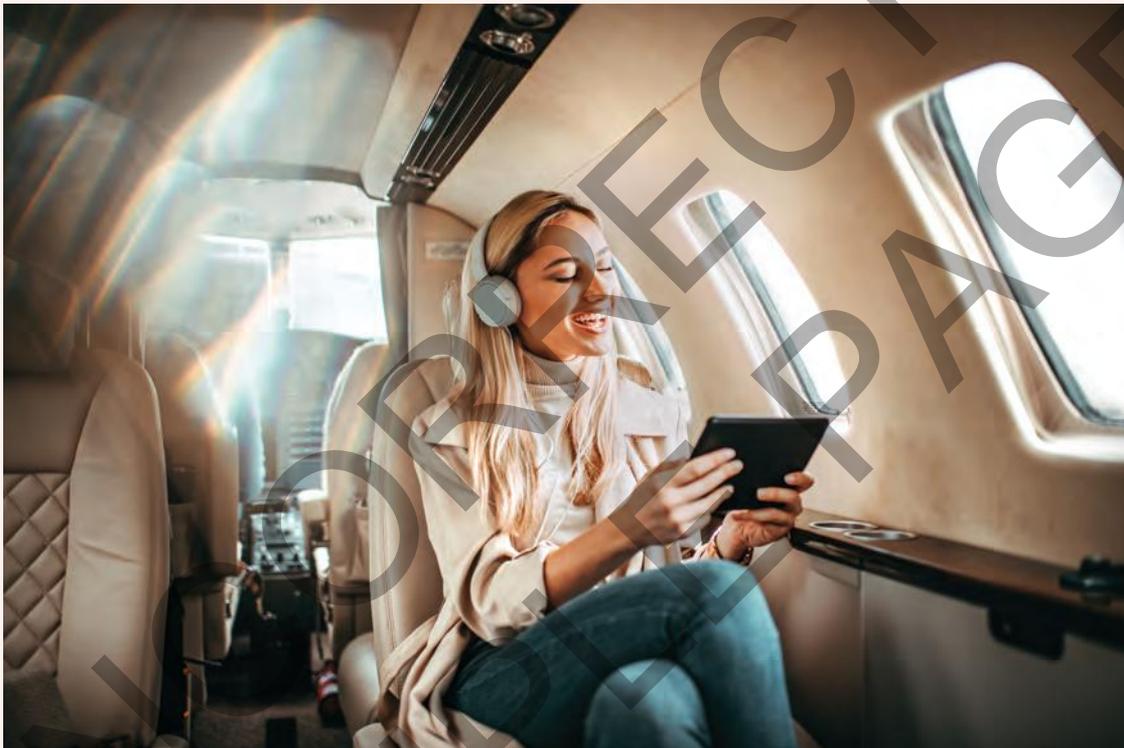


Research task



This research task is designed to be completed over multiple weeks, as you complete the chapter. It should not be left until the end. By completing this research task, you will have the opportunity to consolidate the ideas learned through this chapter, and demonstrate your understanding of Economics and Business concepts and skills.

Research topic: Is income inequality in Australia fair? _____



↑ Figure 12.12.1 Some people have more wealth than others.

Investigate and evaluate the research question and develop your response using the following questions to guide you. You should follow the Q-CAFÉ method of investigation, as described in the box at the end of Lesson 12.1. You will also prepare a report of your investigation.

- 1 **Q:** Think about what you already know about income inequality in Australia. Write down your ideas and questions you have about the fairness of income inequality.
- 2 **C:** Collect information from reliable sources (such as government reports, the Australian Bureau of Statistics, and reputable news outlets) that provide data on household income and wealth distribution. Record statistics, trends and any relevant diagrams or tables from the chapter or online.

Data from the Australian Bureau of Statistics is provided in the tables below.

Table 12.12.1 Standard household – average weekly income (2019/20 prices)

	2009/10 (\$ per week)	2019/20 (\$ per week)	10-year increase (%)
Quintile 1	382	415	8.6
All households	1 034	1 124	8.7
Quintile 5	2 079	2 234	7.6

Source: ABS Household Income and Wealth, Australia

Table 12.12.2 Standard household – average wealth (2019/20 prices)

	2009/10 (\$)	2019/20 (\$)	10-year increase (%)
Quintile 1	25 900	27 800	7.3
All households	496 100	585 900	18.1
Quintile 5	1 542 000	1 821 800	18.1

Source: ABS Household Income and Wealth, Australia

Notes on tables:

- 1 Income includes wages, rents, interests, dividends/profits and government transfers.
 - 2 Wealth includes assets less debts. Average wealth was \$585,900 per standard household in 2019/20.
 - 3 A Standard household is the adjustment to each household so that it equals one adult. So, each second, third, etc. adult is calculated as 0.5 and each child as 0.3.
 - 4 Price level is the prices of 2019/20. Prices for 2009/10 have been adjusted by an index of price increases over the 10 years.
 - 5 A quintile is 20 per cent of the total number of households. Quintile 1 is the 20 per cent of households with the lowest level of income or wealth.
- 3 A:** Analyse the information you have collected. Look for patterns and trends in income data.
- a Construct graphs of the household income for standard households in the Quintile 1 group and in the Quintile 5 group for 2009/10 and 2019/20.
 - b Construct graphs showing the household wealth for standard households in the Quintile 1 group and in the Quintile 5 group for 2009/10 and 2019/20.
- 4 F:** Summarise your findings concisely. What conclusions can you draw about the fairness of income inequality in Australia based on your analysis? Are there clear disparities? What might be the causes of these disparities?

- 5 **E:** Evaluate the evidence you have gathered and decide on the fairness of income distribution in Australia by comparing your findings with a chosen standard. The fairness standard could be:
- a the poverty line
 - b a suggested minimum income for all households
 - c an average household income, used for international comparisons.

The report

Your teacher will tell you how you should present your report (written, oral, multimedia). However, your report should include:

- Define income inequality and its impact on household material wellbeing.
- Present data on income distribution and wealth disparities.
- Identify factors contributing to income inequality (e.g. education, employment).
- Analyse fairness using accepted standards and international comparisons.
- Evaluate government interventions like taxation and social transfers.
- Suggest policy recommendations to reduce inequality and improve fairness.

End of investigation review: What can households do to improve their material wellbeing?



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorcher timed competitive quiz.

Brain dump



What have you learned about improving material wellbeing? Copy and complete the table to explain your understanding. Aim for two points per topic.

Household trading	
Material wellbeing	
Relative scarcity	
Economic decision-making	
Market prices	
Household budgeting	
Taxation	
Consumer rights	

Making thinking visible



Apply the 3-2-1 Routine to summarise your findings from this investigation.

- 1 Recall three main points or ideas from the topic.
- 2 Identify two interesting or surprising facts related to the topic.
- 3 State one question that you still have or something you want to learn more about.

Practice questions



- 1 How does managing household trading contribute to material wellbeing?
- 2 What is the role of relative scarcity in shaping household decisions?
- 3 **Describe** how benefit–cost analysis can help in making economic decisions.
- 4 How do market prices influence household spending?
- 5 What are the key elements of effective household budgeting?

Response to chapter inquiry question: What can households do to improve their material wellbeing?



Write a paragraph in response to the inquiry question. Include the following key terms:

- material wellbeing
- household trading
- relative scarcity
- economic decision-making
- benefit–cost analysis
- price mechanism
- budgeting
- disposable income
- taxation
- consumer rights.

UNCORRECTED
SAMPLE PAGES



Part 4

Civics & Citizenship



FPO

Watch the video for an introduction to Civics & Citizenship in Year 7 and the skills and concepts you will be working with

INVESTIGATION

Australia's political structure, democracy and citizenship

OVERVIEW

[In Year 7 Civics and Citizenship students will] ... develop their understanding of the principles and features of Australia's systems of government and the main participants in Australia's democratic institutions, including citizens. Students examine the characteristics and types of law in Australia, the democratic nature of institutions and the relationship between individuals, communities and contemporary Australian society.

Source: VCAA, Victorian Curriculum V2.0, 'Civics & Citizenship', 'Band description – Levels 7 and 8'

CURRICULUM GOALS

- How can I participate in Australian democracy?
- What makes Australia's institutions democratic?
- Who influences decision-making in Australia's institutions and how do they gain this influence?
- How might we ensure that legal mechanisms create security for all citizens in Australia?
- How does Australian citizenship affect you?

Source: VCAA, Victorian Curriculum V2.0, 'Civics & Citizenship', 'Band description – Levels 7 and 8'

CHAPTER 13

How does Australia's political system support democracy and citizenship?



LESSON	TITLE
13.1	Setting the scene: Why did Australia become a Federation in 1901?
13.2	What is the purpose of the Australian Constitution?
13.3	What is the 'separation of powers'?
13.4	What is the 'division of powers'?
13.5	What is the nature of Australian parliamentary voting?
13.6	What is the role of political parties in Australia's representative democracy?
13.7	Why and how is a law created?
13.8	What does the Whitlam Dismissal in 1975 reveal about Australia's political system?
13.9	Research task: Should voting be voluntary in Australia?
13.10	End of investigation review: How does Australia's political system support democracy and citizenship?

Setting the scene: Why did Australia become a Federation in 1901?



Learning intention

In this lesson, we will learn to identify and explain the problems of having six separate colonies and evaluate the economic benefits of Australia becoming one country.

colony a settlement in a country occupied by people from a different country, who are fully or partially subject to the parent state

Prior to 1901, the Australian continent consisted of six separate British **colonies**. They were Queensland, New South Wales, South Australia, Tasmania, Victoria and Western Australia. At the turn of the twentieth century, the Northern and

Australian Capital Territories were not yet created. The six separate colonies were like six individual adults living under one roof. But there was no one in charge of the whole house and each adult was instead responsible for only their own room.

↓ [Figure 13.1.1](#) Tom Roberts (1856–1931), *Opening of the First Parliament of the Commonwealth of Australia in the Exhibition Building, Melbourne by the H.R.H. The Duke of Cornwall and York on the 9 May 1901*, British Royal Collection permanent loan, Parliament House Art Collection



Each separate colony had its own railway system and there was no singular national railway system. Over a hundred years ago, if someone travelled from Melbourne to Sydney via train, they had to change trains at Albury and board a different train. Trains could not cross state boundaries because the tracks were different sizes. This was a nuisance for businesses that were trading goods because it was time consuming. And time was money! Businesses transporting goods between states had to pay border **taxes**. This annoyed them. Imagine if you ordered a product on Amazon from another state. You got a text message in transit: ‘Your item is held up at the state border. Please pay an extra fee of \$10’. It would be perplexing and unheard of! Yet it was the norm over 100 years ago. Without the phones, of course.

For some, there were also issues about **immigration** from overseas. **Unions** and some political parties feared immigrants would take jobs from Australians. In addition to these concerns, parts of Australia were experiencing severe droughts and economic catastrophes. The droughts that occurred in the 1890s made a bad situation worse. Farming at the time was a major source of **economic productivity** and poor crop harvests severely affected people’s livelihoods. Therefore, people felt the Australian continent needed protection.

The six separate British colonies in Australia had their own laws, defence forces and parliaments. After several **conventions** in the 1890s, they agreed that a single government would better manage immigration, defence, state relations, trade, and **foreign policy**. At one point, there was talk about New Zealand joining the Commonwealth of Australia during the 1890s. Eventually, on the 1st January 1901, Australia became a federated government. This meant that

the six separate British colonies united and Australia became one country. Australia officially became known as the ‘Commonwealth of Australia’.

However, to unite a country, it needed a new set of rules outlining how this would work. These rules eventually became embodied in the **Australian Constitution**. The separate colonies all agreed and consented, but it was not easy. Western Australia initially disagreed but later changed its mind. New South Wales had a large faction of its population against uniting. It eventually agreed though to join if a new capital was built in New South Wales. The new seat of government was to be Canberra. Melbourne was the original capital of Australia until 1927. The current Victorian Parliament House on Spring Street was the original Federal Parliament House. The image in Figure 13.1.2 shows early Canberra, surrounded by farmland. Unlike it, Melbourne and Sydney were urban cities.

tax financial contribution to the government imposed on people, businesses and property

immigration the action of coming to settle as a permanent resident in a different country

union an organisation made up of a group of employees that represent the interests of workers

economic productivity a measure of how well a country or business uses its resources to produce goods and services

conventions meetings of colonial politicians who discussed what a federated government would look like

foreign policy interactions and decisions made by governments with foreign governments like trade, war, immigration and diplomacy

Australian Constitution the birth certificate of the nation, which provides and outlines the rules for the government of Australia



↑ Figure 13.1.2 Above is a photo of Old Parliament House, the Parliament House in Canberra in the 1940s. In the foreground are sheep grazing. This photo captures the relationship between Australia’s historical dependency and connection with agriculture, such as industries like wool that shaped the country’s economy.

The Victorian Curriculum lists a range of skills that you will need to develop. To help you practise and integrate these skills in Civics and Citizenship, we have developed the QUED method of investigation. There are opportunities to apply this method throughout the lessons, as well as in a final research task (Lesson 13.9).

QUED method of investigation



Q Questions are formed to investigate a political, legal or civic issue.



U Undertake the collection and analysis of a range of information.



E Evaluate the quality and breadth of information relevant to the issue.

Evaluate how the principles of justice are achieved through the legal system.

E Evaluate the political power of actors involved with an issue and their connections with institutions.

Evaluate the effectiveness of democratic decision-making.

Evaluate the methods and strategies of civic participation in relation to an issue.



D Decide, recommend and justify changes regarding the issue.

Deliver your response to the issue using the most effective method of communication.

Note that the research task is designed to be completed over the duration of the unit, rather than in the final few weeks. Be sure to get started as soon as possible!



Go online to access the interactive lesson review and more!

Lesson 13.1 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



13.1 Review questions

- Construct** a who, what, when, where, why or how question about Australian Federation and answer it in as much detail as you can.
- Investigate** five facts about the 1890s conventions. Use the following website to help: <https://cambridge.edu.au/redirect/11213>.
- Do you think the decision to create a federated Australia in 1901 was beneficial for the country?
Explain why or why not.
- Justify** why you think it was a good idea to have Canberra as the capital? What would be Australia's alternative capital? Melbourne, Sydney or Brisbane? Develop reasons why.

What is the purpose of the Australian Constitution?



Learning intention

In this lesson, we will explore why the Constitution is necessary, and make comparisons to your classroom environment to help understand the function of the Constitution.

Lesson starter



Complete the following activity to kick-start this lesson.

Headlines

- 1 Using what you have learnt in the previous lesson, develop a creative newspaper headline that captures the key idea.
- 2 Using the image below, **outline** and **explain** what you see, think and wonder about citizenship.

↓ Figure 13.2.1 Prime Minister Anthony Albanese poses with citizenship recipients on January 26, 2023 in Canberra, Australia.



The Australian Constitution

To understand Australia's political structure, its processes and purposes, we need to learn and understand the Australian Constitution. This will take place over the following two sections.

The Australian Constitution is like a rule book. This rule book is based on the consent of the people. It is a document that sets out how laws are made and implemented. It separates and divides decision-making abilities.

Let's use a classroom as an analogy. It will help us understand Australia's Constitution. In your classroom, there are rules and routines to follow. They help the class run smoothly. There are written rules and expectations on how to behave towards each other and the teacher, and vice-versa. These might be written on the walls above you right now.

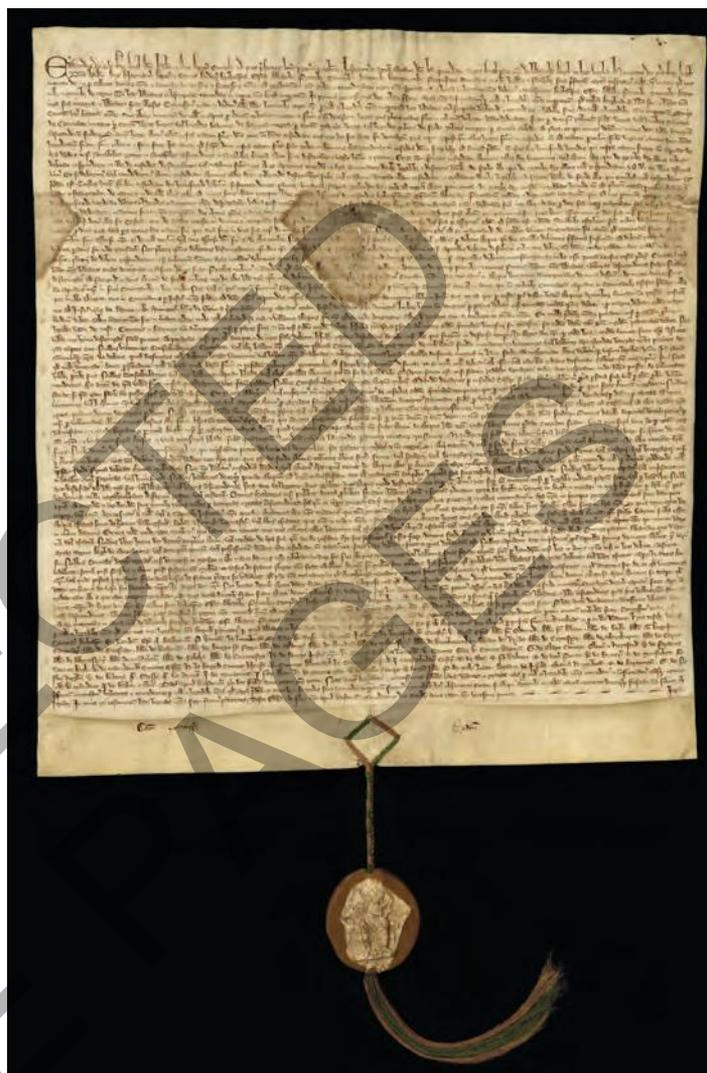
Students must consent to classroom expectations. They can do this by signing a document or poster at the start of the year. It outlines values like 'respect', 'kindness', 'courage' and 'teamwork'. Consent is demonstrated by upholding and obeying agreed upon rules and routines in your classroom. These are all necessary to help facilitate learning. These are your obligations.

As a student, you also have **rights**. You have the right to learn and to be taught and the right to be safe and the right to make contributions, and to be treated fairly. Just like being a student or a member of a classroom, being a **citizen** of a country has its similarities.

Australian citizens have rights, which are the key principles of a liberal democratic country. Our rights come from a number of different sources. They are from:

- international law
- common law (law by Australian courts)

rights the enjoyment of privileges; an entitlement and a freedom of choice
citizen a member of a political community that grants certain rights and privileges to its citizens, and in return expects them to act responsibly, such as to obey their country's laws



↑ Figure 13.2.2 This is a photo of the *Magna Carta*. The *Magna Carta* was created in 1215 at Runnymede, England. It is a charter that aims to limit the powers of the King and protect the rights of the Church and certain English nobles. It continues to influence modern legal and democratic systems of government to this day.

- laws made by the Australian Parliament (statute law)
- the Australian Constitution.

To use another example, your school's teachers must follow the school's code of conduct and policies. The decisions they make at school need to be consistent with the written policies that have been agreed upon when they begin working at your school. They just can't suspend or expel students they don't like.

There are limitations to their authority. They must follow guidelines and rules. Like in school, the Australian political system relies on rules. It must not depend on individual desires. This ensures fair and transparent **governance**. To make sure there is fair and transparent governance, powers are separated.

In your classroom, you probably have a class captain who is responsible for certain duties and tasks that help the classroom to function smoothly and properly. You might have voted on this person at the start of the year or there could be a rotation system in place. Imagine instead though there were three classroom leaders, one called a 'rule-maker', another one called a 'rule-enforcer' and a final one called a 'dispute resolver'. This separation of responsibilities helps to ensure decision-making and planning is fairer because no single person holds all the power. Instead, each leader focuses on a specific task, ensuring that rules are created thoughtfully, enforced consistently, and disagreements are resolved with minimal favouritism.

Conventions and the Constitution

A lot of what is known about the Australian government is based on conventions, rather than what is written

down. Conventions (in this context) are unwritten rules and processes that help to interpret written Constitutional rules and to fill in voids in the Constitution.

For example, there is no mention of the Prime Minister or the Leader of the Opposition in the Constitution.

Another example of a convention is that the Prime Minister must have the support of the majority of the House of Representatives. If not, then they are expected to resign or call an election.

It is also surprising to know that the appointment of the Prime Minister is drawn from the House of Representatives. However, this is a convention and could technically be from either the Senate or House of Representatives.

Summary

Therefore, who does the Constitution actually belong to? It belongs to *all* citizens of Australians. Not just to one person or one group of people based on occupation, ethnicity, or wealth. This is why, when Parliament wants to change the Constitution, a **referendum** is called. It is the duty of all citizens, not just **parliamentarians**, to vote on the changes.

governance a process and rules by which decisions are made and implemented

referendum a vote by the whole of the Australian citizenry population on a proposed change to the Constitution by the Parliament. For a referendum to succeed, it requires a double majority. This is when there are a majority of votes nationally and also a majority of votes in at least four out of the six states

parliamentarian a member of parliament who has been voted into either the Senate or House of Representatives

Concepts and skills builder 13.2



Investigating the role of rules in governance

Consider the following stimulus and apply the QUED method of investigation (outlined at the end of Lesson 13.1) by answering the questions that follow.

Ming is curious about why rules are necessary. In her classroom, clear rules help maintain order and fairness, just as the Australian Constitution sets out the rules for governing the nation. Ming wants to explore how rules work to protect everyone's rights and ensure that leaders are held to account.

1 Q: Develop and answer a who, what, when, where, why or how question about the necessity of rules in a community or classroom.

2 U: Undertake research to identify your local Federal and State members by using the following resources:

State: <https://cambridge.edu.au/redirect/11161>

Federal: <https://cambridge.edu.au/redirect/11164>

If you want to know what they have previously voted on in Parliament, then use this link: <https://cambridge.edu.au/redirect/11214>.

- 3 **E:** Evaluate the strengths and weaknesses of your classroom's rules, considering how they promote fairness and order.
- 4 **D:** Decide why leaders in democratic countries have limitations on their authority, and justify your answer.

Civics and Citizenship concepts and skills: communicating, evaluating democratic institutions and systems, investigating contemporary civics and citizenship issues, participating in civic processes



Go online to access the interactive lesson review and more!

Lesson 13.2 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



13.2 Review questions

- 1 **Recall** when Australia became a Federation.
- 2 **Describe** the purpose of the Australian Constitution.
- 3 **Identify** some of your rights as a student.
- 4 **Identify** some of the rights of an Australian citizen.
- 5 **Explain** why the Australian Constitution belongs to all citizens of Australia.

What is the 'separation of powers'?



Learning intention

In this lesson, we will identify and explain the components of the Australian Constitution and compare and differentiate the different branches and roles of the Constitution.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

In order to ensure politicians in positions of authority do not gain too much power, there needs to be a separation so that no single branch of government can control all decision-making.

- 1 **See:** Describe what you notice about the image.
- 2 **Think:** Do you think this might be the signing of something important? Why?
- 3 **Wonder:** What questions do you have about this image?

↓ Figure 13.3.1 Tony Abbott is sworn in as the 28th Prime Minister of Australia by the Governor-General Quentin Bryce on September 18, 2013 in Canberra, Australia.



The Constitution separates powers between the legislative, executive and judicial branches.

Table 13.3.1 The three branches

Legislative	Executive	Judiciary
Parliament is the legislative part. It includes the Senate and House of Representatives.	The Prime Minister and Cabinet are the Executive. However, King Charles III of England is technically Australia's Head of State. His representative is the Governor-General.	The court system makes up the Judiciary.
Function: The Legislative makes laws through drafting, debating and voting on legislation.	Function: The Executive essentially has the power to apply and put the law into action.	Function: The Judiciary is responsible for adjudicating disputes over the application of the country's laws.

Separation of powers

separation of powers the three different groups – the Legislative, Executive and Judiciary – in making and managing laws

The **separation of powers** prevents the concentration of power in one person or group. The separation of powers serves as a check and a balance. For thousands of years, humans have organised societies where too often power is abused and in the hands of only a few people. Those in power tend to serve their own interests, not the populace. The separation of powers aims to ensure decisions made by leaders are fair and in the interests of those who are governed or ruled.

The separation of powers is between the Legislative, Executive and Judiciary

here in Australia. In the previous chapter, we used your classroom as an example. Now let's use your home environment. Imagine if one of your parents or guardians were the rule-making parent. This is like the Legislative. They decide rules like bedtime, chores and screentime. The other parent or guardian enforces the rules. They make sure everyone follows them. This is like the Executive. Finally, if there's a dispute over a broken rule, the parents may meet with another family member to resolve it. This is the job of the Judiciary.

↓ **Figure 13.3.2** A full sitting of Parliamentary members in the House of Representatives at Parliament House in 2006, listening to an address by former British Prime Minister Tony Blair. The House of Representatives sometimes invites leaders from other countries to come to speak about important international matters.



Legislative

The **Legislative** makes the laws. It does this by drafting, debating and voting on them. Members of Parliament, elected by Australian voters, do this work. Parliament House in Canberra represents the Legislative. It houses the House of Representatives and the Senate. The Senate represents the interests of the States and Territories. The House of Representatives represents the local people in each member's electorate.

Outside of Parliament House in Canberra, each state and territory has its own legislature. All states except Queensland are bicameral ('cameral' meaning 'chamber' and 'bi' meaning two). They have a lower house called the Legislative Assembly, and an upper house called the Legislative Council. The Northern Territory and Australian Capital Territory are unicameral, like Queensland.

In the Australian Constitution, there are four types of legislative power. They are:

- **Specific:** These are law-making powers given to the Federal Parliament. They are in sections 51 and 52 of the Constitution. They provide for 'peace, order, and good government of Australia'.
- **Exclusive:** Only the Commonwealth can exercise these law-making powers, like creating currency, whereas the States and Territories cannot.
- **Concurrent:** These are non-exclusive powers, like taxation, that are shared

between the Commonwealth, states and territories..

- **Residual:** These are the law-making powers of each state. They were agreed to at Federation when the colonies discussed what powers to keep and what to cede to the new Federal Parliament. This is explained in greater detail in the next lesson.

Executive

The **Executive** wields authority to enforce and implement the law. The **Governor-General** has ultimate authority over the Commonwealth of Australia.

Governor-General

The Governor-General has constitutional duties – like signing legislation – but only on the advice of ministers. Essentially, they are like an umpire. They approve the decisions made in Parliament House.

The Governor-General has executive powers, such as:

- giving royal assent to a proposed law (bill)
- starting the process for a federal election.

The Governor-General also has reserve powers. Some reserve powers include the:

- ability to dismiss a prime minister
- power to appoint a prime minister if a federal election has not resulted in a clear outcome.

Legislative makes or changes the law

Executive puts the law into action

Governor-General the Constitution gives power to the King, which is delegated or given to the Governor-General. The Governor-General follows the advice of the Prime Minister and the ministers and signs laws into action

Amazing but true...

Did you know that the Governor-General or when the Head of State, such as King Charles III, comes to visit Australia and attends Parliament House, the King or Queen is not allowed to enter the House of Representatives? This is because it's the people's house. This dates back to 1642 when King Charles I of England, with armed guards, entered the British lower house (the House of Commons) and tried to arrest some members.

Judiciary makes judgments about the law

The Prime Minister and Cabinet

The Prime Minister leads the government and holds the title of ‘first amongst equals’. The photo below depicts new Cabinet ministers outside the front of Government House where the Governor-General presides. The photo includes Prime Minister Anthony Albanese (front row fourth from right) posing with his new Ministry after a swearing-in ceremony at Government House on 1 June 2022 in Canberra, following the Labor Party’s victory in the Australian Federal election on 21 May 2022. Prime Minister Albanese is standing next to Governor-General David Hurley. The Cabinet is the focal



↑ Figure 13.3.3 Prime Minister Anthony Albanese posing with his new Cabinet ministers in June 2022.



↑ Figure 13.3.4 The High Court of Australia in Canberra

point of the decision-making process of government, yet it doesn’t exist in the Constitution. It is another type of convention. Included in the Cabinet are Ministers responsible for certain departments such as Health, Education, Employment, Defence, Infrastructure and Energy, just to name a few.

Judiciary

The **Judiciary** resolves disputes over the application of the country’s laws. This can include disputes between State and Federal jurisdictions, not just between people and companies. For example, in 1983 the High Court heard a case between the Commonwealth of Australia and the Tasmanian government. It was about building a dam, called the Franklin Dam. The Tasmanian government wanted to build it. But the Commonwealth opposed it. The Commonwealth had to protect World Heritage sites under international treaties. They were also concerned about the environment. The Tasmanian government ultimately lost the case and so the construction did not go ahead.

In addition to the High Court, there is the Federal Court and the Federal Circuit and Family Court. They resolve disputes regarding federal laws to do with migration, family, and consumer rights such as buying goods and services. This is because these issues are outlined in the Australian Constitution.

Summary

In conclusion, the Australian government has a system set up where there are multiple roles and responsibilities between the Legislative, Executive and Judiciary. This dispersion of authority helps to ensure accountability and to make Australia a robust democratic country.

Concepts and skills builder 13.3



Investigating the separation of powers in governance

Consider the following stimulus and apply the QUED method of investigation by answering the questions that follow.

Kofi is learning how Australia's government is divided into three branches – the Legislative, Executive and Judiciary – to prevent any single group from holding too much power. He is curious about how this separation of responsibilities works in practice, and he wants to explore a real-life example that shows how these checks and balances operate. Kofi decides to study the Franklin Dam case as a way to understand how disputes between state and federal powers are resolved and what role the separation of powers plays in that process.

- Q:** Develop and answer a detailed question that explores how the separation of powers helps prevent the concentration of power in one branch of government. (Optional: identify and research any information that challenges your answer.)
- U:** Undertake research on the Franklin Dam case to explain how the High Court's decision demonstrated the importance of separating powers between state and federal governments.
- E:** Evaluate the effectiveness of the checks and balances in place by considering whether including the Governor-General as part of the Executive strengthens or weakens this system.
- D:** Decide which branch of government you believe plays the most crucial role in maintaining checks and balances, and justify your answer based on your research and analysis of the Franklin Dam case.

Civics and Citizenship concepts and skills: communicating, evaluating democratic institutions and systems, investigating contemporary civics and citizenship issues, participating in civic processes

Lesson 13.3 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



Go online to access the interactive lesson review and more!

13.3 Review questions

- Identify** the three branches of power in Australia as listed in the Australian Constitution.
- Recall** what the 'Judiciary' means.
- State** the name given to a prime minister's team of politicians.
- Describe** the purpose of the separation of powers in the Australian Constitution.
- Propose** who has the ultimate authority in the Commonwealth of Australia.

What is the 'division of powers'?



Learning intention

Similar to the previous lesson, where we learnt about the necessity for the separation of powers, this lesson focuses on the necessity for the distribution of powers between the different levels of government: the Commonwealth of Australia, the States and Territories and local councils.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- 1 **See:** Describe what you notice about the images.
- 2 **Think:** What is a service that the federal government would provide versus what your local council might provide?
- 3 **Wonder:** What questions do you have about these images?

↓ Figure 13.4.1 The Federal Government is responsible for providing electricity services, whereas emergency services are provided for by State and Territory governments.



Division of powers

In addition to the separation of powers, there is also the division of powers between the **Federal, State** and Territory governments.

When the Australian Constitution was being written in the late 1890s, some Constitutional writers were concerned about a single government in Canberra that had the ability to **oversee** all political matters and decisions. Each state had its own Constitution at the turn of the twentieth century. Yet, during this time in the late 1890s, the Australian colonies also wanted a national government for a variety of reasons. One of these reasons was for a singular national defence force.

They also wanted this single government to have real powers. But they also wanted to limit those powers. They didn't want it to **interfere** with their own responsibilities.

This can best be compared with an adult child living with his or her parents. The parents have certain responsibilities, and the adult child is at an age where he or she has certain responsibilities as well that are different to those of the parents.

Below are examples of the different types of services that are divided between the different levels of government. The reason why services are divided is to allow for a more efficient management.

Table 13.4.1 The different services of the different levels of government

Federal	Federal law-making responsibilities include: national defence, immigration, communication and broadcasting, marriages and divorces, pensions, international trade, income taxation, air travel, postal services and commerce.
State or territory	State responsibilities include: health (hospitals and ambulances), police, housing, primary and secondary education, land taxation, transportation such as buses, trains and trams.
Local council	There are over 500 local government councils . Councils operate under State law and they make laws, called by-laws, on local issues. Responsibilities include: roads and footpath, pet control, sewage, public libraries, rubbish and recycling, child day care, parks and gardens, and street lighting.

Summary

Overall, without the division of powers, the Australian Federal Government would be too big and slow to manage all Australians' needs, wants and concerns. It is important to note that Australia's large size and spread-out population means the necessity for different layers of government that are closer in proximity to where people live. Imagine living in regional Western Australia where there is no local council, nor a State government and instead the nearest head of government was in Canberra! Regional concerns and interests would not be managed properly by someone thousands of kilometres away.

Federal having to do with the national Australian Parliament or government in Canberra rather than State or Territory parliaments or governments

State there are six states: Victoria, New South Wales, Queensland, Tasmania, South Australia and Western Australia. They each make up a geographical region of Australia and are each responsible for governing and administering policies

oversee to keep watch over

interfere entering into something without the right or invitation

council elected officials who govern a local government area



↑ Figure 13.4.2 The current Australian Commonwealth Coat of Arms depicts the six states' emblems between a kangaroo on the left and an emu on the right. The seven-point star on top represents the six states and the seventh represents the territories.

Concepts and skills builder 13.4



Investigating the division of powers between government levels

Consider the following stimulus and apply the QUED method of investigation by answering the questions that follow.

Zahra is keen to understand how responsibilities are divided between different levels of government in her community. She has noticed that the Victorian State Government plays a major role in providing essential services, while her local council directly affects everyday life through local services. Zahra wants to explore how these roles compare and whether the division of powers between federal, state (and territories) and local governments effectively meets community needs.

- 1 Q:** Develop and answer a detailed who, what, when, where, why or how question to do with the services the Victorian State government provides and its impact on everyday life. (Optional: identify and research any information that challenges your answer.)
- 2 U:** Undertake research by visiting your local council's website to discover its responsibilities. Record which services you or your family have used and reflect on their importance.
- 3 E:** Evaluate how effectively the division of powers between federal, state (and territories) and local governments meets the needs of your community, using the information you gathered in steps 1 and 2.
- 4 D:** Decide which level of government, if any, could be considered redundant and justify your decision based on your evaluation and research.

Civics and Citizenship concepts and skills: communicating, evaluating democratic institutions and systems, investigating contemporary civics and citizenship issues, participating in civic processes



Go online to access the interactive lesson review and more!

Lesson 13.4 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



13.4 Review questions

- 1 List** the three 'divisions of power' in Australia.
- 2 Identify** three responsibilities of the Federal Government.
- 3 Identify** three responsibilities of State and Territory governments.
- 4 Identify** three responsibilities of local councils.
- 5 Describe** the purpose the writers of the Australian Constitution had in mind when including the division of powers.

What is the nature of Australian parliamentary voting?



Learning intention

This lesson explains the purpose of political parties and differentiates between different types of major parties as well the minor parties and independents. It also explores how politicians are voted into power.

Lesson starter

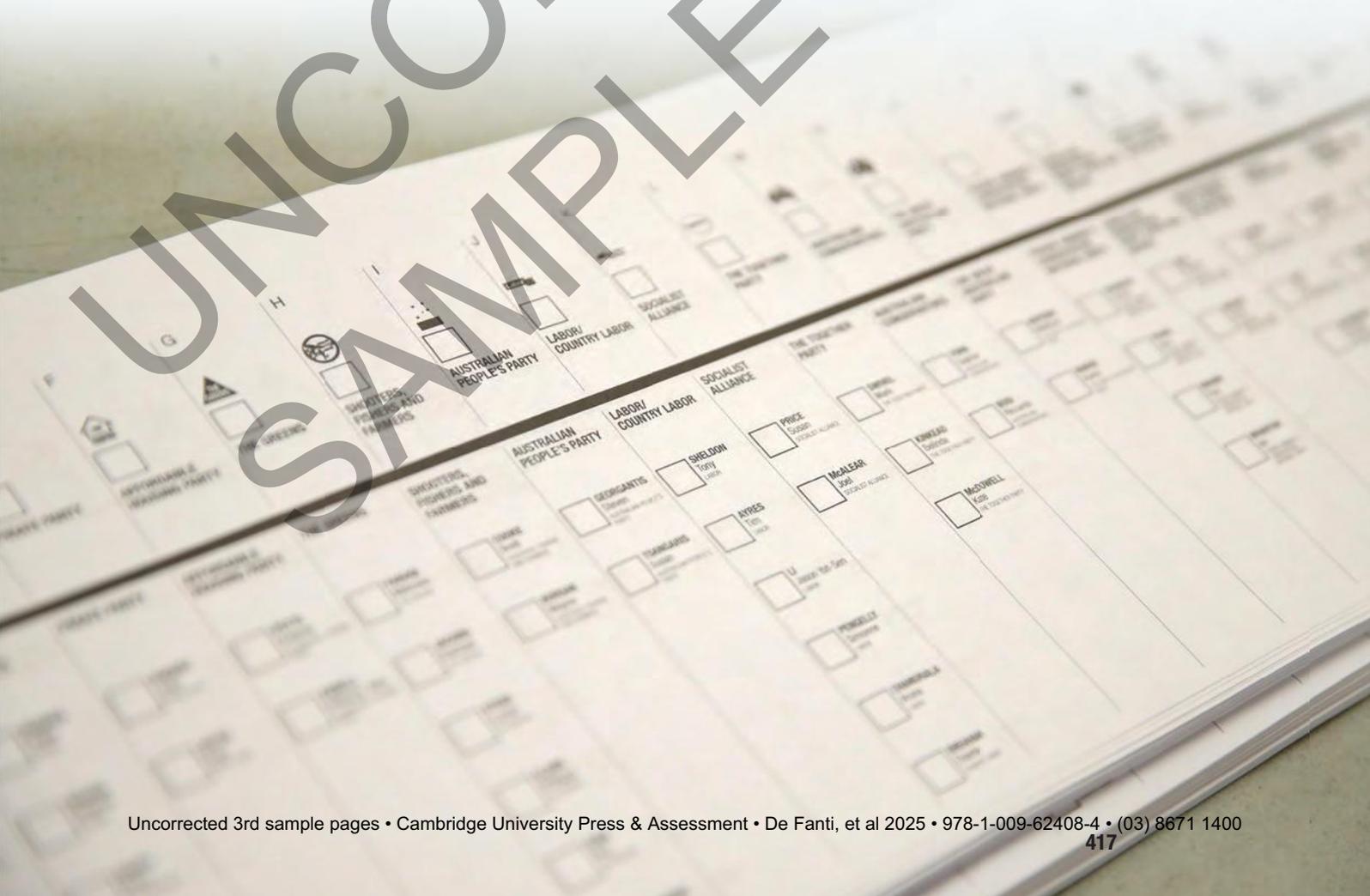


Complete the following activity to kick-start this lesson.

See, think, wonder

- See:** Describe what you notice about the image.
- Think:** What do you already know about how to vote in Australia?
- Wonder:** What questions do you have about this image?

↓ [Figure 13.5.1](#) Ballot papers for an Australian federal election



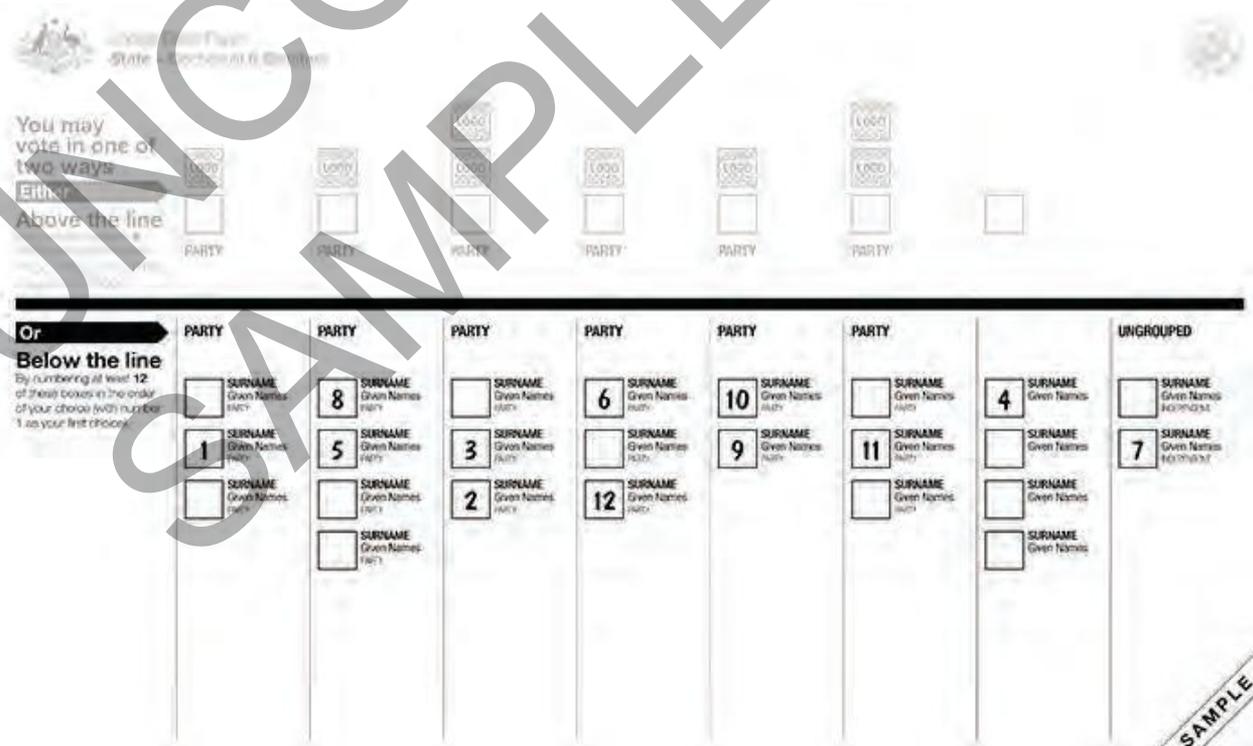
Politicians depend upon the consent of the Australian populace to be in positions of power. This is reflected in elections where Australians vote for who they want to represent them in Parliament and make important decisions on their behalf. However, what are the different voting processes used to select politicians?

Australia is one of the longest-running parliamentary democracies in the world, but democratic rights have not always been equally granted. Throughout history, many countries have not been democracies, and most people were considered **subjects** rather than citizens with rights. While some First Nations peoples in South Australia and other colonies had voting rights in the nineteenth and twentieth centuries, these were inconsistent and often restricted over time. Before the 1967 Referendum, some First Nations peoples were counted in state and administrative censuses, but the Australian Constitution excluded them from the official federal population count. The right to vote was not fully secured for all First Nations peoples until 1962 at the

federal level, highlighting the long struggle for equal democratic participation.

In Australia, the history of voting is complex. Australia has a **federated** structure with States, Territories and a Commonwealth. So, the States and Territories have their own voting history. Voting also occurs at the council level as well. Technically, there are three layers of government whereby citizens are asked to vote for their representatives.

Voting in elections is compulsory for all Australian citizens aged 18 years or older. This is quite rare for a democracy. Many democratic countries around the world in fact have optional voting. Australia introduced compulsory voting in 1924. However, some people believe that requiring citizens to vote infringes on their personal freedom. Compulsory voting, though, gives the ruling political party greater legitimacy, as it reflects the consent of a true majority. It is also seen as a necessary duty and an important part of being a citizen. When citizens vote on election day, there are different types of methods of voting.



↑ Figure 13.5.2 Sample Senate ballot paper from the Australian Electoral Commission (AEC).

Types of voting

During federal elections, there are different ways voting is counted. It is more complex than simply counting the number of votes and awarding the **political candidate** winning the majority of votes. The House of Representatives and the Senate each has its own method of counting votes.

Proportional representation voting

Under proportional representation, parties, groups and independent candidates are elected to the Senate in proportion to the number of votes they receive. There is a formula used to determine the elected candidate. In Figure 13.5.1 is an image from the Australian Electoral Commission of a Senate **ballot paper** that voters use on election day. As you can see it is incredibly long. That's because there are multiple candidates vying for a Senate seat as opposed to a House of Representatives seat.

Preferential voting

In the preferential voting system, a political candidate needs more than 50 per cent of the votes to win. Voters rank all candidates in order, starting with their preferred favourite, and if no one gets enough votes in the first round, the candidate with the fewest votes is removed, and their votes go to each voter's next choice. This keeps going until someone has enough votes to win. The preferential voting system is used in the House of Representatives. On election day political parties give voting preferences to another party. So if their political candidate doesn't win, but still receives some votes, then those votes will be allocated to another party.

Summary

In summary, voting is a core part of any democracy because it reflects the



↑ Figure 13.5.3 Sample House of Representatives ballot paper from the Australian Electoral Commission (AEC).

people's choices. Members of Parliament are depended upon voters selecting and choosing them to represent their interest, needs, wants and concerns. There are different types of voting methods. This helps to ensure the independence of each of the houses of Federal Parliament.

political candidate a citizen who wants to be nominated and elected for political office

ballot paper a document on election day which voters use to cast their votes with their preferences

Concepts and skills builder 13.5

Investigating the history and fairness of voting

Consider the following stimulus and apply the QUED method of investigation by answering the questions that follow.

Lucas is interested in how voting has evolved in Australia and what makes our voting system unique. He has learned that voting has a long history, including key milestones for Indigenous Australians, and that voting is compulsory. Lucas wants to explore the historical events that shaped voting rights and to consider whether requiring citizens to vote is fair and democratic.

- 1 Q:** Develop and answer a detailed who, what, when, where, why or how question about the history of voting in Australia.)
- 2 U:** Undertake research by visiting the Australian Electoral Commission website (<https://cambridge.edu.au/redirect/11215>) to explore historical milestones for First Nations Peoples. Select two significant events – one from the nineteenth century and one from the twentieth century – and identify the causes and consequences of each event.
- 3 E:** Evaluate whether requiring citizens to vote by law is fair and democratic, using the historical evidence and your own reasoning.
- 4 D:** Decide on a fair and effective method for conducting a class vote, and write a brief recommendation explaining your decision.

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Lesson 13.5 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



13.5 Review questions

- 1 Identify** who can vote in elections in Australia.
- 2 State** the age at which Australian citizens can vote.
- 3 Justify** whether you think compulsory voting, like we have in Australia, is more or less democratic than voluntary voting in countries such as the USA. If you were eligible to vote, **propose** which system would you prefer, and why?

What is the role of political parties in Australia's representative democracy?



Learning intention

Political parties are essential to the running of the House of Representatives and the Senate in Federal Parliament. Citizens vote for them during elections to represent the different interests and needs of the Australian society.

Lesson starter



Complete the following activity to kick-start this lesson.

Headlines

Develop a one word creative headline that encapsulates your understanding about the previous lesson. Be prepared to share and elaborate your response.

What is representative democracy?

The word *democracy* comes from the ancient Greek words 'demos', meaning people, and 'kratos', meaning to rule or give power to. The very basis of democracy is the notion that power and authority resides in the people, not the leaders ruling the country like it is their own private property.

Each citizen has the right to vote for a candidate to represent them in their respective State, Federal and or Territory parliaments. That candidate is usually part of a political party that stands for particular ideas and **ideologies**. It is believed that an elected representative, with particular skills and understanding of the law, can be better positioned to determine what is in the public interest. But this isn't always the case as there are some politicians who have been elected that don't have a background in law.

Representative democracy can also be best defined by what it is not. **Direct democracy** is when citizens directly make decisions on laws. Imagine every Australian eligible voter turning up to Parliament House to debate and vote on bills. There wouldn't be enough room! Nor the time!

The functioning of Parliament House and the passage of laws requires political parties or more precisely the government and opposition. It would be undemocratic if there was only one party in the parliament that decided on the passage of laws. An essential component of any democracy is a functioning and stable political party in opposition to hold the party in government to account for its decisions.

ideology a set of ideas or a way of thinking that guides an individual or social movement about how a society should be structured and ordered

representative democracy citizens choose representatives to make decisions on their behalf

direct democracy laws are decided by the people themselves and not their representatives

What is a political party?

A political party is an organisation that represents a particular group of Australian society's needs and concerns. It is an organisation that consists of members and it is the objective of the party to have as many members elected to Parliament.

What are the roles of political parties?

A political party brings people from the general society together with similar political ideas. They help to enable supporters' demands to be addressed in Parliament. In the Australian political system, there are three major political parties.

Table 13.6.1 The major and minor Australian political parties

Major political parties		
<p>The Australian Labor Party</p>  <p>The Australian Labor Party is the oldest political party in Australia and the oldest Labour party in the world. It has its origins in 'the aspirations of the Australian people' and 'to take forward the struggle of the working class'.</p> <p>The first Labor Prime Minister was Chris Watson, whose real name was Johan Cristian Tanck and who was born in Chile to a German father.</p>	<p>The Liberal Party of Australia</p>  <p>The Liberal Party was created in 1944 and first came to office in 1949. Its objective is to be 'dedicated to political liberty and the freedom and dignity of man'. 'Man' in this case is a homogeneous term referring to humans.</p>	<p>The Nationals</p> <p>The Nationals are committed to 'the future of regional Australia' which is 'critical to the future of the Australian nation'.</p> <p>It is important to note though that the Nationals and the Liberal Party are allied or joined together in 'the Coalition'. Both parties generally vote the same way.</p>
Minor parties		
<p>One Nation</p> <p>One Nation is critical of multiculturalism and expects individuals living in Australia who are of different ethnic backgrounds to give Australia their full, undivided loyalty.</p>	<p>The Greens</p>  <p>The Greens foster a vision of the world characterised by 'peace and nonviolence, social justice, grassroots participatory democracy and ecological sustainability'.</p>	<p>Independents</p> <p>In addition to political parties, there are also political parties or individuals that are independent. They are members of Parliament that don't belong to a mainstream political party.</p> <p>They are individual people who are restricted to a particular geographical area. Just like political party members of Parliament, they too represent their local area's interests and needs in Parliament House, whether it be in the Senate or the House of Representatives. They usually sit in the middle of the house to reflect their non-alignment with a major political party.</p>

Senate one of the two houses of the Federal Parliament of Australia, which has 76 Senators, 12 from each of the six states and two each from the Northern Territory and the Australian Capital Territory, elected from each state and territory voting as one electorate

House of Representatives one of the two houses of the Federal Parliament of Australia, whose members are elected on a population basis

Amazing but true...

The first Labor Prime Minister was Chris Watson, whose real name was Johan Cristian Tanck and who was born in Chile to a German father.

Summary

In conclusion, political parties represent certain groups' interests, needs, wants and concerns. They each have their own history and vision for Australia and Australians. Political parties that are not elected into power still have a responsibility to hold the party in government to account by questioning their decisions and challenging legislation. This helps to reinforce and maintain Australia's democratic nature.



↑ Figure 13.6.1 Senator David Pocock was a former Australian rugby player, and has been an independent senator as of 2024. Here he is speaking in the Senate. He does not align with any major political party.

Concepts and skills builder 13.6



Investigating the origins and roles of political parties

Consider the following stimulus and apply the QUED method of investigation by answering the questions that follow.

Leilani is beginning to think about her future as a voter. Although she is not old enough to vote yet, she wonders which political party she might support when the time comes. She decides to look into the history, principles and values of a party that interests her, to see whether it truly represents her needs.

- 1 Q:** Develop and answer a detailed who, what, when, where, why or how question about the origin of one of Australia's major political parties, explaining its founding principles and historical context.
- 2 U:** Undertake research to gather information on the history and founding ideals of your chosen political party.
- 3 E:** Evaluate whether the founding principles of this party still effectively represent the needs and concerns of Australians today.
- 4 D:** Decide, based on your evaluation, whether there is a need for a new political party to address emerging issues among young people, and justify your decision with clear reasons.

Civics and Citizenship concepts and skills: communicating, evaluating democratic institutions and systems, investigating contemporary civics and citizenship issues, participating in civic processes



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Lesson 13.6 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



13.6 Review questions

- 1 **Identify** where the term 'democracy' originated.
- 2 **Explain** the concept of democracy in your own words.
- 3 **List** the two major political parties in Australia.
- 4 **Identify** three minor political parties in Australia.
- 5 **Explain** why an elected independent could be very powerful in a representative democracy like Australia.

UNCORRECTED SAMPLE PAGES

Why and how is a law created?



Learning intention

In this lesson, we will learn why laws are created, the distinction between laws and rules, and the process by which laws are created and passed in Australia. We will also be able to develop the ability to describe the legislative process, and explain the roles of the House of Representatives and the Senate in passing laws.

Lesson starter



Complete the following activity to kick-start this lesson.

See, think, wonder

- See:** Describe what you notice about the image (Figure 13.7.1).
- Think:** Why would we regulate laws about how fast you can drive a car?
- Wonder:** What questions do you have about this image?



↑ Figure 13.7.1 There are laws relating to how fast you can drive a car.

Why is a law created?

Laws apply to everyone living in Australia. This includes politicians who design and create the laws. Nobody is above the law. Laws are created to ensure Australia remains a functioning society, but more importantly it is a rule to ensure the 'peace, order, and good government of Australia' according to sections 51 and 52 of the Constitution.

It's important to explain that laws are different to **rules**. The law applies to everyone living in a country whether you're a citizen or not. Rules, on the other hand, only apply to a particular group – like a sports club or a school. Not everyone living in a country are members of either of these groups. Rules also have different consequences. If you break the law you might be **finned** or put in jail.

law a law is a rule to ensure to ensure the 'peace, order, and good government of Australia'
rule a rule tells you what you can or can't do in a certain place or situation
finned given a financial penalty

How is a law created?

transparency easily seen or understood'

electorate a geographically defined area that is represented by a parliamentarian

Laws are created through a lengthy but diligent process to ensure **transparency** and fairness. Ideas for laws can come from number of places, including:

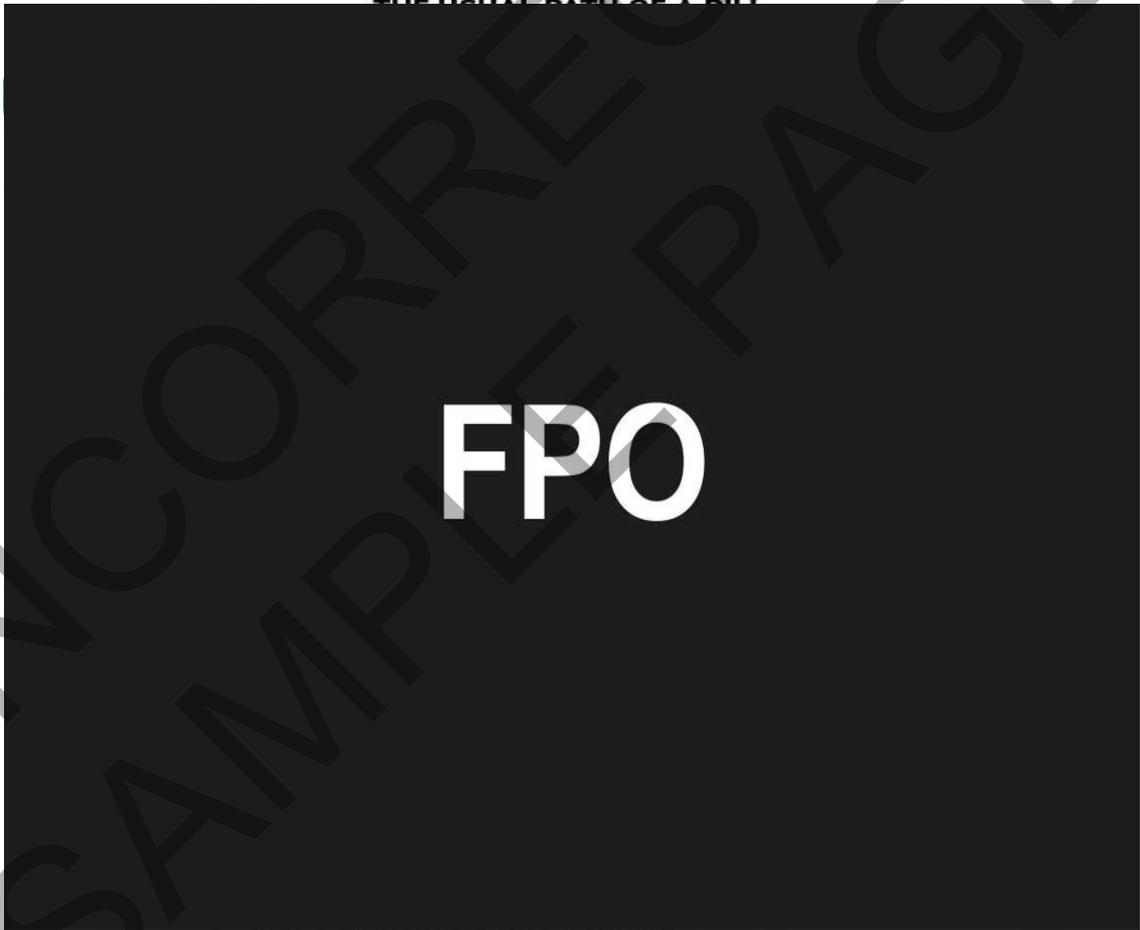
- an advisor to a member of Parliament

- someone from the public community advocating for a law
- political parties
- members of Parliament
- parliamentary committee.

The process of passing a law

A proposal for a law can begin in either House of Parliament (the Senate or the House of Representatives). The idea needs to be drafted into a bill, which is then debated on in both houses.

Remember that the Senate represents the six States and two Territories, and the House of Representatives represents 150 geographically defined **electorates**.



↑ **Figure 13.7.2** For a law to become a law, it is first introduced as a bill to Parliament. It is debated in both the House of Representatives and the Senate. A bill can also be initiated in the Senate and not only the House of Representatives. As part of the process, committees are created to investigate the bill and they are usually members of Parliament, but not ministers. The investigative process involves receiving submissions from the public that allows Parliament to listen to a wide variety of information and ideas. A bill needs to pass through and be agreed upon by both houses. This two-house system is called the bicameral system. The Senate, which is referred to as the Upper House and represents the interests of the States and Territories, serves as a check and safeguard on the decisions made in the Lower House, the House of Representatives. Graphic sourced from the Parliamentary Education Office (peo.gov.au).

DOUBLE DISSOLUTION TRIGGER



←Figure 13.7.3
The infographic shows the method that leads to the trigger for the Governor-General to call a double dissolution on the advice of the Prime Minister. Graphic sourced from the Parliamentary Education Office (peo.gov.au).

The two Houses of Parliament have separate responsibilities, but having two houses also means that power isn't held all in one place – the two houses are able to operate as a type of **scrutineer**. This is to ensure power and decision-making is **dispersed** to allow for a diverse range of input and ideas from different politicians. Think about it like this: household decisions need to be negotiated and agreed upon by both heads of a household rather than by one single person. On the previous page is a useful image (Figure 13.7.2) by the Parliamentary Education Office that explains the process of passing a law. As you can see it is quite a lengthy process.

But what happens if a bill is rejected multiple times?

What is a double dissolution?

A **double dissolution** happens when there is a deadlock between the Senate and the House of Representatives on a bill. A bill must fail to pass the Senate twice before a double dissolution is called. A double dissolution is called by the Governor-General, who does so on the advice of the Prime Minister. In Figure 13.7.3 is an infographic by the Australian Parliamentary Education Office that outlines the passage of a bill that leads to a 'double dissolution trigger'.

The steps in more detail are:

- 1 The House of Representatives passes a bill and sends it to the Senate.
- 2 The Senate rejects the bill or asks for **amendments** that the House does not agree with.
- 3 Three months pass from when the Senate did not pass the bill.
- 4 The House passes the same bill and sends it to the Senate again.
- 5 The Senate again once again rejects or fails to pass the bill or passes the same bill with amendments which the House does not agree with.

Summary

For an Act of Parliament to become a law, it requires the involvement of both the House of Representatives and the Senate. The Act then finally depends upon receiving royal assent of the Governor-General. This royal assent is on the advice of the elected Prime Minister or Minister who has the support of Parliament. A recent example was the successful passage of the Online Safety Amendment Bill 2024 that was given royal assent in December 2024. This is to ensure greater protections for young Australians and to put responsibility on social media companies to prevent Australians under 16 years old from having accounts (<https://cambridge.edu.au/redirect/11255>). The next section will introduce to you an example of the consequences of a double dissolution in Australia's political history.

scrutineer a person who examines someone's conduct
dispersed separate into parts
double dissolution a double dissolution is when both Houses of Parliament are suspended
amendments a correction or general improvement

Concepts and skills builder 13.7



Investigating the role of the Senate in lawmaking

Consider the following stimulus and apply the QUED method of investigation by answering the questions that follow.

Amelia's dad recently remarked that the Senate acts as a 'check' on the House of Representatives, ensuring all laws are fair and balanced. Intrigued by his comment, Amelia wants to investigate how the Senate performs this role, and what impact it has on the lawmaking process in Australia.

- 1 Q:** Develop and answer a detailed who, what, when, where, why or how question about the role of the Senate in the lawmaking process.
- 2 U:** Undertake research by examining a current bill being debated in Parliament. Visit: <https://cambridge.edu.au/redirect/11317> to gather information about the bill and its discussion in the Senate.
- 3 E:** Evaluate which House of Parliament you think is most influential in shaping legislation, using evidence from your research and class discussions.
- 4 D:** Decide why the involvement of both Houses is necessary for passing legislation, and justify your answer with clear reasons.

Civics and Citizenship concepts and skills: communicating, evaluating democratic institutions and systems, investigating contemporary civics and citizenship issues, participating in civic processes



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Lesson 13.7 review

Online quiz



Review questions



Research task



Teachers can assign tasks and track results



13.7 Review questions

- 1 Recall** who laws apply to in Australia.
- Using the text in the chapter, **describe** what laws are meant to do according to sections 51 and 52 of the Australian Constitution.
- 3 Explain** how a law becomes a law in the Australian parliamentary system.

What does the Whitlam Dismissal in 1975 reveal about Australia's political system?



Learning intention

In this lesson, we will understand the Senate's role in blocking supply bills and critically analyse the circumstances and decisions surrounding the Whitlam Dismissal.

Lesson starter



Complete the following activity to kick-start this lesson.

Headlines

Before we begin our final lesson, imagine you a newspaper reporter and writer and create a headline that captures what you have learnt and understood about how a law is made.

↓ [Figure 13.8.1](#) Gough Whitlam speaking to the media after he was dismissed by the Governor-General on 11 November 1975.



Up until now, you have learnt about the structure and role of the Australian political system. This small lesson is

about an event that occurred in 1975 that reveals the different functions of the system.

The Whitlam Dismissal

mandate an official order given to a government to govern and make decisions for the country

reserve powers these are powers given to the Governor-General which are not written in the Constitution

dismiss release or remove with dishonour from employment

caretaker government a temporary government

In 1974, the Labor Party won the House of Representatives, allowing it to govern in its own right. However, the Labor Party struggled to maintain control of the Senate, making it challenging to pass bills.

In late 1975, the Opposition blocked the government's supply bills in the Senate, which were essential for running government services such as schools, hospitals, defence and infrastructure. The Opposition blocked these bills to pressure Prime Minister Gough Whitlam into calling an early election, as they questioned Labor's **mandate** to govern effectively.

Whitlam, however, refused to call an early election. To prevent a potential shutdown of government services, Governor-General Sir John Kerr exercised his **reserve powers** to **dismiss** Whitlam

as Prime Minister. Kerr appointed Malcolm Fraser as Prime Minister of a **caretaker government** on the condition that Fraser would call an election.

The Governor-General's dismissal allowed the deadlock to be resolved through a public election, in which the Australian people could decide the government's future. When the election was held, Whitlam and the Labor Party were defeated, and Fraser's Coalition won office.

Summary

The dismissal of Gough Whitlam by Sir John Kerr was a day in Australia's political history that demonstrated governments in power depend upon the role of the Senate and the Governor-General.

Concepts and skills builder 13.8



Investigating the dismissal of Gough Whitlam

Consider the following stimulus and apply the QUED method of investigation by answering the questions that follow.

Amir recently heard a discussion about the dramatic event in 1975 when Governor-General Sir John Kerr dismissed Prime Minister Gough Whitlam. Shocked by the idea that a Governor-General could use reserve powers in such a way, Amir wants to explore what reserve powers are, why they were used in this case, and whether the decision was justified.

- 1 Q:** Develop and answer a detailed who, what, when, where, why or how question about the dismissal of Gough Whitlam by Sir John Kerr.
- 2 U:** Undertake research to investigate the types of reserve powers held by the Governor-General.
- 3 E:** Evaluate whether you think Sir John Kerr's decision to dismiss Gough Whitlam was reasonable, and explain why or why not.
- 4 D:** Decide what advice or recommendation you would have given to either the Prime Minister, Opposition Leader or the Governor-General, and justify your answer.

Civics and Citizenship concepts and skills: communicating, evaluating democratic institutions and systems, investigating contemporary civics and citizenship issues, participating in civic processes

Lesson 13.8 review

Online
quiz



Review
questions



Research
task



Teachers can
assign tasks
and track results



Go online to
access the
interactive
lesson review
and more!

13.8 Review questions

- 1 **Identify** who Australia's Prime Minister was in 1975, and which political party they belonged to.
- 2 **Identify** who Australia's Opposition Leader was in 1975, and which political party they belonged to.
- 3 **Recall** who the most powerful individual is in the Commonwealth of Australia.
- 4 **Explain** why the Whitlam Dismissal was an important event in Australian history in your opinion.

Research task



This research task is designed to be completed over multiple weeks, as you complete the chapter. It should not be left until the end. By completing this research task, you will have the opportunity to consolidate the ideas learned through this chapter, and demonstrate your understanding of Civics and Citizenship concepts and skills.

Research topic: Should voting be voluntary in Australia?

Investigate and evaluate the research question and develop your response using the following questions to guide you. You should follow the QUED method of investigation, as described in the box at the end of Lesson 13.1. You will also prepare a report of your investigation.

- 1 **Q:** The task is to investigate and evaluate the advantages, disadvantages and potential impacts of making voting voluntary in Australia. Based on what you already know, what do you think are the implications of voluntary voting in Australia? Write down your ideas and any questions you have.
- 2 **U:** Undertake research to find information on:
 - a Current voter turnout figures in Australia
 - b Reasons for why voting is compulsory
 - c How other countries with voluntary voting systems compare.
- 3 **E:** Evaluate the information you have collected. Think about:
 - a What are two good reasons for keeping compulsory voting?
 - b What are two possible benefits of switching to voluntary voting?
- 4 **D:** Based on your evaluation, decide whether you believe voting should become voluntary or remain compulsory in Australia.
 - a Include at least one reason why your chosen system might work better for the community.
 - b **Suggest** one idea for improving the voting process, if applicable.

The report

Your teacher will tell you how you should present your report (written, oral, multimedia). However, your report should include:

- A clear explanation of key terms (e.g. 'compulsory voting' and 'voluntary voting')
- The important facts or data you collected
- Your evaluation of the pros and cons
- Your final decision, with reasons.

End of investigation review: How does Australia's political system support democracy and citizenship?



Access the Interactive Textbook for a range of digital tools to help you review this topic, including:

- Chapter summary
- Auto-marked chapter test
- Scorcher timed competitive quiz.

Brain dump



What have you learned about how Australia's political system supports democracy and citizenship? Copy and complete the table to explain your understanding. Aim for two points per topic.

Federation and the Constitution	
Separation of powers	
Division of powers (Federal, State, Local)	
Parliamentary voting	
Role of political parties	
Lawmaking process	
Whitlam dismissal	

Making thinking visible



Apply the 3-2-1 Routine to summarise your findings from this investigation.

- 1 Recall three main points or ideas from the topic.
- 2 **Identify** two interesting or surprising facts related to the topic.
- 3 State one question that you still have or something you want to learn more about.

Practice questions



- 1 What are the three branches of government in Australia and what is the role of each?
- 2 How does the Constitution establish the principles of a representative democracy?
- 3 **Explain** the concept of federalism and how it differs from a unitary system.
- 4 **Describe** how the separation of powers helps prevent the concentration of power.
- 5 What is the significance of compulsory voting in maintaining a robust democracy?

Response to chapter inquiry question: What can households do to improve their material wellbeing?



Write a paragraph in response to the inquiry question. Include the following key terms:

- Federation
- Constitution
- separation of powers
- federalism
- representative democracy
- constitutional monarchy
- citizen rights.

Research-based task



Choose one of the following research topics. Apply the QUED method of investigation to collect and analyse relevant information, then present your findings and decision in a report.

- Which level of government (council, State, or Federal) would you remove and why?
- Do you think Australia should have remained as six separate independent states?
- Which political party best represents young people's interests and needs?

Glossary

History

Chapter 1 Overview

Anangu the term used by several Aboriginal groups in the Western Desert, including the Pitjantjatjara, Yankunytjatjara, and Ngaanyatjarra, to describe themselves

archaeologists experts who study human history through artifacts and physical remains

carbon dating determining the age of things that were once alive by measuring the amount of carbon-14 they contain – the less carbon-14 there is, the older the object is

civilisation a large, organised society with complex structures, including cities, governments, social classes, and cultural developments

crop a plant that is grown for a specific purpose such as food, fibre, or fuel

cuneiform system of writing used in the ancient Middle East

Demotic ancient Egyptian script used in the Nile Delta. The term was first used by the Greek historian Herodotus to distinguish it from hieroglyphics

domesticate the process of taming wild animals or cultivating plants for human use

ecosystem a geographic area where plants, animals and other living things work together

excavation the process of uncovering and studying physical remains from the past by digging at archaeological sites

fertile producing or capable of producing substantial amounts of crops

Fertile Crescent the modern-day Middle East

historians scholars who study and interpret past events using written records and other sources

humanitarian concerned with or seeking to promote human welfare

irrigation the supply of water to land or crops to help growth, typically by means of channels

mega-continent several large land masses thought to have divided in the past to form the present continents

migration the process of a person or people travelling to a new place or country

Neolithic a period around 10 000 years ago when many/most human societies transitioned from a lifestyle of hunting and gathering to one of agriculture and settlement

nomadic people or groups who move from place to place without a permanent home

Sanskrit a language which is the root of many Indian languages

Songlines are oral maps passed through generations by First Nations Peoples, using song, story, and ceremony to navigate Country, record history, and maintain deep cultural and spiritual connections to the land

Chapter 2 Deep Time

Acknowledgement of Country/Traditional owners

a formal statement or gesture of respect for the traditional owners of the land and their spiritual and cultural connection to it

activism working from outside the government to bring about political or social change

alliance an agreement or partnership between groups

anthropologist scientist engaged in the study of humankind, both from past and present societies

aquaculture the raising of water animals such as fish for food

archaeologist a person who studies human history by digging and uncovering sites, and investigating objects and other remains

artifacts objects made by people, usually from another time

astronomy the scientific study of the universe and of objects that exist naturally in space, such as the moon, the sun, planets and stars

bias supporting or opposing a particular person or thing in an unfair way, because of allowing personal opinions to influence your judgement

blackfella/blackfulla 'blackfella' is an Aboriginal English term used by Aboriginal and Torres Strait Islander Peoples to express their identity and sense of community. Aboriginal English is the name given to the various kinds of English spoken by Aboriginal people throughout Australia

bora a location where sacred rituals are held; there are different words in different languages

bp 'before present', a timescale used to define events from the past. Mainly used for events that are thousands of years old, these timelines are found through scientific methods like radiocarbon dating

Bunjil the ancestral wedge-tailed eagle, the creator much of south-eastern Australia and the features, animals and people within it. Stories of Bunjil (and Waa, the protector crow) provide meaning to south-eastern Aboriginal people

celestial a celestial, or astronomical, object is a natural thing existing outside Earth's atmosphere

climate the general weather conditions usually found in a specific place

constellation a group of stars that appear to form a recognisable pattern in the night sky

continuity something continuing for a long period of time without being changed or stopped

core the stone from which one or more flakes have been removed

Country ancestral lands and waters that people are custodians for

Country/Place spaces mapped out that individuals or groups of First Nations Peoples of Australia occupy and regard as their own and having varying degrees of spirituality. They include lands, waters and sky

cultivation the act of preparing land and growing crops on it

cultural burning (also known as cool burning) is a traditional Aboriginal land management practice that has been used for over 60 000 years to reduce fire hazards, encourage new growth of culturally significant species, and protect native wildlife already living on Country

cultural heritage an expression of the ways of living developed by a community and passed on from generation to generation

cultural landscape an area shaped by the practices, beliefs and cultural traditions of Aboriginal and Torres Strait Islander Peoples, reflecting their spiritual and historical connection

custodians Aboriginal or Torres Strait Islander people or groups of people who have responsibilities in caring for their Country

Deep Time refers to the events and processes over vast spans of time

displacement forced removal of people from their ancestral lands, often resulting in loss of culture, connection and livelihood

dispossession the taking of lands and resources without consent

diverse many different kinds

diversity a range of different people, ideas, or things

Dreaming/Knowledge knowledge connected to specific Country, Places, or things, with deepening levels, connected to dance, song, art, ceremony and cultural practices, passed on through kinship

Elders knowledge holders respected by Aboriginal and Torres Strait Islander Peoples, often called Aunty or Uncle

empathy the ability to relate to other people

era (or epoch) a period of geological time

everywhen describes the eternal and interconnected nature of time in First Peoples' understandings

evolutionary biologist a scientist who studies how species change over time

exploitation the use of something to get an advantage from it

fish traps methods for capturing fish in seas, rivers, creeks and streams, such as pools of shallow water against artificially built walls or fences or woven nets or baskets placed in weir and pond systems

fish weir a way of channelling fish into fish traps by using a fence or wall built into the water of a river, creek, or stream; the fence allows the water to freely flow through it

flake stone chips produced by striking the edge of a stone with another hard material

forager a person or animal that goes from place to place in search of things that they can eat or use

fossil evidence information gathered from the shape of a bone, a shell, or a plant or animal that has been preserved in rock for a very long period

geologist a person who studies rocks and similar substances that make up the earth's surface

gnamma holes naturally forming rock holes used by First Nations people to access fresh water

grains small, hard, dry seeds from grasslike plants, used as a staple food source, often ground into flour for making bread

grindstone a stone tool used to process (grind and crush) plant foods and other materials

gunyah a type of Aboriginal hut or shelter

historical significance relating to the long-term importance of an event

Holocene the period of time beginning at the end of the Pleistocene era (= around 11 000 years ago) that begins at the end of the last glacial period, where global temperatures began to warm and sea levels rose, and continuing to the present

hunter-gatherer people who consistently move across the landscape and rely on the hunting of animals and the foraging and collecting of plants and other resources

hypothesis a theory based on facts

interpretations in History, an interpretation is an explanation of the past

intolerance refusing to accept views, beliefs, or behaviour that are different from your own

inundation a flood

Irish Potato Famine a period of mass starvation and disease in Ireland lasting from 1845 to 1852

kinship a social system that establishes a person's relationships and responsibilities to other people and entities

language groups a community of people who speak a common language, often reflecting cultural, historical and ancestral ties

linear idea of time often understood as a narrative or story involving events in which one follows another one directly (past, present, future)

linguistic related to language or the study of language

luminescence dating a method to determine how long ago mineral grains were last exposed to sunlight or heat

lunette a crescent-shaped chain of dunes bordering a lake bed or valley in arid or semi-arid locations

Makassan people from the region of Sulawesi in Indonesia

massacres large-scale killing of human beings

megafauna large animals over 40 kg, such as the elephant, rhinoceros and extinct diprotodon

Native Title as set out by the *Native Title Act 1993* (Cth), the recognition that Aboriginal and Torres Strait Islander Peoples have rights and interests to lands and waters according to traditional cultural practices and customs

natives a colonial word for Aboriginal and Torres Strait Islander people that is no longer used as it has derogatory meanings

nomadic the practice of staying on the move and living in multiple places

occupation a situation in which an army or group of people moves into and takes control of a place

ochre a yellowish-orange colour, or a substance obtained from earth that is used for giving this colour to paints

oral history the recording of past events in a spoken form, including through song, story, or dance

pastoralists farmers who specialise in sheep and cattle

perspective the way we see something, a point of view or attitude to something

Pleistocene era (or epoch) a long period of geological time that includes the last glacial period, where temperatures were cooler and sea levels lower (1.6 million to 11 000 years bp)

primary source a source of information about the past created in the time being studied

protocol system of rules and acceptable behaviour used at official ceremonies and occasions

quarry a spot on the landscape where a particular raw material is retrieved for cultural use, such as a type of stone for the creation of stone tools

radiocarbon dating a method to determine the age of organic materials, such as hair, bones or wood, by measuring how much carbon-14 is left

reconciliation Reconciliation Australia describes this as ‘strengthening relationships between Aboriginal and Torres Strait Islander Peoples and non-Indigenous peoples, for the benefit of all Australians’

regenerative food cultivation a method of farming that creates biodiverse, sustainable and resilient food systems

repatriate the act of bringing someone back to the Country that they came from

seasonal indicators events, such as a tree flowering, that indicate other known events will happen

secondary source a source of information about the past created after the time being studied

sedentary the practice of living in one place for an extended period of time

settlers a person who arrives, especially from another country, in a new place in order to live there and use the land

smoking ceremony smoking by burning leaves is an important part of Aboriginal and Torres Strait Islander ceremonies and can also be performed as its own ceremony

Songline describes the features and directions of travel that were included in a song that had to be sung and memorised for the traveller to know the route to their destination. Certain songlines were referred to as ‘Dreaming Pathways’ because of the tracks forged by Creator Spirits during the Dreaming. These special Songlines have specific ancestral stories attached to them.

Sorry Business a term used to describe a period of mourning and activities related to mourning a loved one for Aboriginal and Torres Strait Islander Peoples

subsistence the state of existing by having just enough resources like food and water to stay alive

sustainable able to be restored and recycled, ensuring resources do not run out

Tagalaka a First Nations group from the Gulf Savannah region of north Queensland

terra nullius a Latin term that means ‘nobody’s land’. In Australia, *terra nullius* was the legal principle used by the British government to justify the colonisation of the continent

till to prepare and use land for growing crops

tula a stone tool used for wood working (e.g. scraping) and butchery

turning point the point at which significant change takes place, directly or indirectly caused by a specific event and representing enduring change

Welcome to Country where a custodian introduces a person to and grants permission to go onto Country

yam a type of root vegetable

yarning an Aboriginal English term that refers to the traditional practice of informal, conversational storytelling and knowledge sharing

Chapter 3 Ancient China

ancestors people you are descended from, like a parent, grandparent, great-grandparent, great-great-grandparent and so on

autonomy the right to rule or live independently

bodhisattva a follower of Mahayana Buddhism who is able to reach *nirvana* (a state without suffering) but delays doing so out of compassion for the suffering of others

bolt a large roll of cloth

canals channels dug to carry water

consort a wife or companion of a ruler

corroborate to support or confirm an idea or claim with evidence

currency any type of item used in trade; often coins or notes, but it also can be items of high value like gold, gems, or silk

divination the practice of foretelling the future through supernatural means

dynastic succession a process of passing power and authority from one person to a family member, traditionally often father to son

elixir of immortality a potion or medicine to keep you alive forever

embankments ridges of earth or stone walls used to hold back water

feudal a societal structure based on rank where higher ranks owe protection to lower ranks; lower ranks give a tribute in return, usually agricultural goods

fledgling something that is new or young and without much experience

kilns ovens for drying or baking mud and clay

levee earth embankments built along riverbanks to prevent flooding

magnanimity the quality of being highly moral in forgiveness and overlooking insults from others

military campaign a series of conflicts or battles that are aimed at reaching the same goal

monetised to have a currency, usually in the form of coins

Neolithic period an era of change when people who used stone tools moved away from hunting and gathering to settle in an area to farm animals and crops

sage-king a ruler in ancient China known for being very wise and having good judgement

shrine a place used for religious rituals

smelting a process of heating rocks and sediment to extract metals

sovereign a king or ruler who has total and permanent authority

tribute a payment or gift provided to a king

vassal a person or state that must pay tribute to a king in return for protection

virtues qualities of goodness or moral excellence

Chapter 4 Ancient Egypt

afterlife life after death; Egyptians believed that a person's soul continues after their body dies

BCE Before the Common Era. Previously, historians had used BC, meaning Before Christ, but then they realised that this was not appropriate for many people who are not Christians

deben currency in ancient Egypt

diplomacy the work or skill of managing relations between countries or empires

hierarchy a way of showing the structure of a society, with people ranked above, below, or at the same level as each other

Hittites a great ancient empire to the north of Egypt centred on the land today known as Türkiye, 1650–1180 BCE

inundation flooding, when a river overflows its usual banks

irrigation the human-controlled supply of water to help grow crops

marshal gather up, organise

misogyny contempt for or prejudice towards women or girls (sexism)

mummified preserved with chemicals and wrapped in cloth bandages

nomadic moving from one place to another rather than living in one place all the time

nomarch the name for the ruler of a region or province in ancient Egypt

nomes the name for a region or province in ancient Egypt

offering a gift or sacrifice presented to a very important person or a god

oust to throw out a person

perpetuation making permanent, lasting forever

pharaoh the ancient Egyptian word for king, first used during the New Kingdom, but now used to refer to all Egyptian kings

pre-dynastic the period before the recognised dynasties of kings started in ancient Egypt

progeny a descendant or descendants

propaganda information, including images, designed to impress people, promote a person or idea, or to frighten enemies

sarcophagus a stone outer coffin, usually decorated with writings and pictures

shrine an object or building that is considered to be holy because it is connected with a sacred person or thing

Stone Age the early period in human history when people made tools and weapons primarily out of stone

tomb a space for burying the remains of the dead, often underground

vizier the most powerful official in ancient Egypt, supporting the pharaoh

Chapter 5 Ancient Greece

abnormal something that is not normal

Acropolis the complex of temples and other buildings built on the hill in the centre of Athens

agora an open public space used for markets or assemblies

alphabet a set of letters or symbols used to represent the sounds of a language

archonship high offices in command of important jobs in the city-state of ancient Athens

aristocracy a class of people holding high social rank, often controlling government before democracy

barracks a building where soldiers live

brutalise cause damage to something

city-state a city that rules itself and the area immediately surrounding it

Council of 500 a governing body in ancient Athens that prepared laws for the Assembly

democracy a system of government where the citizens have the power to make decisions, typically through voting

draconian excessively harsh or severe, used to describe Draco's legal code

dramatist an individual who writes dramas

egalitarian the belief in or promotion of equal rights and opportunities. Pericles promoted political egalitarianism in Athens, expanding participation in public affairs

endow to give something to someone

exertion physical or mental effort

garrison a group of troops stationed in a town or city

grain crops plants used to grow grain to use in making food like bread

Greco-Persian Wars a series of conflicts between the ancient Greek city-states and the Persian Empire

Hellas another term for Greece

Hellenes ancient Greeks were also called Hellenes

historical interpretation the opinions of historians about a topic

hoplite ancient Greek citizens who were also soldiers in city-states; they fought with spears and wore bronze armour

imperialism a policy of extending a country's power and influence using military force, or other means

libations a drink poured out as an offering in a ceremony

magistrate an important elected official

military state a society that is organised around the military

mythological something that is imaginary; from myths or legends

oligarchy a form of government in which a small group of people have control

oracle a person who is guided by the gods to answer a question about the future

pantheon all the gods in a religion or mythology

Peloponnesian War a series of conflicts between Athens and Sparta, and their allies

phalanx an ancient Greek military tactic that involved densely packed soldiers fighting with long spears and interlocking shields

Phoenician a seafaring civilisation from the eastern Mediterranean, whose alphabet influenced the Greek alphabet

Plataeans inhabitants of the ancient Greek city of Plataea

sophist a teacher in ancient Greece who specialised in philosophy

stadion race a short footrace (about 192 metres) that was the main event in the first Olympic Games

statesman a politician or a leader in an organisation who has had a long and respected career at the national or international level

terrain the landforms of a particular area

tunic a robe that is worn

tyrant in ancient Greece, a ruler who seized power without legal right, often with popular support

underworld a place where the ancient Greeks believed the soul went when a person died; it was ruled by the god Hades

Chapter 6 Ancient India

caste a system of dividing Hindu society into classes

cavalry soldiers who ride horses

infantry soldiers who fight on foot

moksha freedom from the cycle of reincarnation

monsoon season a period of time between May and September where the wind blows from the south west bringing with it a large number of storms

plain a large area of flat land

plateau a large, flat area that is high above sea level, often surrounded by mountains

Rigveda the oldest of the sacred texts of Hinduism

samsara the belief that actions in this life determine what your future lives will be like

Chapter 7 Ancient Rome

archaeologists people who dig up human and other physical remains to understand more about a society

artifacts objects from the past that were made by human beings

assassination murder of an important or powerful person by a surprise attack

asylum seeker a person who has left their home due to danger and is seeking to live in another country

barbarian someone from another place who spoke a different language; for ancient Romans, a barbarian was any person who was not part of the Roman Empire

carbonised to turn something into charcoal by heat or fire so that it becomes a fossil and is preserved

centurion an experienced and respected soldier, who commanded 100 men

citizen a person who is loyal to a government and entitled to its protection

Colosseum an open-air stadium with seating around the edges to watch sports or theatre in the centre

consul the leader of Rome; during the Roman Republic, two consuls were elected into office every year

cremation to dispose of a dead body by burning it to ashes

dictator someone who rules with total power over a country or territory

empire a large area of land under the control of a powerful emperor, king, or queen

equestrians soldiers who owned and rode horses

founding when something new is created by a people, generally a city or place

frontier a border between countries, or the limit of a country or empire

hearth the central fireplace in a home

legions groups of 4000 to 6000 soldiers in the ancient Roman army

monuments statues or buildings created to commemorate an important event

mythology fictional story, often part of a religion, that describes a heroic deed or the origin of something

navy a fleet of ships used to wage war; part of a country's armed forces

patricians wealthy upper-class people in ancient Rome who often had political power

patron someone who supports others with money, gifts, or favours; a patron god of a place was seen to support that place with divine favour

plebeian an ordinary Roman citizen who was not part of the privileged patrician class

republic a government where people's representatives hold power, not a king or queen

sack to invade and destroy a city

senate the group of politicians who had the most power to make laws in a government

senators politicians who have been elected to a senate

temples places for worship; in ancient Rome a temple would have an altar, where animals were sacrificed

tribunes elected officials whose job was to protect the people's rights

veto a legal power to stop or cancel an official action or decision

Geography

Chapter 8 Water as a resource

algae bloom the rapid increase or growth in the amount of algae within water

aquaculture system the farming or growing of aquatic animals and plants in a controlled environment

arid very dry, often without rainfall to support plants

artificial made by people, often as a copy of something natural

biodiversity the range of plant and animal life found in a particular environment

bores holes drilled into the ground to access underground water resources

brine water that contains a high concentration of salt

catchment area the area of a drainage basin that collects and drains water

climate the average weather conditions in an area over a long period of time

condensation the process by which water vapour in the atmosphere cools and changes into liquid water

crop failure the complete loss of a crop on a farm

cubic kilometres a cubic kilometre is equal to a volume of $1000 \times 1000 \times 1000$ cubic metres; a cubic kilometre is also equal to a teralitre, which is exactly one trillion litres

cull the selective slaughter of animals to reduce their population

cultural flows water within the river system that is reserved to be used to preserve environments and allow First Nations groups to undertake cultural practices

Cultural Landscape according to UNESCO these are 'combined works of nature and humankind ... [that] ... express a long and intimate relationship between peoples and their natural environment'

dams barriers that prevent the flow of water downstream

degradation the reduction in the quality and health of a natural environment due to natural processes or human activities

drainage basin an area of land where precipitation collects and drains into a central point such as a river channel

drought a long period of water shortage, usually as a result of low rainfall

environment the living and non-living components within and surrounding a place

environmental flows water allowed to flow through the river system to help sustain freshwater environments

environmental resources resources that are from the natural environment such as water and wood

ephemeral something that happens only for a short time

evaporation the process of a liquid changing to a gas, especially by heating

fauna the animals of a particular region

filtered the process of removing solids and impurities from water

finite resources resources that have a limited supply

floodplain the area of flat, low-lying land beside a river which is prone to flooding

flora the plants of a particular region

flow regime the seasonal changes to the flow of rivers

fossil fuels resources that were formed underground from plant and animal remains millions of years ago; examples include gas, coal and oil

freshwater water with less than 0.5 per cent of dissolved salts

gigalitre one billion litres

glaciers large masses of ice that move slowly; they are frozen rivers of ice that form when snow accumulates and is compacted

groundwater water that is located below the Earth's surface that has soaked into soil and rocks

habitat the natural environment where an animal or plant usually lives

hard surfaces human-made surfaces, such as concrete, which cover the natural ground and limit the amount of water that can infiltrate the soil to become groundwater

harvest to pick and collect crops, or to collect plants, animals, or fish to eat

hydroelectricity electricity produced by the force of fast-moving water below dams and in rivers

hydropower a form of renewable energy which uses the flow of moving water to generate electricity

ice caps a thick layer of ice that permanently covers an area of land

infiltration the process of water moving from the surface and soaking into the soil and rock layers below

infinite resources resources that will never run out

infrastructure the physical structures and facilities needed within a community such as roads, buildings and pipelines

inhabited a place in which people permanently live

interconnection the relationship between places and people, and the ways in which they influence each other

irrigation the practice of supplying land with water so that crops and plants will grow

megalitre a metric unit of capacity equal to a million litres, symbol ML

migratory birds birds that travel seasonally for breeding and feeding

non-renewable resources resources existing in limited quantities that cannot be replaced after they have all been used

nutrients any substance that plants or animals need in order to live and grow

pasture grass or similar plants suitable for animals, such as cows and sheep, to eat

perennial something that happens repeatedly or all the time

pilgrimage the journey of a person who visits sacred sites for religious reasons

pollutants harmful substances such as industrial waste from factories or fertilisers and pesticides from farm use which get washed into waterways when it rains

population density the amount of people per square kilometre

porous something that has many small holes so liquid or air can pass through, especially slowly

potable water that is safe for drinking

precipitation water that falls from the clouds towards the ground, especially as rain or snow

purified the process of removing dirty or harmful substances from water

regenerate managing a forest so that it grows back following a disturbance such as logging

renewable resources resources that can be produced as quickly as they are used

reservoir large lakes used to store large quantities of water

riverine ecosystems environments within and surrounding river channels

runoff water that is not absorbed by the land and flows from high areas to low areas

rural an area in the countryside that is not part of a large town or city

self-determination having the freedom and power to make decisions about one's own lives and futures, including the management of lands, waters and resources, and the ability to maintain and develop cultures, languages and identities

sewage waste matter such as human urine or solid waste

sodium chloride the chemical compound for common table salt

surface water water available on the surface of the Earth in rivers and lakes

sustainability the use of natural resources in a way that does not reduce the supply for future generations

transpiration the process of losing water through the surface or skin of a body or a plant

tributaries rivers or streams that flow into a larger river or a lake

urban relating to towns and cities

urban development the growth of urban areas as they expand to cater for population growth

water scarcity a lack of freshwater resources to meet the demands of water usage within a region

water withdrawals the total amount of water withdrawn from a surface water or groundwater source

weir a wall built under the water across a river, over which the water flows from one level to another in a controlled way

wetlands an environment featuring land that is either permanently or seasonally covered with water

Chapter 9 Water hazards

agricultural sector the sector of the economy to do with farming such as crop and animal production

confluence the point at which two or more rivers meet and join to form a single channel

corruption dishonest behaviour by people in power, often involving bribery

displaced forced to leave their home

displacement moving something or someone from its original place to somewhere else

evaporation the process of a liquid changing to a gas by heating

floodplain the area of flat, low-lying land beside a river which is prone to flooding

frequency how often something occurs

heavy metals dense metals such as iron and lead

infiltrate to seep into the ground so that water is absorbed by the soil

infrastructure the physical and organisation structure of a country such as buildings, roads and energy supplies

insurance premiums the amount of money an individual pays for their insurance policy

inundate to cover with water

livestock domesticated animals raised on a farm for production

low-lying area an area that has a very low elevation close to sea level, usually located near the coast

low-pressure system areas of low pressure that suck air toward them, leading to high winds and rainfall

medicane a Mediterranean tropical cyclone

meteorologist a person who studies the atmosphere, especially the weather, and makes predictions for weather forecasts

runoff water that is not absorbed by the land and flows from high areas to low areas

saturate to reach a point where soil cannot absorb any more water

sediment solid material that is moved by rivers and deposited in a new location

submerge to cause something to be under water

urban areas built-up environments such as cities or large towns

Chapter 10 Place and liveability 1

absolute location the latitude and longitude of a location, also known as co-ordinates

access the right or ability to enter, look at, or use something

accessibility resources or services are available and affordable for all people to use

affordability the ability to afford a service or attendance of a facility; for example, going to the doctor

asset property (for example a house or car) that can be exchanged for cash

biodiversity the number and types of plants and animals that exist in an area

central business district (CBD) the centre of business in a town or city

characteristics the unique natural and human features of a place

ecosystem a geographic area where plants, animals, and other organisms, as well as weather and landscape, work together to form a community of life

heritage status a status given to a building or area to protect it from future development and preserve its past

infrastructure the physical structures and facilities needed within a community such as roads, buildings and pipelines

intangible something that exists but you cannot see or touch it

pedestrian people who are walking rather than travelling in a vehicle

perception the way something is viewed or understood

pull factor the reasons people move to an area

push factor the reasons people move away from an area

relative location the location of a place in relation to another place or feature

resource anything that people need or use (for example, water, metals, oil and gas, trees)

sanitation a system for protecting people's health by removing dirt and waste

sense of place the meaning that a person or group attaches to a specific area or space

sustainability the wise use of resources so that they are available into the future

tangible things that you can physically see and touch

urban planning the process of planning the layout and infrastructure of a place

Chapter 11 Place and liveability 2

biodiversity variety of plant and animal life

internal migrant people who have moved from one part of a country to another

off-peak travel travel that occurs during less popular times of the year

passive letting things happen without taking action or being directly involved

regulation rules or laws

STEAM science, technology, engineering and mathematics

urban consolidation keeping residential development and population growth restricted to the urban areas that already exist

urban sprawl when a city's buildings and houses spread into areas outside its main centre, often taking over rural land

walkable an area that can be accessed by walking

wildlife corridors natural paths that allow animals to move safely between areas

Economics and business

Chapter 12 Economic considerations in Australia

agent a member of a household who acts on behalf of or represents that household

agents members of organisations, such as households, who represent them in making economic decisions; consumers are agents of households

Assets things owned by households and used for making goods and services

Behaviour economics a new branch of Economics that looks at the psychological reasons behind consumer spending

being economic using resources to maximise material wellbeing

benefit–cost analysis investigation of the benefits and costs of activities, such as buying a product

budget plans for future income, spending and savings

business organisation formed and operating to make maximum profit

capability what you or a household could do if given the opportunity to participate

communities grouping of households living in a local region and interacting with each other

consumer sovereignty consumer demand for a product pushes businesses to make that product, and businesses then employ resources for that production

consumer a member of a household who uses a good or service for happiness

consumption the use of final goods and services by households

council rates a tax paid by homeowners to the local council; calculated as a percentage of the value of the property

Economic decision a decision based on maximising net benefits

employment the use of household resources by businesses in making goods and services

Enterprise the special skill of taking risks and creating a successful business

essential products goods and services needed for survival, such as basic food, clothing and shelter

fairness a moral right to have access to, or share of, something so that there is no discrimination

financial resources cash or credit that can finance the production of goods and services

free-market price the price in a market without government interference

freedom a moral right to act in a chosen way, as long as it does not harm others

Goods and Services Tax (GST) a 10% tax on the sale of most goods and services. Businesses collect this tax and pay it to the Commonwealth government. The Commonwealth government transfers it to the State governments

guarantee a guarantee is a commitment by a business that the product will perform as stated

homemade products goods and services made at home and not purchased in a market, such as fruit, vegetables, cooking, knitting and cleaning at home

household choices how to earn income from resources, how much to spend on desired goods and services, and how much to save?

Household people who live together and seek to maximise their material wellbeing

Human skills competencies and qualifications of people for making goods and services

income (factor) money paid to the owner of a resource employed by a business as a factor of production

income tax a commonwealth government tax on income less allowable deductions

inflation all or most prices keep rising

Labour a human skill used for a specific time in production

legal right a claim to act according to the legal system of a nation

market demand buyers plan to purchase a product in a market

market shortage the amount buyers plan to buy is greater than the amount sellers offer for sale

market supply sellers plan to offer a product in a market

market surplus the amount sellers plan to offer for sale is greater than the amount buyers plan to buy

market the business or trade in a particular product or service

Material wellbeing happiness or satisfaction from consuming goods and services

material wellbeing the happiness a person experiences from using goods and services

maximise get the most material wellbeing or benefit from the use of resources

moral right a claim to act according to the moral code of a culture, e.g. a right to own property

national pie the total quantity of products available to people in a nation (e.g. Australia)

natural resources things provided by nature that can make goods and services

net benefit the difference between the total benefit and total opportunity cost of an activity

non-essential products goods and services not essential for survival, such as luxury items, entertainment and travel

Non-material wellbeing the happiness experienced from other sources rather than from using goods or services

opportunities chances or openings for the employment of human skills and/or assets

opportunity cost the cost of an item measured by the value (price) of the next-preferred item

payroll tax a State-government tax on the total wages paid by a business

pension a regular transfer of money from the government to certain people due to their circumstances, e.g. old age

price mechanism the working of relative prices to change the use of resources across the various businesses

produced resources things produced by businesses that can make goods and services

product markets markets where products are traded

relative prices one price compared to another price

relative scarcity there are not enough resources to make all the desired goods and services

resource allocation the spread and use of resources across the various businesses of a nation

Resources things that can make goods and services

savings income not spent on goods and services for consumption

scams a scheme or trick that steals your income or assets, such as a fake email from the tax department

skills competencies learned through study or from life experience

Society the population of a nation interacting with one another in many different ways

spending money spent by a household in buying goods and services

tax brackets individuals pay different income tax rates; depends on which bracket of income that they receive

trade the exchange of a product for money

transfer payment a gift of money to people who the government does not consider to have enough income

unemployment benefit a government transfer of money to those unemployed, e.g. the job-seeker allowance

warranty a warranty is a promise by a business that a faulty product will be repaired or replaced for a period of time, e.g. a five-year warranty on car parts

Civics and citizenship

Chapter 13 Australia's political structures

amendments a correction or general improvement

Australian Constitution the birth certificate of the nation, which provides and outlines the rules for the government of Australia

ballot paper a document on election day which voters use to cast their votes with their preferences

caretaker government a temporary government

citizen a member of a political community that grants certain rights and privileges to its citizens, and in return expects them to act responsibly, such as to obey their country's laws

colony a settlement in a country occupied by people from a different country, who are fully or partially subject to the parent states

conventions meetings of colonial politicians who discussed what a federated government would look like

council elected officials who govern a local government area

direct democracy laws are decided by the people themselves and not their representatives

dismiss release or remove with dishonour from employment

dispersed separate into parts

double dissolution a double dissolution is when both Houses of Parliament are suspended

economic productivity a measure of how well a country or business uses its resources to produce goods and services

electorate a geographically defined area that is represented by a parliamentarian

Executive puts the law into action

Federal having to do with the national Australian Parliament or government in Canberra rather than State or Territory parliaments or governments

fined given a financial penalty

foreign policy interactions and decisions made by governments with foreign governments like trade, war, immigration and diplomacy

governance a process and rules by which decisions are made and implemented

Governor-General the Constitution gives power to the King, which is delegated or given to the Governor-General. The Governor-General follows the advice of the Prime Minister and the ministers and signs laws into action

House of Representatives one of the two houses of the Federal Parliament of Australia, whose members are elected on a population basis

ideology a set of ideas or a way of thinking that guides an individual or social movement about how a society should be structured and ordered

immigration the action of coming to settle as a permanent resident in a different country

interfere entering into something without the right or invitation

Judiciary makes judgments about the law

law a law is a rule to ensure to ensure the 'peace, order, and good government of Australia'

Legislative makes or changes the law

mandate an official order given to a government to govern and make decisions for the country

oversee to keep watch over

parliamentarian a member of parliament who has been voted into either the Senate or House of Representatives

political candidate a citizen who wants to be nominated and elected for political office

referendum a vote by the whole of the Australian citizenry population on a proposed change to the Constitution by the Parliament. For a referendum to succeed, it requires a double majority. This is when there are a majority of votes nationally and also a majority of votes in at least four out of the six states

representative democracy citizens choose representatives to make decisions on their behalf

reserve powers these are powers given to the Governor-General which are not written in the Constitution

rights the enjoyment of privileges; an entitlement and a freedom of choice

rule a rule tells you what you can or can't do in a certain place or situation

scrutineer a person who examines someone's conduct

Senate one of the two houses of the Federal Parliament of Australia, which has 76 Senators, 12 from each of the six states and two each from the Northern Territory and the Australian Capital Territory, elected from each state and territory voting as one electorate

separation of powers the three different groups – the Legislative, Executive and Judiciary – in making and managing laws

State there are six states: Victoria, New South Wales, Queensland, Tasmania, South Australia and Western Australia. They each make up a geographical region of Australia and are each responsible for governing and administering policies

tax financial contribution to the government imposed on people, businesses and property

transparency easily seen or understood'

union an organisation made up of a group of employees that represent the interests of workers