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CAMBRIDGE HUMANITIES FOR VICTORIA 9

Michael Adcock Adrian DeFanti Tisha Eggleston Damien Osborne
Despina Polatidis Ashley Keith Pratt Lisa Ritchie

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Please be aware that this publication may contain images of Aboriginal and Torres Strait Islander people now deceased. Several variations of Aboriginal and Torres Strait Islander terms and spellings may also appear; no disrespect is intended. Please note that the terms 'Indigenous Australians' and 'Aboriginal and Torres Strait Islander peoples' and 'First Australians' may be used interchangeably in this publication.

About the cover

One of the goals of the Humanities subject in the Victorian Curriculum is to 'appreciate the common humanity shared across time and distance'. Pictured on the cover of this book is an Australian nurse from the First World War; World War I is one of the key topics in this book, as is the role of women throughout history. The illustration was created by Melbourne-based artist Ben Sanders.

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Foreword

Dear student,

Humanities in Year 9 draws heavily on the key skills that you have been developing in Year 7 and Year 8 but also begins to look at some more complex topics. Intricate global interconnections become much more apparent as you gain mastery over the disciplines of Geography, History, Economics and Business, and Civics and Citizenship. Throughout Year 9 Humanities you will develop a much better understanding of why things in the modern world are 'the way they are'.

In Year 9 History you will learn about the beginnings of the modern world and the invasion and settlement of Australia by the British in the eighteenth century. You will gain an understanding of the disastrous consequences of this event on the First Australian communities around Australia. You will also learn about the significant achievements of the settlers in the lead up to Federation. Finally, you will examine one of the most significant recent events that has shaped Australia's national identity: World War I.

In Year 9 Geography you will focus deeply on interconnections, fundamentally the innumerable links between the planet and human society. These interconnections will help to illustrate how complex the modern world has become and how we can face some of the resulting challenges, including environmental and humanitarian issues.

In Year 9 Economics and Business you will explore the concept of 'globalisation' and the economic interconnections that have formed around the world in the twenty-first century. You will also refine your money-management skills and your understandings of good financial decision making.

In Year 9 Civics and Citizenship you will build upon the knowledge of Australia's political system that you have learned previously. You will explore how political views are formed, learn about political rights and responsibilities, and investigate how groups try to achieve their political aims.

Best wishes for the year ahead and we hope that that you enjoy learning about these dynamic global interconnections, how they affect you, and how you can help to shape them.

– Ashley Keith Pratt, series author

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About the authors

Dr Michael Adcock (*lead author: History*) is a History teacher, lecturer, author and tour guide who specialises in the social and cultural history of France. He regularly presents illustrated lectures for the History Teachers' Association of Victoria, Modern History Seminars (Sydney) and the National Gallery of Victoria. His published works focus on the history of the French Revolution, and include a recent work on the Enlightenment. He is also the tour leader for Academy Travel (Sydney), and conducts residential study tours in French History in Paris, and in the Russian Revolution in St Petersburg and Moscow.

Adrian De Fanti (*lead author: Geography*) has taught Geography and Mathematics at secondary schools for over 10 years. At his current school, he coordinates the Learning Management System and is the Dean of Learning and Innovation. Adrian has a particular interest in integrating technology into the Geography curriculum, including using geographic information systems to analyse spatial data, tracking change over time using satellite imagery, going on virtual field trips using virtual reality and collecting data in the field using spatial technology. Adrian is also an active member of the Geography Teachers Association of Victoria, where he regularly presents professional development sessions and revision lectures and writes a range of classroom resources.

Lisa Ritchie (*lead author: Economics and Business*) is Head of Business Studies at her current school and has worked in the area of Business and Economics for over 15 years. Lisa has experience teaching Economics, Global Politics, Accounting, Legal Studies and Japanese. She has worked in exam development and assessing and has extensive experience around curriculum development at both boys' and girls' schools.

Damien Osborne (*lead author: Civics and Citizenship*) is Head of Humanities at his current school. He has taught a range of Humanities subjects in Victorian secondary schools for more than 15 years, including at VCE level: Legal Studies, Australian and Global Politics, Geography and History. Damien is an experienced VCAA assessor for VCE Legal Studies exams and is a passionate advocate for civics education.

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Ashley Keith Pratt (*contributing author: History*) has worked in Victorian secondary schools for over a decade with extensive experience teaching History. Ashley has completed postgraduate research in history education at the University of Melbourne and has contributed to curriculum design in Victoria through VCAA review panels for VCE History. Ashley is Vice-President of the History Teachers' Association of Victoria (HTAV), a contributor to the HTAV journal *Agora*, and is a VCAA assessor for VCE History exams.

Tisha Eggleston (*contributing author: History*) is Head of History at her school in Ringwood East. She has been teaching for over 18 years in secondary schools in Australia and the United Kingdom. Tisha is an experienced teacher of History, English, Literature and English Language; working with curriculums including the General Certificate of Secondary Education in the UK, the Victorian Curriculum and the International Baccalaureate. She is dedicated to promoting the value of History for all students to foster critical thinking and empathy in our society.

Despina Polatidis (*contributing author: Geography*) is a Geography and Humanities teacher at her current school. She has worked in Victorian schools for seven years and has experience teaching Geography, Legal Studies and English across Years 7–12. Prior to teaching, Despina practised law in Australia and the United States and was the recipient of the Blake Dawson Waldron Prize for International Environmental Law. She has previous experience as a VCAA assessor for Geography and as a committee member of the GTAV. Despina is passionate about the importance of fieldwork in Geography education and was a recipient of the Alex Lyne Fieldwork Award for Years 9 and 10.

Nick Frigo (*digital content adviser*) is Digital Learning Leader at his current school. He has worked across a number of educational settings for over 20 years. Nick is passionate about examining, and experimenting with, the intersection of digital technology and the teaching of history for increased student engagement and maximum pedagogical efficacy.

About the illustrator

Jean-Michel Girard is an illustrator based in Québec City, Canada, who has 30 years' professional experience in working around the world. While Jean-Michel is able to work in a wide variety of styles (from hyperrealism to cartoon), he has specialised in historical illustrations as he is a long-time history aficionado. His attention to historical detail is extraordinary. Jean-Michel uses digital tools but with traditional drawing methods.

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Introduction

Victor Perton, from Australia's Centre for Optimism, has defined 'optimism' as the ability to believe that, when things are bad, they can still get better. He adds that optimism is the underpinning of resilience, which means the ability to bounce back and to recover. It is so important that students understand the inner strength of resilience. We are currently contemplating such mighty issues as global warning and climate change (for instance, pictured above are students attending a climate protest in Sydney in September 2019).

The wonderful subjects that make up the Humanities – Geography, History, Economics and Business, Civics and Citizenship – have always addressed the great issues that affect human life on earth, but perhaps never have they been so very crucial than at the present time. As students face issues such as environmental damage, medical pandemics and evolving technology, these subjects cease to be merely a study of the past, and become intellectual tools for understanding the present and preparing for the future. They offer an effective way of understanding these issues and thinking through their potential solutions.

In History, for example, studying the Industrial Revolution leads to a direct discussion about the escalating environmental impacts created in our own time. In Geography, we investigate subjects such as global food security, and analyse the shortfalls of food distribution across the planet. In Economics and Business, we reflect on Australia's role as a trading nation, which in turn invites reflection on current issues such as our over-reliance on China. In Civics and Citizenship, we develop an understanding of our own political system and place in the world, which in turn invites students to consider recent global developments.

Central to all these subjects is the core belief that human beings are resilient, and can rise to challenges. The Humanities are essentially optimistic: things can always get better.

– Dr Michael Adcock, series author

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How to use this resource

Book structure

- All chapters have been closely aligned to the Victorian Curriculum for Humanities for Year 9
- This book contains four sections, with each section covering one of the four topic areas: History, Geography, Economics and Business, and Civics and Citizenship
- Every chapter starts with an engaging 'Setting the scene' story to help you jump into a new topic, and includes an activity that can be used to spark classroom discussion
- Each chapter has a 'Chapter overview' which lists 'Learning goals' for the chapter
- Each chapter is divided into numbered sections, and each of these sections cover a content descriptor from the Victorian Curriculum
- Each chapter section starts with 'Focus questions' to drive your inquiries into the Humanities
- In all chapters QR codes are included for easy access to related videos
- At the end of each section are End-of-section Review questions and at the end of each chapter are End-of-Chapter Activity questions.

Activity types

This series uses a range of activity types including the following:

- Developing concepts and skills (activities that scaffold important concepts and skills from the Victorian Curriculum)
- Making Thinking Visible activities based upon Harvard's Project Zero's innovative Visible Thinking Routines (a guide to using these activities is available for teachers in the Online Teaching Suite)
- End-of-section Reviews (questions in both print and digital formats)
- Multiple other activity types, particularly in End-of-chapter activities, that vary from analysing historical visual sources to graph interpretation and map-reading
- Activities cover a range of different learning types and levels (a Glossary of activity verbs used in this series is available for teachers in the Online Teaching Suite).

Digital resources

This series uses the interactive Edjin platform, and includes both a student and a teacher edition.

In the **Interactive Textbook** version of this book students will find the following key resources:

- Self-assessment checklists (aligned to each chapter's Learning goals, for students to rate their progress)
- Interactive Chapter quizzes and Scorcher quizzes (timed, competitive and fun tests of knowledge)
- Google Earth tours of key locations in each chapter (to provide dynamic geographic context)
- Videos, image galleries and other multimedia materials such as interactive maps
- A guide to using Topographic maps for Geography
- Additional PDF chapter on the COVID-19 pandemic of 2020
- A Victorian Curriculum Capability Project and downloadable assessment rubric (a research-based task; further information is available for teachers in the Online Teaching Suite)
- Downloadable worksheets for all activities
- Suggested solutions to all activities (enabled by teacher)
- A PDF downloadable version of the student textbook.

In the **Online Teaching Suite**, teachers will find:

- Guidance on using the digital versions of the book
- Teaching programs and teaching tips
- Curriculum grids for each topic area
- Additional activity worksheets.

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1

History

What is History?

History is the study of the past. We study the past in order to better understand the present and to help us prepare more effectively for the future. History can give us a sense of where we have come from. It can also give us a sense of where we are headed.

The concept of history is common to all people. It exists in all societies. The simple act of keeping records about ourselves, our families and the nation in which we live makes all of us historians in one way or another.

History opens a window on the past. It shows how our own society has changed over time. It also helps us understand how other nations and societies have changed over time.

History is a process of investigation that follows certain rules. It begins by posing a question or starting an investigation, then gathering evidence that will answer that question.

One kind of evidence historians seek out is **primary sources**. These are records that were made by people who lived at the time being investigated. Written or printed documents are useful primary sources. Photographs, drawings and paintings can also tell us a great deal if we can interpret, or 'read', them carefully.

Another kind of evidence used by historians is **secondary sources**. These are records made at a time after the event being investigated. When using secondary sources, historians look critically at the views of the people who created those sources. They ask extra questions about those people's interpretations of what happened.

When you think about it, history could be thought of as 'the thinking person's guide to the future'.

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Introducing historical concepts and skills: *using historical sources as evidence*

In this section, you will come across a variety of historical **sources**. You will be asked to examine these sources and to interpret what they show. You will be asked to consider who created these sources, and why. You will decide how **reliable** these sources are, often by comparing them with other sources. Historians are sometimes called 'time detectives' because, like detectives, they are constantly investigating and interrogating the stories that people tell. You will be asked to read historians' points of view, to make decisions about their interpretations and to conclude how accurate their view is.

Left: This photograph shows a soldier writing a letter home from the trenches. Because he was there at the time, and saw the trench warfare, his letter automatically becomes a valuable **primary source**.

Right: One of our finest historians, Bill Gammage, reading one of the 1000 soldiers' letters and diaries he studied. When he wrote his book *The Broken Years* (1974), this became a **secondary source**, because it was written by somebody who was not actually in the war.

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Unit 1

The making of the modern world

Overview

The creation of the modern world in which we now live began with a quantum leap in humankind's command of energy, power and technology, known as the Industrial Revolution. This occurred in Britain during the eighteenth century, then across Europe in the nineteenth century. New technologies (such as steam engines), new processes (such as for making iron and steel), and the use of canals and railways gave humans unprecedented power.

These technologies enabled humans to explore and conquer the world. This assisted the formation of empires, by which powerful nations such as Britain, Germany and France acquired colonies. This meant that Europeans had an increasing impact on traditional societies, including the First Peoples of Australia, and on the ancient civilisations of Japan, China and India.

In this unit, we will explore how the Industrial Revolution first transformed life in Europe and then had a global impact on many other lands as European powers expanded their control. As we will see, the impact of European influence on China weakened the ruling dynasty and caused a revolution. For the Indigenous Australians, the arrival of Europeans was an invasion of their ancestral lands, one that fatally challenged their traditional custodianship of the land and their way of life.

Learning goals

After completing this unit, you should be able to answer these questions:

- What were the changing features of the movements of people from 1750 to 1918?
- How did new ideas and technological developments contribute to change in this period?
- What was the origin, development, significance and long-term impact of imperialism in this period?
- How did these consequences shape the modern world?

Video
Unit Overview

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

In the chapters in this unit, there will be a particular focus on the historical concepts of **chronology** as well as **continuity and change**.

A **chronology** is essentially a linear list of key events: at very least, it will provide a sequence of dates, with the name of a key event beside it. An **annotated chronology** will more usefully include a brief description of an event. An **analytical chronology** will contain some comment on the **significance** of one event to the overall situation being studied.

In this respect, the historian is very much like a prosecuting lawyer making a case in court: to prove that a person is guilty, it is necessary to establish which events occurred and in what order. In this respect, events and dates are actually being used as a form of evidence. In good historical writing, a historian like you does more than simply tell the story of what happened. You will need to use the sequence of events to actually make an argument as to why something happened.

Another important concept is **continuity**. Even in times of great **change** – such as the Industrial Revolution in Britain – some things remain unchanged and continue as they did before. For example, while the Industrial Revolution made massive changes to the way industry and agriculture were carried out, the government of Britain remained very much as it had been before, with a king or queen ruling in conjunction with a parliament.

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▼ **The 'iron horse':** A Great Western Railway engine named King Edward VIII speeding through Old Oak Common in North West London in 1936. The steam train was one of the great inventions of the Industrial Revolution.

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CHAPTER 1

The Industrial Revolution (1750–1914)

Setting the scene: a typical view of the Industrial Revolution

The Industrial Revolution prompted the birth of the trade-union movement. Trade unions are designed to express the needs and demands of working people to their employers. Many employers were unwilling to give their workers better pay and conditions. Workers had to force the situation by taking strike action. In a strike, people stopped work and refused to resume until their demands were met.

Going on strike was a risky thing. Factory owners could respond with a lockout, when they simply shut down their factory for some time, leaving the workers unemployed. Since workers rarely had savings, their families went hungry. Women and children often begged their men not to strike, causing workers additional anxiety.

▲ **Source 1.1** *The Strike* by German artist Robert Koehler, 1886

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MAKING THINKING VISIBLE 1.1

See, think, wonder

Step 1: what do you see?

Look carefully at every single detail of this painting, made in 1886, showing a strike in progress.

How is the factory owner (in top hat) reacting to the strike? What might he say to the workers? How is his servant (behind him) reacting?

How do you think the presence of the factory has affected the local environment?

This man appears to be speaking on behalf of the striking workers. What problems and grievances did they have? What demands might he be making?

What might this woman be thinking as she watches the strike?

What might this man and woman be arguing about?

How do we know from this detail that the protest might be about to become violent?

Step 2: what do you think?

1. Do you think that a painting can be a reliable picture of a conflict such as a strike?
2. Do you think that the artist is on the side of the rich man who owns this business or of the workers who are demanding better conditions and pay?

Step 3: what do you wonder?

1. Why do you think workers have taken this potentially violent action instead of discussing their conditions peacefully?
2. What might be some of their grievances and complaints?
3. Why has the factory owner not tried to meet some of the workers' complaints and demands?
4. Ask yourself:
   - **a** How are the men expressing their anger and frustration?
   - **b** How are women and children reacting to the strike situation?
   - **c** How have the factories affected the landscape and atmosphere here?
   - **d** What does the costume of the owner and his servant on the porch tell us about the owner's wealth?

Step 4: what comments and further questions do you want to note down?

1. What are three important things I have discovered about industrial strikes?
2. What problems did workers face when they went on strike?
3. What did workers of the Industrial Revolution achieve by going on strike?
4. Who was Robert Koehler, and why did he paint this picture of a strike that he had probably never seen?

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Chapter overview

Introduction

The Industrial Revolution created the basis of the world in which we now live. During the eighteenth and the nineteenth centuries, new inventions, technologies and industries gave human beings the control of power and energy on a scale that we had never before enjoyed. Existing industries, such as coal mining and iron production, grew massively in size and sophistication. New technologies, such as the steam engine, freed ships from depending on the wind, mills from depending on water-wheels, and vehicles from depending on animal power. Humble village workshops were replaced by enormous factories in industrial cities and in the countryside. The invention of railways and steamships gave human beings unprecedented freedom of movement across the entire surface of the planet and allowed the building of colonies and great empires.

Learning goals

After completing this chapter, you should be able to answer these questions:

- Why did the Industrial Revolution develop so well in Britain?
- What were the main inventions and technologies that drove the Industrial Revolution?
- How did the Industrial Revolution change the pattern of human settlement?
- How did society change as a result of the Industrial Revolution?
- How did the Industrial Revolution change the lives of ordinary men, women and children? Were these changes for the better or for the worse?
- How did people respond to the Industrial Revolution?
- What are the long-term environmental consequences of the Industrial Revolution?

Historical skills

After completing this chapter, you should be able to:

- Explain what 'chronology' and 'cause and effect' mean in the study of history
- Understand and evaluate different historians' points of view
- Develop historical empathy with people in the past
- Interpret primary sources in both print and visual form
- Evaluate the reliability of primary sources
- Correctly use special terms specific to the topic under study
- Use factual evidence (dates, statistics, examples) to substantiate an argument.

► **Image on next page:** The steam hammer was invented by the Scottish engineer and inventor James Nasmyth (1808–1890). It took the human effort out of the process of forging wrought iron and steel to form engine and machine parts, as well as substantially reducing production costs.

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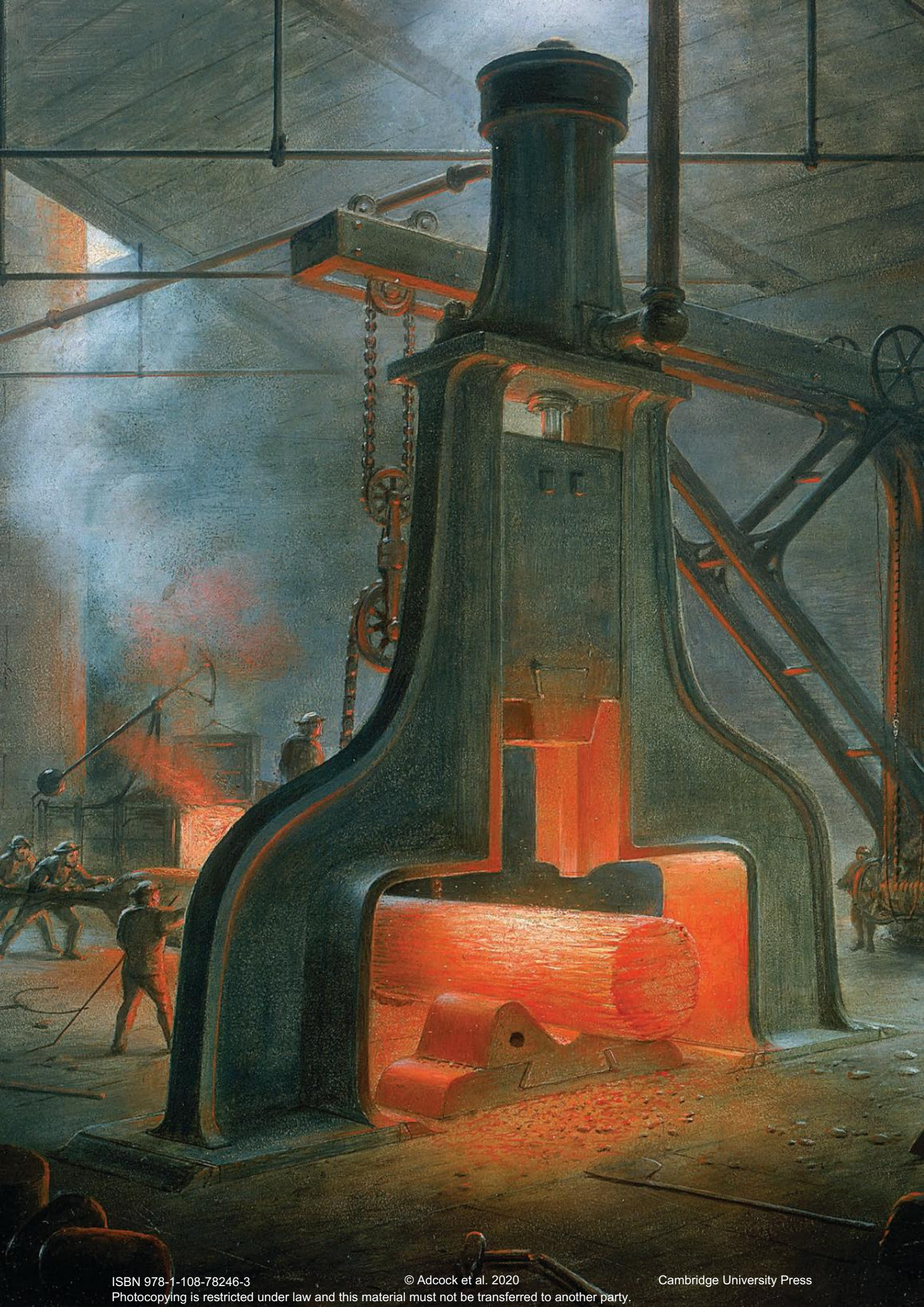

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Timeline of key events

What came before this topic?

- **The Middle Ages (tenth to fifteenth centuries):** a steady growth in scientific knowledge, much of it coming from the Arab world.
- **The Renaissance in Italy (fifteenth to sixteenth centuries):** continued growth in scientific knowledge. Leonardo da Vinci investigates the natural world and understands the human body by dissecting corpses.
- **The European 'Scientific Revolution' (seventeenth century):** European thinkers, such as Isaac Newton, make further discoveries of the essential laws of science.

In the seventeenth century, European scientists like Isaac Newton made key discoveries in their fields

1698
Thomas Savery invents the first commercial steam engine

1701
Jethro Tull invents an efficient machine to sow seeds

1712
Thomas Newcomen improves the steam engine and designs the first steam-driven beam engine

1737
John Harrison invents the first accurate time-keeping device to be used at sea to measure location

1752
American scientist Benjamin Franklin experiments with lightning rods

1762
The sandwich is invented, and named after its inventor, Sir John Montagu, the Fourth Earl of Sandwich

1764
James Hargreaves invents the Spinning Jenny

1771
Richard Arkwright opens a water-powered mill at Cromford in Derbyshire

1774
James Watt joins forces with Matthew Boulton to open a factory making steam engines at Soho in Birmingham

1779
Samuel Crompton further develops the Spinning Jenny with his Spinning Mule

1779
Thomas Pritchard designs the world's first iron bridge, and it is built at Coalbrookdale by Abraham Darby

1782
In France, the Montgolfier brothers make the first flight in a hot air balloon

1784
Edmund Cartwright designs the first powered loom for weaving cloth

1785
Watt's steam engine is first used to replace water power in a cotton mill

A model of a steam engine from 1712

The first recorded manned flight was made in a hot air balloon built by the Montgolfier brothers on 21 November 1783

Timeline questions

1. What can you tell from the information in the timeline about the rate of new inventions during the Industrial Revolution?
2. Of all the inventions listed in the timeline, which one arguably did the most to change the world completely?

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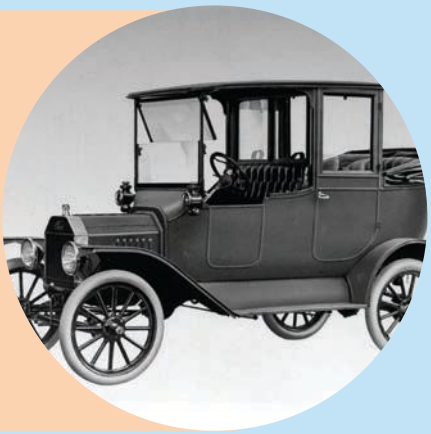
What came after this topic?

- **1870–1914:** The 'Second' Industrial Revolution transforms the world again, with the emergence of petrol, electricity and steel technologies.
- **1969 to present day:** The 'Third' Industrial Revolution, new communication technologies (i.e. the digital revolution and the internet) and energy sources (i.e. renewable electricity) create millions of new jobs.
- **2000s (right now):** The 'Fourth' Industrial Revolution is the age we now live in. Our lives are being changed by extraordinary new technologies, such as artificial intelligence, virtual reality and rapidly advancing robotics.



The 'Second' Industrial Revolution saw the invention of the automobile. Pictured is a Ford Model 'T' from 1914

1788
The modern form of false teeth is invented, bringing much relief to the toothless

1789
A canal is built to link the Thames and the Severn Rivers, creating an expanded waterway

1795
The invention of canned food, massively helping the provisioning of armies in the field

1796
Edward Jenner demonstrates vaccination against smallpox

1801
French inventor Joseph Jacquard invents a loom that uses hole-punched instruction cards to weave detailed patterns

1801
Richard Trevithick builds his first steam carriage

1804
Richard Trevithick designs the first steam locomotive

1806
Isambard Kingdom Brunel starts his stellar career in building bridges, tunnels, railway lines and steamships, dominating the industrial scene until 1859

1811–16
In the Luddite Riots, workers smash many new factory machines, fearing that they would put people out of work

1816
A canal from Leeds to Liverpool is completed

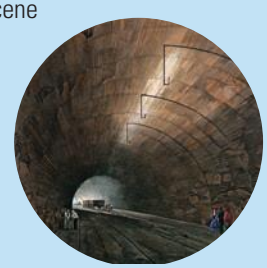
1825
George Stephenson constructs a railway line from Stockton to Darlington, 40 kilometres in length

1829
George Stephenson designs his train *The Rocket*, which reaches a record speed of 46 kilometres per hour

1838
The Liverpool-to-Manchester Railway is extended to London, making it some 400 kilometres in length

1851
The Great Exhibition is held in London. It is the 'shopfront' displaying the wonderful new products of the Industrial Revolution, and some six million people visit it.

Trevithick's locomotive



A tunnel on the world's first intercity railway, the Liverpool to Manchester railway line. Constructed under the guidance of chief engineer George Stephenson (1781–1848), the building of the railway was a major civil engineering project.

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1.1 Why did the Industrial Revolution start in Britain?

FOCUS QUESTION

Why did the Industrial Revolution first develop in Britain?

Why a revolution?

In History, a revolution is usually a rapid change in the government of a country, generally carried out by some form of protest and violence by a revolutionary crowd. Such political revolutions were responsible, for example, for the birth of modern England, France and America.

In 1799, a Frenchman who had witnessed the French Revolution, Louis-Guillaume Otto, visited Britain. He was amazed at the way people's lives had been completely changed during the century by industrial developments. He called it an 'Industrial Revolution': there was no change of government but a complete change in society, in economics and in daily life for nearly the whole population.

Since then, we have accepted this second meaning of the word 'revolution', to simply mean a complete and radical change in the way we live. Such change occurs not by fighting but by massive developments in technology. This applies, for example, to the Computer Revolution in more recent times. No revolutionary fighting was involved, but our lives have been totally changed by new inventions. A student sitting in your present classroom in the year 1960 could not possibly have imagined that you could now download music through a computer, create a blog, talk to somebody through Skype and share your thoughts on Twitter or Facebook.

Was the industrial 'leap forward' really a revolution?

Historian Dan Cruickshank has written:

> The epoch [time] of the Industrial Revolution was Britain's heroic age. Men and women of astonishing ingenuity [intelligence], inventive power and sweeping vision appeared on the scene. Within a few fleeting decades, from 1760 to 1840, the old modes [ways] of life and work – in many ways little advanced since the Middle Ages – had given way to the modern world we know today.

▲ **Source 1.3** Dan Cruickshank, quoted in Gavin Weightman, *What the Industrial Revolution Did for Us*, 2003, p. 7[1]

▼ **Source 1.2** An industrial scene in nineteenth-century Wales. Note how the landscape has been transformed by this iron factory and the town that has sprung up around it.

1 This is what is known as a **footnote**. Whenever you see a small number on the page, have a look down here. Historians often use these extra notes at the bottom of a page to give additional information to their readers, usually about the source of evidence that they are quoting from, in case the reader wants to learn more.

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While the Industrial Revolution did not aim to overthrow the government of Britain, it did create enormous changes in the ways most people lived, worked and enjoyed life. This was through a process known as **urbanisation**. For example, in 1750, only 15 per cent of Britain's people lived in cities; the rest lived in the countryside. By 1900, 85 per cent of Britain's population lived in cities and towns. Most of these people worked in the new, enormous factories, using machines that were totally new inventions.

Historian Anthony Burton concludes:

> A new world was made in the 18th century: it was neither a **Utopia** born in a philosopher's brain, nor a land opened up by exploration. It was our own world, the world of machinery and factory. In that period, one country, Great Britain, went through a change so fundamental and traumatic that we can find nothing comparable in the whole of written history.

▲ **Source 1.4** Anthony Burton, *The Rise and Fall of King Cotton*, 1984, p. 9

A global revolution

This was a revolution that also spread around the world. The explosion of experimentation and invention spread to European countries such as France and Germany. The Industrial Revolution also powered the spread of **empires** – such as the British Empire, with its effects felt in large parts of Asia, Africa and the Pacific region.

In the nineteenth century, America also committed heavily to **industrialisation**, creating the miracle of 'Smokestack America', with its new millionaires and even more spectacular inventions in technology. In due course, industry reached as far as Australia and fed the growth of our great cities and towns. Truly, this revolution originating in Britain became a global revolution, affecting people – for better or for worse – all over our planet.

KEY TERMS

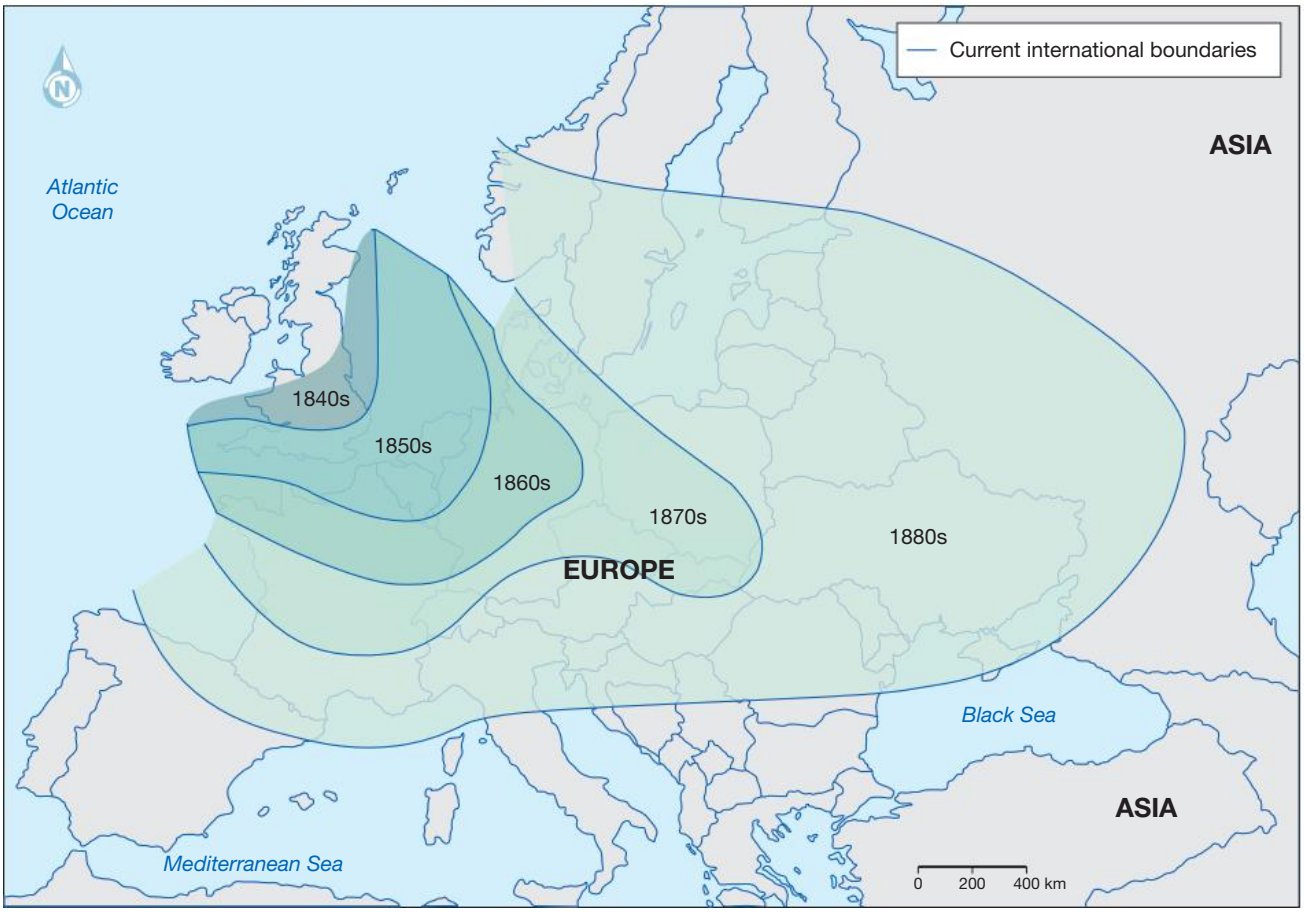
urbanisation the growth of cities

utopia a perfect society in which everyone is happy

empire a group of countries ruled by a single person, government or country

industrialisation the process of developing industries in a country

▼ **Source 1.5** The initial spread of the Industrial Revolution from Britain. The revolution eventually spread from Britain to the rest of the world.



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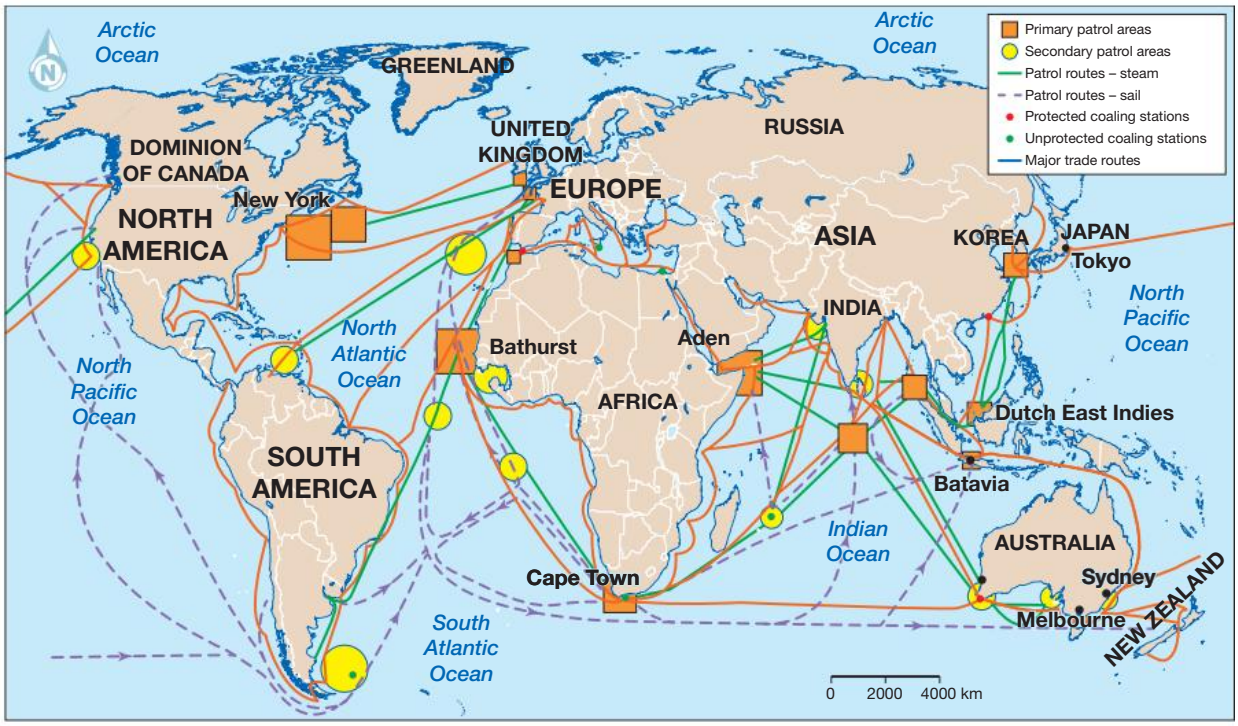
Video
European imperial expansion



▲ **Source 1.6** British Empire and trade routes circa 1885. This highlights the global nature of Britain's trade, its empire and the vital importance of its navy and fleet of merchant ships for trade.

Why Britain?

Historians often wonder why important changes like the Industrial Revolution occur in one country before they occur in others. What was it about Britain that made it such a good place for this sudden explosion of invention and **modernisation**?

KEY TERM
modernisation the act of making something more modern

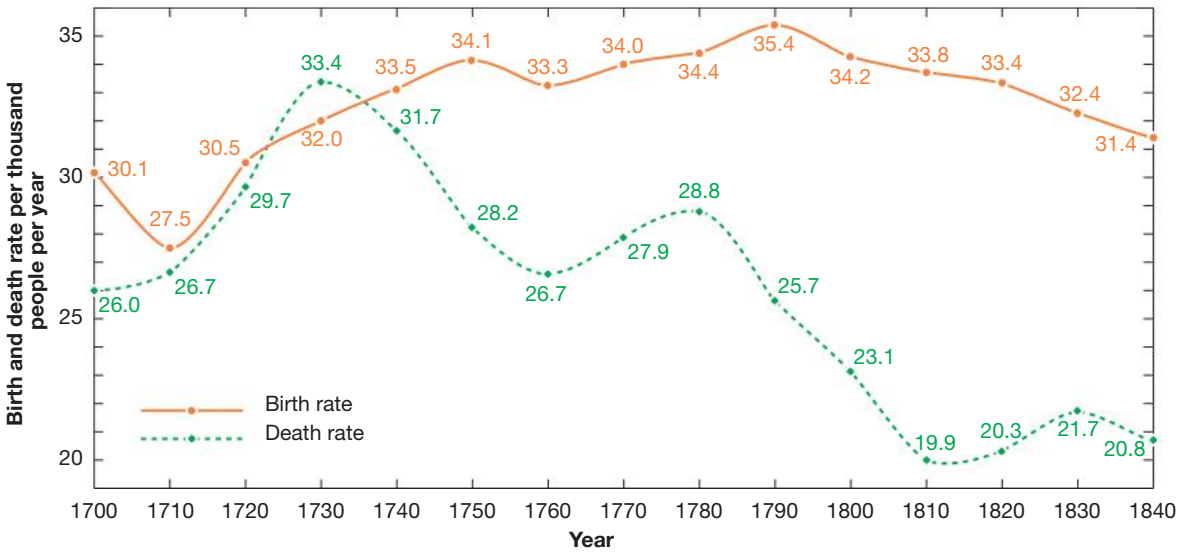
Political stability

Britain's political system made the country quite stable. Britain's monarch ruled together with a parliament. The parliament did contain political parties, but the opposition party was generally loyal to the existing order.

Growing population

Britain's population was increasing at a very fast rate. In 1770, the population was 7.4 million; this had increased to 15.9 million by 1840. The birth rate increased, while the death rate decreased. This was partly because healthcare was improving and partly because the food supply was increasing. Peoples' wages were rising, and they could afford more fresh meat and vegetables. Overall, there was an increase in the standard of living – the quality of houses, clothing and food – even

▼ **Source 1.7** This graph shows birth and death rates in Britain between 1700 and 1840. The birth rate (number of children born per 1000 people per year) steadily increased until 1790. At the same time, the death rate steadily decreased from a high of 33.4 deaths per 1000 people per year in 1730 to a low of 19.9 in 1810. The total population grew greatly during that time.



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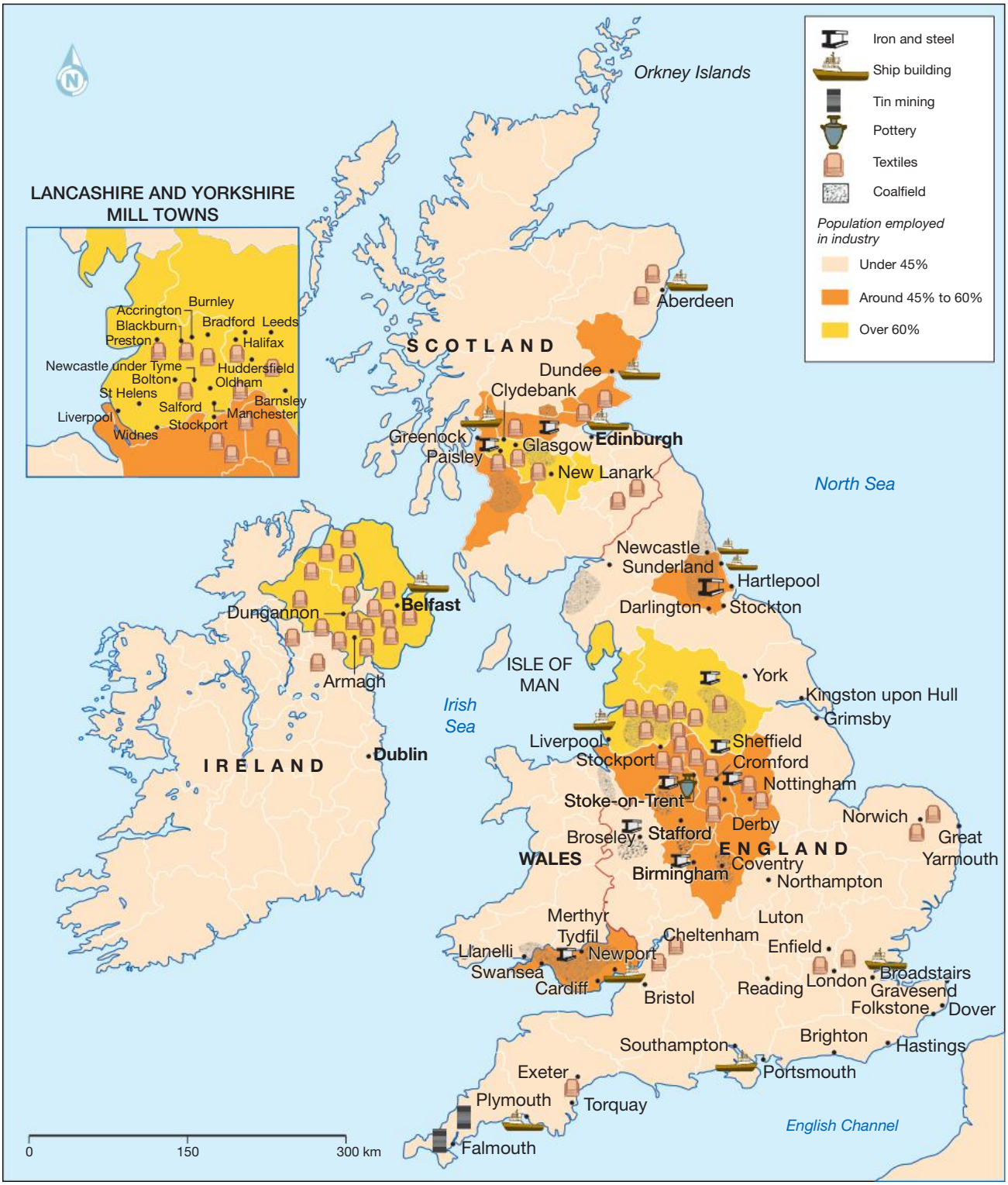
for working-class people. This in turn increased the demand for consumer goods and services, and financed more economic growth.

Reliable financial system

Britain enjoyed a very stable, reliable financial system. The Bank of England was trusted all over the world, and Britain's credit system was solid. Anybody wishing to invest in Britain saw it as a very safe option.

Plentiful raw materials

Britain had good supplies of important raw materials, such as coal and iron ore. Since these were often found at similar levels, this made mining easier.



▲ **Source 1.8** This map of Britain's industrial economy circa 1800 shows that factories were built in areas where there were good supplies of coal and iron, and good ports. These allowed raw materials to be brought in by ships and completed goods to be sent to foreign markets.

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Generations of brilliant inventors

Britain had a new class of practical, inventive men and women with the vision to create new machines and try new technologies. Historian Dan Cruickshank explains:

> Men and women of astonishing ingenuity, inventive power and sweeping vision appeared on the scene. It was the age of the polymath [the multi-skilled person] with many different fields of endeavour [activity] linked by the common thread of the open, inventive and enquiring mind.

▲ **Source 1.9** Dan Cruickshank, quoted in Gavin Weightman, *What the Industrial Revolution Did for Us*, 2014, p. 7

KEY TERM

industrialist an owner or an employee in a high position in industry

These **industrialists** were indeed a remarkable breed. We will discuss some of them in this chapter.

We get a good sense of the genius and capability of these inventors from a group portrait painted by John Lucas in 1858 (Source 1.10), when some of England's finest engineers gathered to plan one of their greatest projects yet. This group is typical of the can-do men of the Industrial Revolution: willing to attempt massive projects, keen to try new techniques, new machines, new materials and seemingly able to overcome any challenges. Robert Stephenson (1803–1859) sits at the table in the centre of the image. He designed the Britannia Tubular Bridge across the Menai Strait shown in the background. As a traditional bridge would block the passing of navy ships, Stephenson designed a tubular steel bridge to rise high above the water. The great engineer Isambard Kingdom Brunel (1806–1859) stands at the far right.

John Harrison was also typical of these new inventors. A carpenter from Lincolnshire, he became fascinated by a government competition to design a clock so accurate that a ship's captain could use it to determine their longitude (location on the globe) at sea. He spent some 20 years designing a clock that did not need a pendulum and finally succeeded with his Clock H4. This clock was successfully used by Captain Cook on his second voyage to Australia in 1772. Sadly, the Board of Longitude accepted Harrison's success but refused to pay him the prize money of £3000.

▼ **Source 1.10** This painting by John Lucas shows a meeting of the engineers who were involved in building the Britannia Tubular Bridge in 1858

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▲ **Source 1.11** This portrait from 1767 by Thomas King has been described as less than a portrait of John Harrison and more a portrait of his inventions around him, of which he looks justifiably proud

From the portrait by Thomas King (Source 1.11), we sense that Harrison was a very determined and proud inventor: he sits bolt upright, gazing directly at the viewer, very much aware of his own worth and of the brilliance of his invention. His is the very 'face' of the Industrial Revolution.[2]

We know that the people who made the Industrial Revolution were strongly aware of their importance to history. They were proud of their hard work and their brilliant inventions. These were a matter of national pride, even national identity.

> *We know that the people who made the Industrial Revolution were strongly aware of their importance to history.*

William Ball (1795–1852), who worked in the iron foundry at Coalbrookdale as a foreman, was reported to be so strong that he once lifted metal weighing 460 kilograms. The unusual goggles he wears in the portrait in Source 1.12 are due to being blinded in one eye by a jet of red-hot metal. He became famous at the London Great Exhibition of 1851 as 'John Bull', a national example of British determination and pride, the British equivalent of 'Uncle Sam'.

▲ **Source 1.12** The writing on this picture states: ' "An Englishman am I". William Ball, alias John Bull. Born at Horsehay, Shropshire, 8 July 1795. Worked forty years, Puddler [furnace worker] and Shingler for the celebrated Coalbrookdale Company of Ironmasters. Height, 5 feet 9 inches. Exceeds 40 stone weight. Healthy and very active.'

Amazing but true ...

'John Bull' was a huge man who needed a crane to be able to mount his horse. He was so heavy that he actually broke the back of the poor animal, and it had to be put down. When he died in 1852, some 20 men were needed just to carry his coffin.

Another reason for rapid progress in Britain was the intellectual movement known as the Enlightenment. This Europe-wide movement was especially strong in both England and Scotland, where people flocked to discussion groups (such as the Lunar Societies) to learn about the latest scientific theories and the most recent developments in industrial technology. Industrialists were passionate to learn about inventions that could be applied to manufacturing in order to increase production and to improve the quality of goods. The Enlightenment placed a strong emphasis on **empirical knowledge**, that is, information based on direct observation and on scientific experimentation.

KEY TERM

empirical knowledge
information based on what is seen or experienced rather than theoretical

2 Want to know more about this genius? For an interesting documentary, look up 'A Detailed Study of H4 – John Harrison's Longitude Timekeeper Reconstruction' on YouTube.

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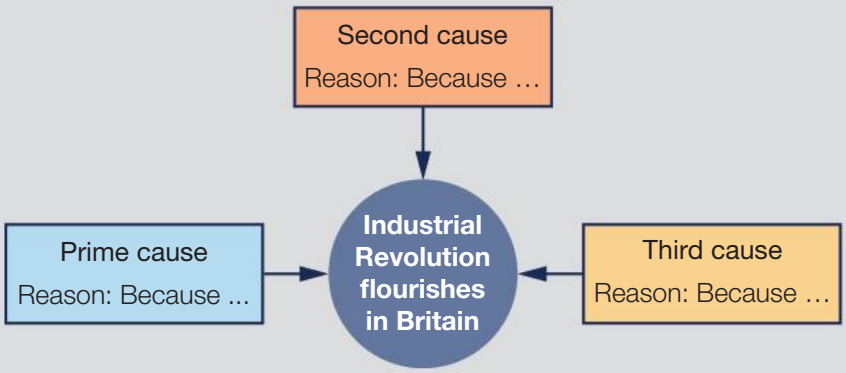
DEVELOPING HISTORICAL CONCEPTS AND SKILLS 1.1

Determining cause and effect

One of the most important ways of thinking in History is to understand **cause and effect**. Events don't happen without a reason; good historians are able to work out what causes an event to occur and what the effect of the event was. Also, most historical events have more than one cause and more than one effect. Based on the information in this section, try to complete the following graphic organiser about the causes of the Industrial Revolution in Britain.



1 Copy and complete the this graphic organiser.

2 Then choose three causes from this list that you believe are the key causes of the Industrial Revolution:

- The revolution in agriculture
- Ample resources
- Durable government
- Stable financial system
- Brilliant inventors
- The Enlightenment and the rapid increase in scientific knowledge.

3 Finally, briefly explain why each cause mattered in your opinion.

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 1.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 How did Britain's political system create favourable conditions for the Industrial Revolution?

2 How did Britain's financial system create favourable conditions for the Industrial Revolution?

3 How did Britain's population growth create favourable conditions for the Industrial Revolution?

4 What does the story of John Harrison tell us about this special breed of inventors in Britain?

Interpret

5 What is the main difference between the first meaning of the word 'revolution' (e.g. French Revolution) and the second meaning (e.g. Industrial Revolution)?

6 How do we know that the new industrial developments became a matter of national pride in Britain?

Argue

7 **Identify and evaluate** the relative importance of the factors that encouraged the start of the Industrial Revolution in Britain.

Extension

1 Investigate the careers of the main inventors shown in the picture of the meeting at the Britannia Bridge (Source 1.10), and construct an argument as to which one of them was most important to the development of the Industrial Revolution.

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1.2 The revolution in farming

FOCUS QUESTION

How did the Industrial Revolution change agricultural practices?

Introduction

We usually think of the Industrial Revolution as being driven by improvements in industry and located in big cities. At the time, there was a second, less obvious revolution happening out in the countryside that would also help the Industrial Revolution. Put simply, better farming techniques resulted in a large increase in the amount of food available in Britain.

Three great changes occurred, as discussed in this section.

A new science of farming

Farmers are sometimes cautious and unwilling to try doing things differently. British farmers at this time, by contrast, turned eagerly to new scientific discoveries and inventions that promised to make faming more productive. They read the works of Thomas Coke and 'Turnip' Townsend, explaining how to enrich soil and produce better crops.

Breeding animals for excellence

Inventors and farmers also followed the advice of men such as Robert Bakewell about how to produce healthier animals by carefully cross-breeding their animals with strong stock. Even the king, George III, played at being 'Farmer George' on his own farm at Windsor. He experimented with merino sheep imported from Spain. Others imported better breeds of pigs from China. Farmers experimented with breeding better animals. Robert Bakewell experimented with breeding the Long-Horned Beauty, a bigger cow that produced more milk. Breeding programs selected the best male and female cattle and had them mate together. Each generation of animals was stronger, healthier and produced more milk, wool or pork. Bakewell developed superb stud animals, which he hired out to other farmers, earning him £1200 each year. The tradition of the agricultural show was also born, allowing farmers to show off their animals and to learn new farming techniques.

▲ **Source 1.13** A view of a traditional farming family before the changes of the Industrial Revolution. Working the land meant manual physical labour with the assistance of animals such as oxen.

▲ **Source 1.14** Thomas Coke, Earl of Leicester, on his estate at Holkham

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New farming inventions

Farmers also bought new inventions, such as Jethro Tull's machine for planting seeds. Tull realised that the traditional way of sowing seeds by hand was slow and wasteful: the seeds fall thick in some places, thin in others, resulting in low growth rates. His machine was simple and brilliant. The cart was drawn by a horse and held a container full of seeds, which dropped down a chute to feed through a funnel down to the ground. They fell evenly into a furrow created by a plough at the front of the vehicle. Farmers could plant three rows of seeds at a time, and these grew in perfectly straight lines, evenly spaced; as a result, food yields increased dramatically. Ideas were being turned into reality, and the countryside was booming.

▲ **Source 1.15** Jethro Tull's seed drill

Amazing but true …

Human ingenuity drives the process of invention forward, always seeking to improve what is being made. Sometimes, we human beings push too too far. This painting by George Stubbs shows the massive Lincolnshire Ox that, by scientific breeding, had been developed to an amazing height of 1.9 metres; it weighed 1300 kilograms. Sadly, the body weight was too great for the animal to support: its four legs all broke, and the poor animal died soon after. The man at the right of the image is John Gibbons, who won the beast as a prize quite cheaply when his fighting rooster (also shown) won a cockfight.

▲ **Source 1.16** John Gibbons with his Lincolnshire Ox, by artist George Stubbs

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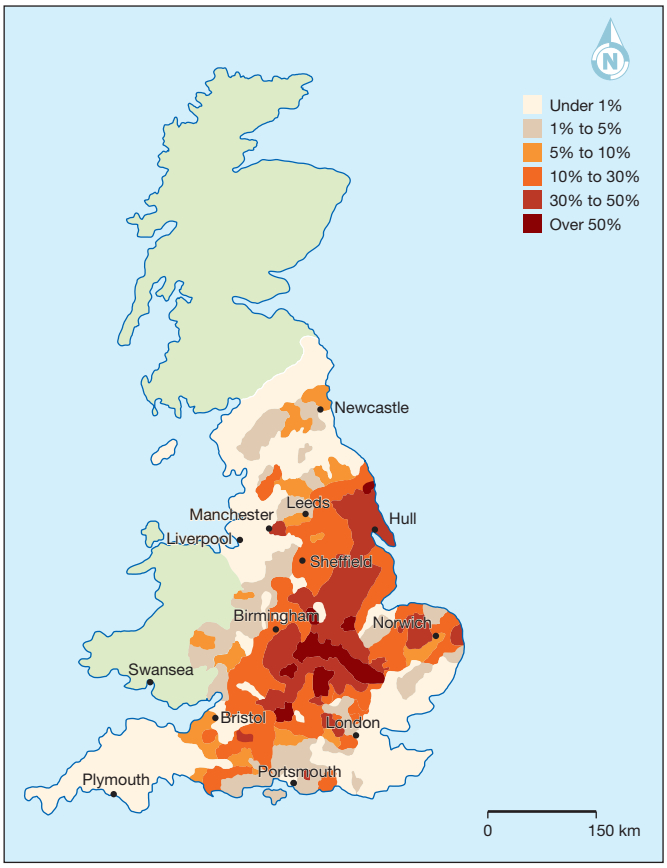
Organising the land into larger farms

You might remember from Year 8 History that during the Middle Ages (a period of time from about the tenth to the fifteenth century), England operated under a social system known as feudalism. This kept workers tied to particular sections of land in return for safety and protection by the owners of the land; the nobility. At the time, England was made up of farms varying from many small strips of land worked by poorer farmers, to some larger properties owned by richer farmers. For years, though, wealthy farmers had been buying up the small strips from the poorer farmers.

During the eighteenth century, this process sped up, as rich men created much bigger farms. They bought out the small farmers and also bought up land that was 'common' (belonging to the whole community). This was called the Enclosure Movement and was completed between about 1750 and 1850. In this time, some seven million acres, or one-sixth of England, were enclosed. This was all legal: under Prime Minister William Pitt, and his agriculture adviser Arthur Young, 4000 Acts of Parliament allowed the virtual 'theft' of land from poor people who had a traditional right to use it.[3] By the mid-nineteenth century, England was a country of wealthy owners of large farms which were, admittedly, more efficient and produced much more food.

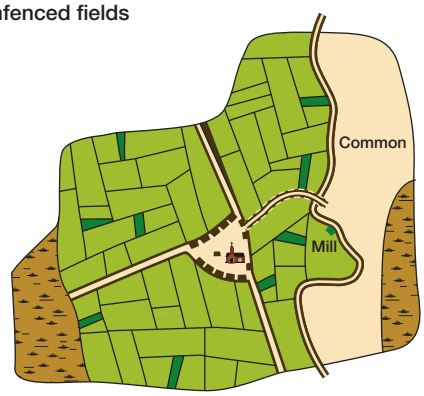


▲ **Source 1.17** The division of land that resulted from the Enclosure Movement in England

Prior to enclosure, available farm land was often divided into small, narrow strips. Each strip was worked upon by an individual farmer. After enclosure, these strips of land were combined into large estates. This often left no choice for the poor farmers who previously worked their small strip of land but to move to the city to work in factories. Source 1.18 demonstrates this contrast of land division before and after enclosure in a typical English village.

▼ **Source 1.18** An example of the changes under the Enclosure Acts in Great Britain, 1700–1801. This is based on the work of Professor Robert Sirabian at the University of Wisconsin.

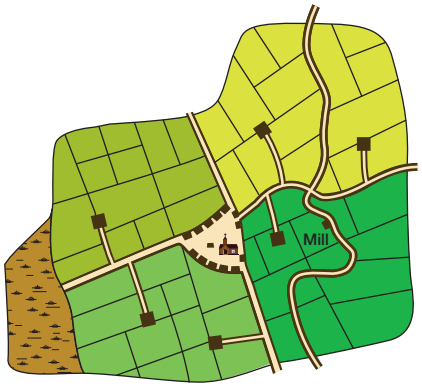
Before enclosure
A system of open fields, which allowed a farmer's land to be scattered around the village in small and unfenced fields



Strips of land owned by Farmer A

Church

After enclosure
A system of closed fields, which meant that a farmer's land was all together and fenced.



Farmer A's land now enclosed

Road

New farm buildings

Hedge

3 For more information, visit *The Land* magazine's website and search for 'A Short History of Enclosure in Britain'.

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William Cobbett (1763–1835) was a politician and writer who was very concerned about the condition of poor people in the country. He set out to explore the English countryside on horseback and noted everything he saw. He created a very valuable primary source (a record made at the time) based on direct observation. His description of Cricklade village records what he saw there:

KEY TERMS

hovel a very poor-quality shelter, not fit for human use

rod an old unit of measurement of about 5 metres

Pitt Prime Minster William Pitt, who encouraged the Enclosure Movement

> The labourers seem miserably poor. Their dwellings are little better than pig-beds, and their looks indicate that their food is not nearly equal to that of a pig. Their wretched **hovels** are stuck upon little bits of ground on the road side, where the space has been wider than the road demanded. In many places they have not two **rods** to a hovel. It seems as if they had been swept off the fields by a hurricane, and had dropped and found shelter under the banks on the roadside! Yesterday morning was a sharp frost; and this had set the poor creatures to digging up their little plots of potatoes. In my whole life I never saw human wretchedness equal to this: no, not even amongst the free negroes in America, who, on an average, do not work one day out of four. And this is 'prosperity,' is it? These, Oh, **Pitt**! are the fruits of thy hellish system! However, this Wiltshire is a horrible county.

▲ **Source 1.19** William Cobbett, *Rural Rides*, 1830, p. 19

Poor working people, having no land to live off, moved to the cities in large country-to-city migration

Poor working people, having no land to live off, moved to the cities in a large country-to-city migration, becoming the workforce for the great new factories that were developing. For example, records suggest that London's population doubled between 1801 and 1850.

▲ **Source 1.20** William Cobbett

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 1.2

Identifying continuity and change

In the study of History, historians never limit themselves to merely describing what has happened in the past, but set themselves two great analytical questions. First, what kinds of **change** have occurred in the period of time we are studying? Were the changes massive in scale or relatively minor? Did the changes generally benefit people, or did they cause difficulty and hardship? Did the changes affect the entire population or only certain groups of people? Asking these sorts of questions helps historians to determine the **significance** of an event.

Examine the following two maps then answer the questions that follow.

1. Describe how the population distribution in Britain changed between 1700 and 1801.
2. Referring to Sources 1.8 and 1.21, explain the significance of the distribution of the coalfields.

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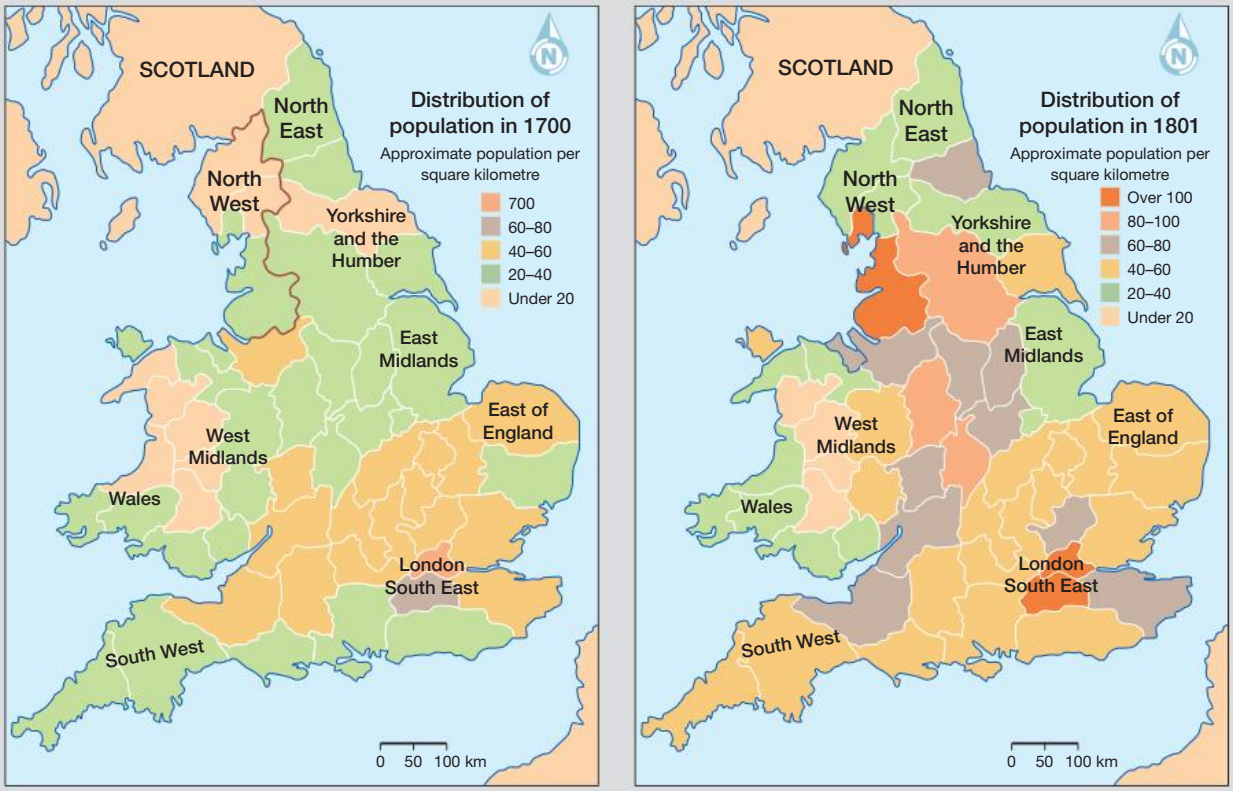

▲ **Source 1.21** The distribution of population in Britain in 1700 and 1801, with present-day regional boundaries. The total population rose from just over 6 million in 1700 to about 10.5 million in 1801. Note for example how the north west region, sparsely populated in 1700, became one of the most densely-populated regions in 1801, at least in its southern part, while its northern half became less densely populated.

END-OF-SECTION REVIEW 1.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 How did new scientific thinking help improve farming and food production in Britain? Give examples.

2 How did new mechanical inventions help increase food production in Britain?

3 What was the Enclosure Movement?

Interpret

4 How did the Enclosure Movement help to increase the supply of food in Britain?

5 Explain how more scientific methods of breeding animals helped increase the production of wool and meat during the Industrial Revolution.

Argue

6 Although the Enclosure Movement was harmful to poor farmers, it was a crucial factor in the rapid expansion and success of the Industrial Revolution. Explain why this was so.

Extension

1 Investigate the career of a 'gentleman-farmer', such as Thomas Coke, Earl of Leicester, and explain the new techniques of animal breeding he developed on his estate at Holkham.

Digital quiz
Please see the Interactive Textbook to access digital activities

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1.3 The revolution in power

FOCUS QUESTION

Why was the invention of the steam engine significant?

The key to power is power

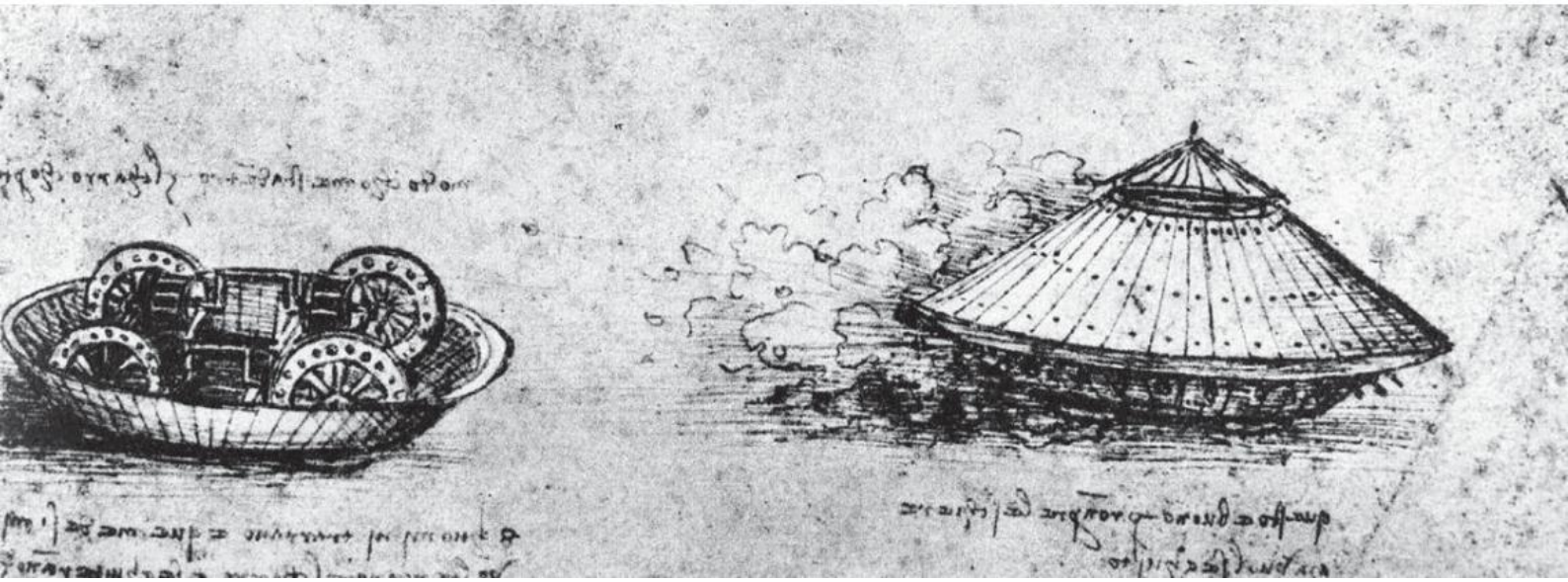
Many years before the Industrial Revolution, in the sixteenth century, artist and inventor Leonardo da Vinci designed amazing new machines intended to help his employer, the Duke of Milan, win wars and become powerful. For example, he designed an armoured vehicle that could go into battle; we would call it a tank. He designed a flying machine with rotors: a helicopter. He imagined an underwater vessel: a submarine. His designs were excellent, and yet they were never actually made, and no wars were ever won with them.

One crucial thing was missing: the power to drive them. In da Vinci's time, power (the rate of using or producing energy, usually to drive movement) still came from a few sources: human power (people pulling carts), animal power (horses and oxen pulling loads) and the movement of wind and water (to drive sailing ships, windmills and water mills). None of these sources of power was strong enough to drive the machines da Vinci had imagined, so his brilliant plans were never made real.

Things remained so for some centuries until, in the eighteenth century, humans harnessed a totally new source of power: heat from coal to produce steam. As steam-engine manufacturer Matthew Boulton proudly said: 'I sell here, Sir, what all the world desires to have – power'. We are going to explore how the invention of this massive new sources of power touched off a series of inventions that would change human life – and the face of our planet – forever.

The steam engine was as important to the eighteenth century as the use of electricity or the internal combustion engine would be to the twentieth century: it gave humans massive new power. The steam engine made mining more efficient, it drove trains on tracks at great speed and pushed steamships across the oceans of the globe with great swiftness and reach. The invention of this new form of power gave human beings economic, military and political power they had never had before.

▼ **Source 1.22** Design drawing by Renaissance artist Leonardo da Vinci of a military tank for use in battle. His design was perfectly practical with one exception: in the sixteenth century, humans did not possess enough power to drive such a machine. In the eighteenth century, people invented a machine to deliver such power in the steam engine.



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Many interlocking revolutions in technology

Human beings have always tried to improve their technologies by invention, but in some periods of history this process of invention leaps ahead. Between about 1750 and 1850, a number of interlinked inventions took industrial production to new heights. These were especially strong in the metal and textile industries.

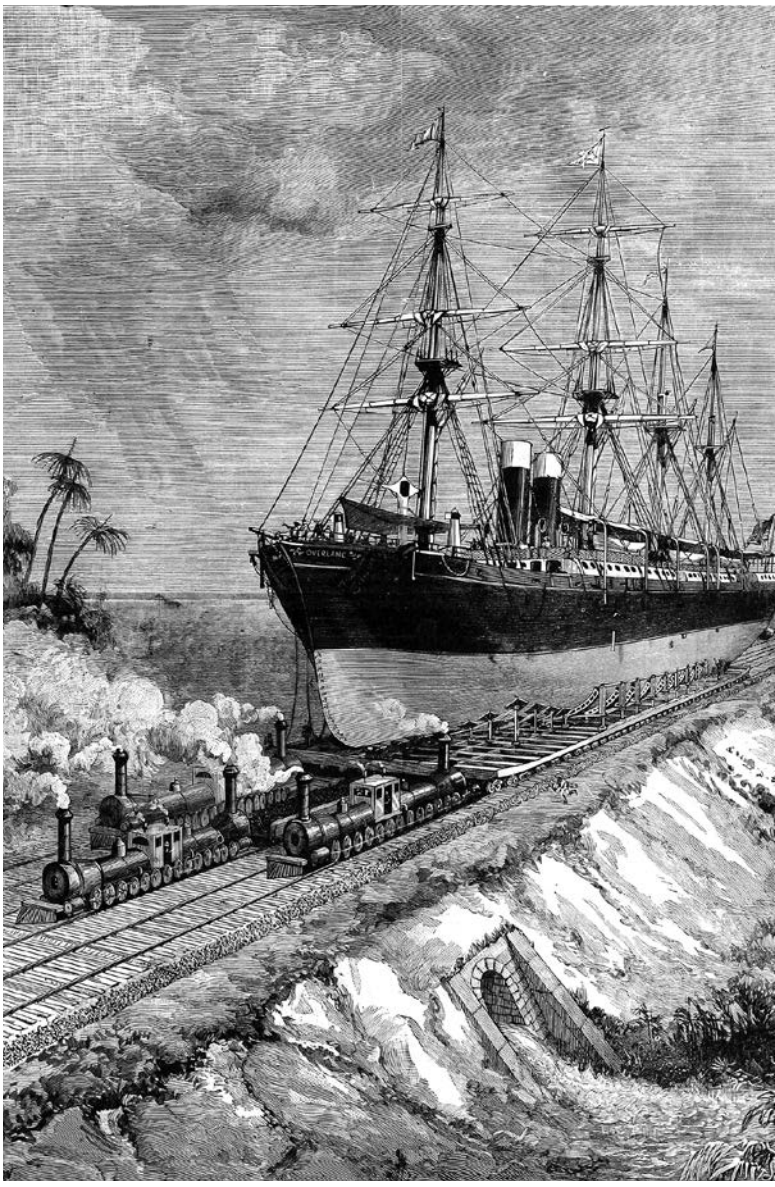
There were four main types of change.

The first great change was to power. Human and animal labour, waterwheels and windmills started to be replaced by steam power.

The second great change was to machinery and industry. There was an explosion of new inventions and new techniques that transformed the way important things such as cloth, iron and steel were made.

The third great change was to the increase in the scale of production. There were some large factories before 1750. As early as the 1600s, Ambrose Crowley built a large ironmaking factory at Winlaton. In the 1700s, however, many more industries changed from small workshops to large factories employing hundreds of people.

The fourth great change was to transport. First came the invention of canals. These allowed the transportation of heavy raw materials to factories across Britain. The next great change would be created by the construction of good-quality modern roads in the 1820s. A later revolution in transport would occur with the construction of a system of railways during the 1830s.



▲ **Source 1.23** An 1884 magazine prediction of the future use of steam-powered trains – hauling a ship across the Panama Isthmus (*Scientific American*, 1884)

The invention that empowered the world

All of these revolutions in transport created the expectation that improvements would continue almost limitlessly: as late as 1884, people were still speculating about the power of transport to achieve massive tasks. The magazine *Scientific American* published an article proposing that one day humans might even use powerful steam engines to haul great ships across land in a short cut from one sea to another. The magazine published a futuristic engraving showing great double-boiler locomotives hauling such a steamship on rails (Source 1.23). Coming a century after the appearance of steam engines, this suggestion demonstrated that humankind saw almost unlimited possibilities for the power that it had recently unlocked.

The power of steam was first discovered by the ancient Greeks. They understood that when water is heated into vapour it expands 1800 times, creating enormous power. In modern times, Thomas Savery designed an early steam pump in 1698 to pump water out of mines.

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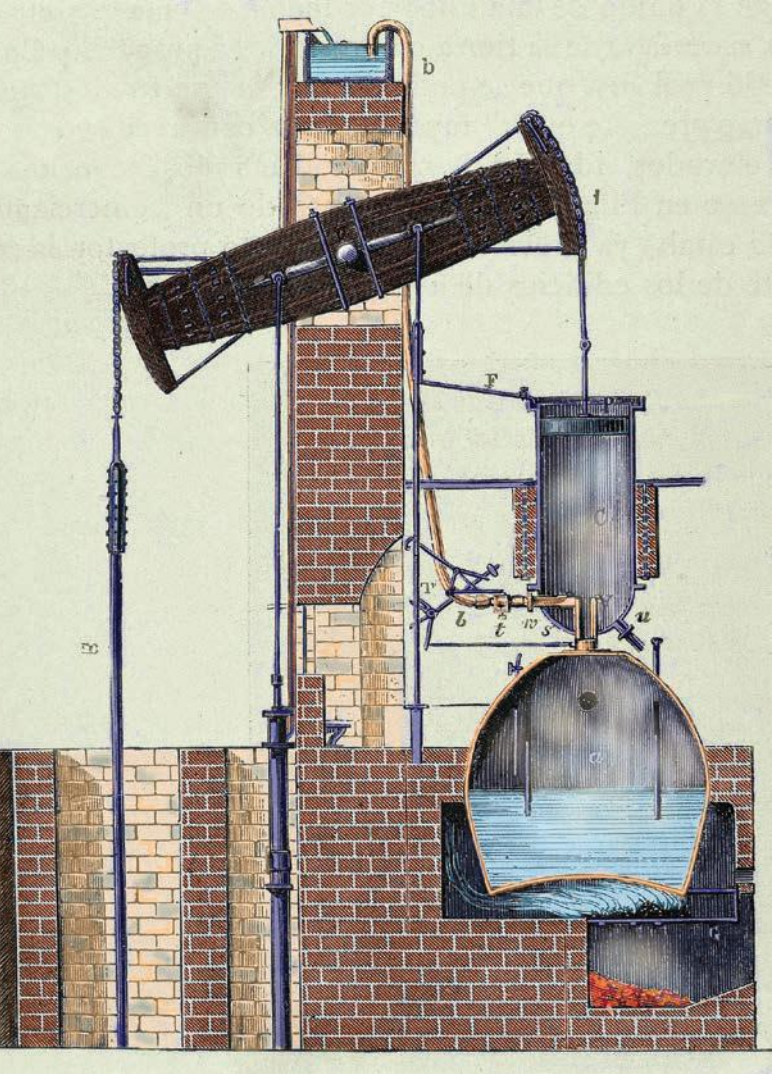


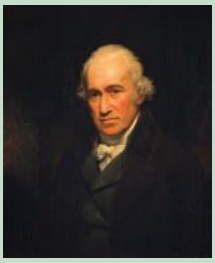
▲ **Source 1.24** Eighteenth-century diagram of Newcomen's steam pump

Later, Thomas Newcomen improved Savery's device to create a powerful steam engine with a cylinder and piston, used to pump water. It allowed mines to be dug without being flooded, and was the first true steam engine to be used industrially.

James Watt improved on Newcomen's design, creating the modern condensing steam engine in 1775. Its enormous power could haul coal up mine shafts, pump air through blast furnaces to make stronger iron and drive the heavy machines in cotton mills, breweries, paper mills and many other factories. Once it was harnessed to locomotives, it had the power to haul heavy loads such as iron over long distances. Later, it would be harnessed to shipping, creating the modern steamship.

FAMOUS FACE

JAMES WATT (1736–1819)



James Watt did not actually invent the steam engine, but he is credited with having made it much more efficient, with the effect that it burned less coal and produced a lot more energy.

Born in Scotland in 1736, Watt quickly learned the use of tools and instruments in the home workshop of his father. He went to London as an apprentice to a maker of fine mathematical instruments in 1754. He completed his training in just one year. His family was by now poor, but in 1757 Watt's career improved.

He made expert repairs on an instrument belonging to the University of Glasgow and was offered a job there with his own workshop and bedroom. It also offered him the education he had never been able to afford. The staff there taught him about physics, mathematics and chemistry. In 1759, Watt opened his own shop selling instruments in the Scottish city of Glasgow. This business was successful, and he was soon employing some 16 men. The same job introduced him to a new technology that fascinated him. In 1763, he was asked to repair one of Thomas Newcomen's working models of a steam engine. These were used to pump water out of mines.

Watt realised that Newcomen's machine needed improvement. It was inefficient: it burned up a lot of coal, it was slow and required three operators. Worse, the pump could only lift an arm up and down; it could not do a round-and-round movement. Watt realised that if he could translate the power and movement into rotary form, it could drive a greater variety of machines in factories, and replace more waterwheels and windmills. His first model of his own machine was made in 1765, patented in 1769 and finally worked up in 1775.

In 1774, the gentle Watt enlisted the help of the more businesslike Matthew Boulton. The partners displayed their working machine in 1776. By 1786, they had developed a machine that could be used to drive all the many machines in a cotton mill.[4]

4 For more information about James Watt and cotton mill machinery, read James and Elisabeth Outman, *Industrial Revolution Biographies*, 2003.

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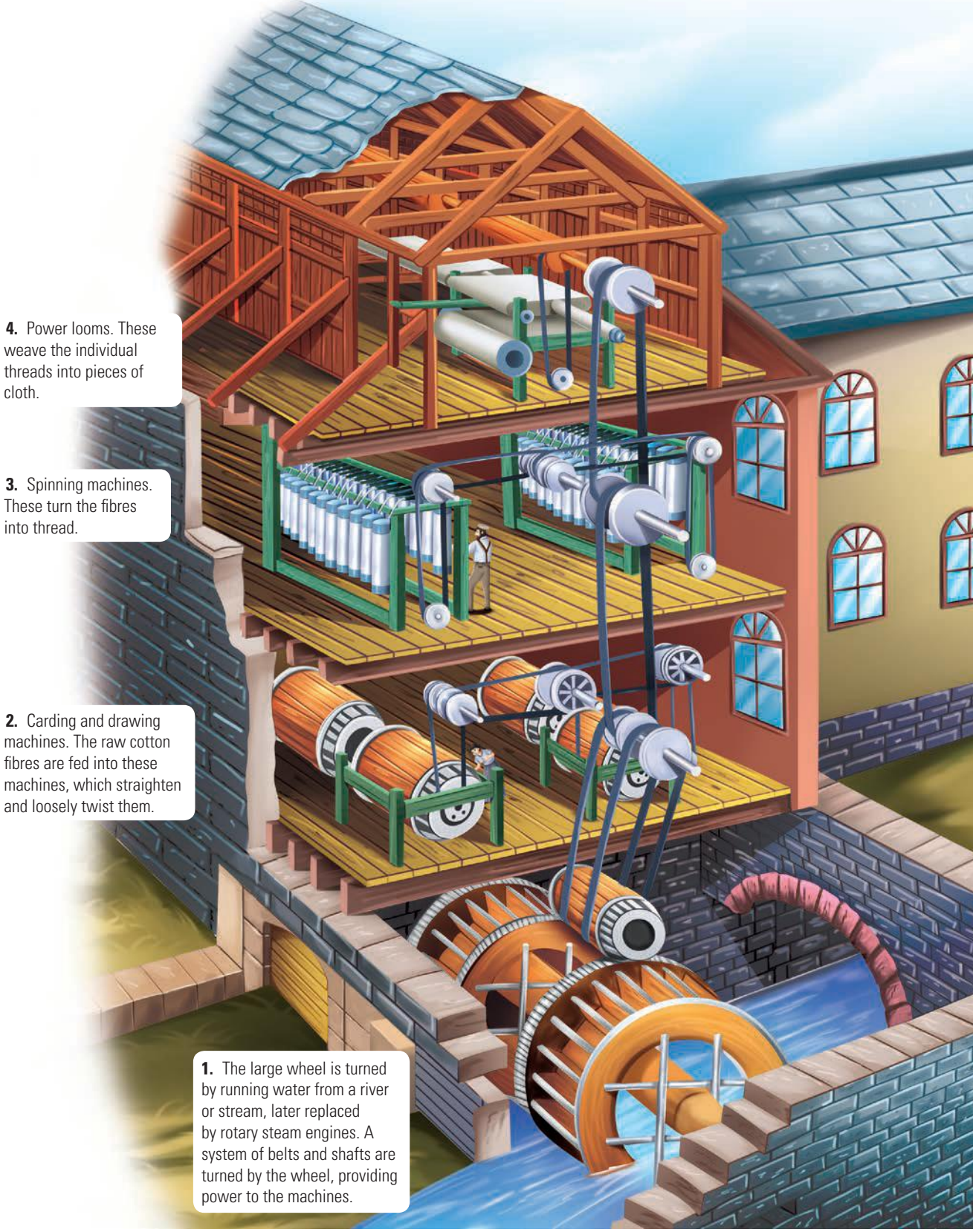

▲ **Source 1.25** A water-powered textile mill. Note the method by which the power is transferred from the river to the machines. This diagram shows how, traditionally, water power had been used to drive the machines in factories. While water was a driving force, it did require that factories be built in remote, steep valleys where the water flowed strongly. Production could also be affected if drought made the river dry up. The invention of coal-fired engines meant that factories could be situated anywhere, close to coal fields and close to ports. From what you can see, what do you think the working conditions would be like in the textile mill? Who is operating the machinery? What skills were required to operate the machinery? After James Watt adapted his steam engines to produce rotary motion, they became the preferred power source for mills and factories. Why do you think this was?

Amazing but true …

Without your knowing about it, James Watt is remembered in every room of your house. Every light globe is printed with a measure of how many 'watts' it uses. This unit of power was first proposed by engineers as a unit of electrical power to pay tribute to James Watt, even though none of his work was ever with electricity. Later the watt was adopted as the unit for all forms of power, even human muscle power in sports science.

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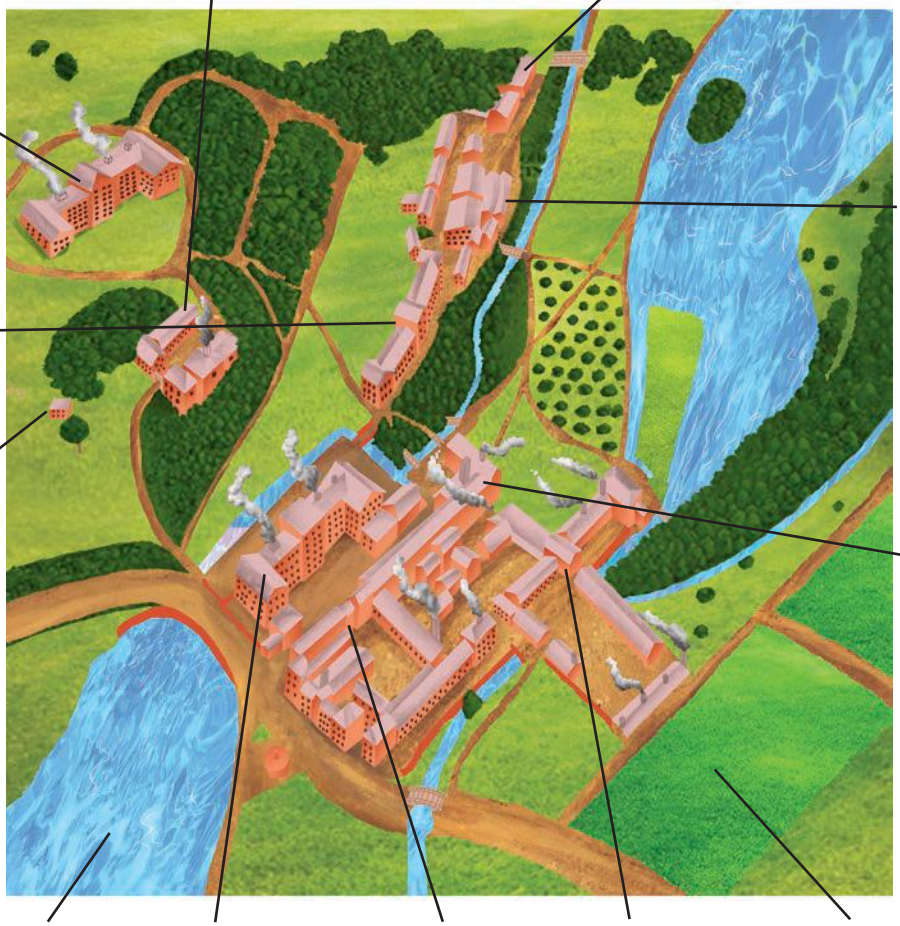
FAMOUS FACE

MATTHEW BOULTON (1728–1809)

Matthew Boulton grew up in an industrialist's family in Birmingham. When his father died, Boulton transformed his small business into a more ambitious enterprise. He then built a massive new factory at Soho. He successfully produced coins for the Royal Mint and made luxury silver goods for domestic use. Like so many industrialists, he was a member of the Lunar Society's Birmingham Branch. This group was interested in discussing the latest inventions. There, he met physician Erasmus Darwin and James Watt. He immediately saw the importance of Watt's steam engine, and helped develop and market it. He also became a business partner in Watt's firm. They developed the Boulton and Watt Steam Engine, which, being more powerful than any engine before, could be used effectively first in mines, then in hundreds of factories.

Boulton was a humane industrialist who took care of his workers. He made a policy of only hiring boys who were orphans or from poor families as apprentices. He refused to employ boys from wealthy families. He also introduced the first insurance scheme for workers, to cover them in the event of injury or sickness.[5]



▲ **Source 1.26** Matthew Boulton's industrial estate at Soho

5 Want to find out more? Read more about Boulton in Shena Mason, *Matthew Boulton: Selling What all the World Desires*, 2009.

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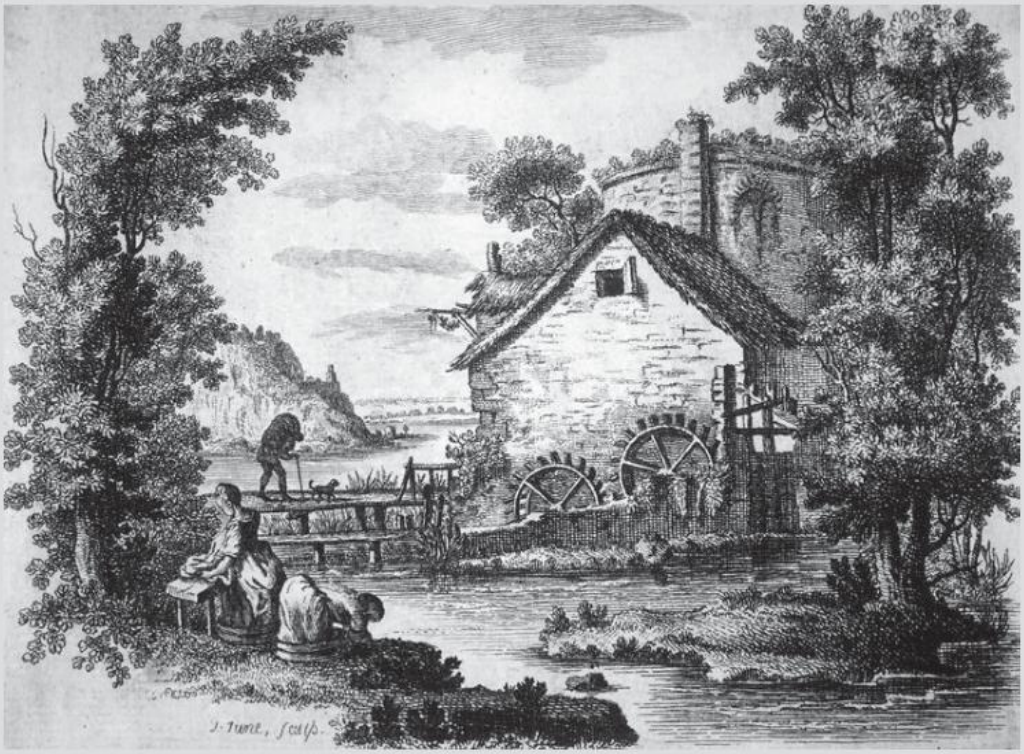
DEVELOPING HISTORICAL CONCEPTS AND SKILLS 1.3

Cause and effect

The steam engine did much more than increase human activity and production: it caused a massive shift of population from one place to another.



▲ **Source 1.27** Before the steam engine, a flour mill like the one shown here had to be powered by strongly flowing water. This meant that mills were often placed in a remote valley where there was a strong stream, far away from cities that were on flat ground.

▲ **Source 1.28** Once the steam engine was invented, a mill could be placed anywhere, even on flat ground and close to other mills or to cities. This caused large shifts in population. Many workers now lived in cities and lived closer to each other. This had the effect that they could meet and talk more often. This in turn allowed workers to discuss their problems and grievances and, finally, to form trade unions to campaign for better conditions. Thus the Labour Movement was born.

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The power of steam

Human | Animal | Wind | Water

Replaces lesser forms of power used in the past

Creates massive increase in speed and volume of production

Railways | Steamships

Increases the speed, distance and load of transport

Creates massive increase in delivery of raw materials and transport of finished goods to markets

The steam engine was to the eighteenth century what electrical and atomic power was to the twentieth century

Revolutionises the textile industry

Britain becomes 'the workshop of the world'

Revolutionises coal making and iron and steel production

Makes possible the great technical projects of the Industrial Revolution, such as iron bridges

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END-OF-SECTION REVIEW 1.3

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Why did Leonardo da Vinci's wonderful inventions (helicopter, tank) in the sixteenth century never actually come into use in his own time?

2 What were the main forms of power available to human beings before the Industrial Revolution?

3 Why did traditional forms of power limit where people worked and how much work they could do?

4 How did the invention of the steam engine allow the relocation of mills and of the people who worked in them?

Interpret

5 Why were Watt's improvements upon Newcomen's original steam engine crucial to the technological developments of the Industrial Revolution?

6 How did the invention of the steam engine cause a massive shift of population from one place to another?

Argue

7 Evaluate the extent to which the steam engine can be seen as the most important invention in terms of making the Industrial Revolution possible.

Extension

1 Investigate the successful business practices of the Watt and Boulton industrial team. To what extent can we say that it was mainly they who gave the steam engine its true place in the history of the Industrial Revolution?

Digital quiz
Please see the Interactive Textbook to access digital activities

Keep an eye out for more information about the growth of the labour movement in other places throughout this chapter.

▼ **Source 1.29** A representation of Holbeck railway junction at Leeds from 1868

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1.4 The revolution in production

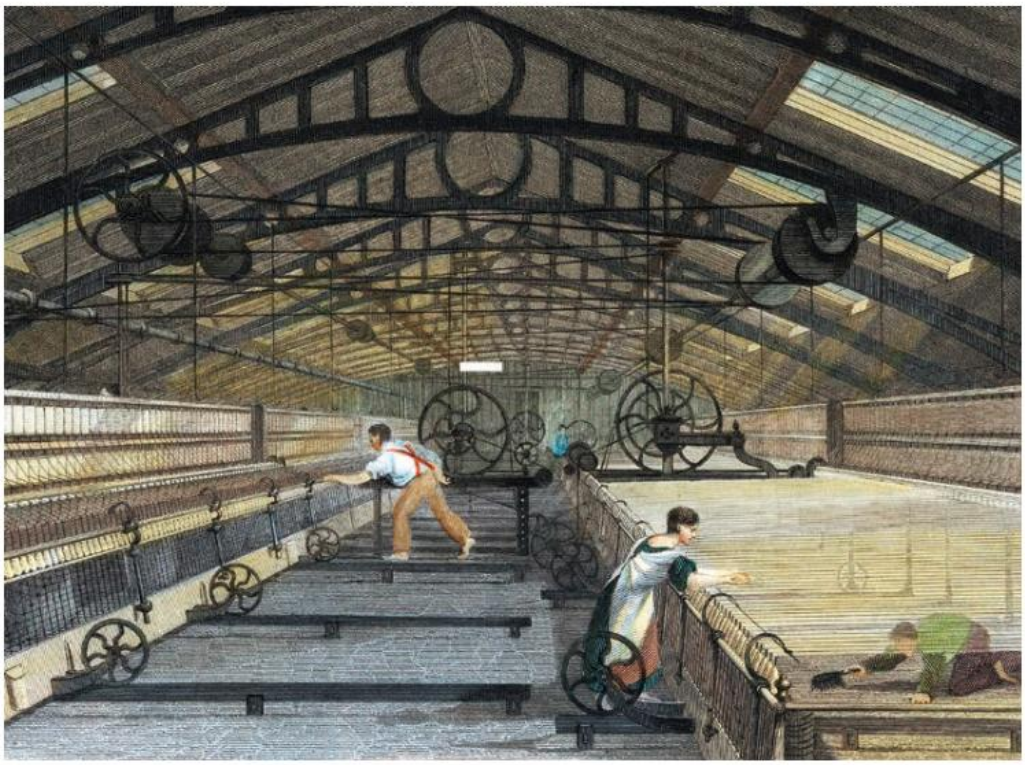
FOCUS QUESTION

How did the lives of people change when the scale of production increased?

Introduction

Before the Industrial Revolution, most goods – from cloth to metal tools to furniture – were produced in small workshops by several workers. Some goods, such as cotton, were even made in people's homes. This type of small-scale industry was called 'cottage industries'.

◄ **Source 1.30** Small-scale cottage production of cloth



◄ **Source 1.31** There was a gradual change from producing cotton in thousands of small cottage workshops, like the one shown in Source 1.30, to producing cloth in very large factories like this one, where new machines could spin and weave much more quickly. Note the boy sweeping up under the cotton threads.

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The development of great factories and mills

After about 1750, England's great industrialists realised that they could massively increase production, sales and profits if they planned on a bigger scale.

First, they built much larger multi-storey buildings of brick, providing enormous spaces for hundreds of workers. Later, they discovered how to build even more massive structures with the new, strong iron beams. These buildings came to be known as factories or sometimes as mills (a mill was generally like a factory but where grinding was an essential part of the machine process, such as a flour mill).

Second, they adapted the power of the steam engine to driving great machines to produce far more than a few workers ever could.

Third, they made sure that there was transport – canals first and then railways – to bring in many tons of raw materials, such as coal, and to carry out the many tons of goods they had made.

The importance of strategic location

These new industrialists quickly learned that a careful choice of a site for a new mill gave them another great advantage that would help their business: access to raw materials. Textile mills, for example, were placed close to a port like Liverpool, so they could quickly buy the bales of raw cotton coming by ship from farms in America. Iron-making factories were best located in areas where both iron ore and coal were mined. All factories using steam engines also had to make sure that they were near to a coalmine, because their machines required plenty of coal for fuel. Refer to Source 1.8 for areas where steel and iron were produced (within the north-east of Britain).

Bad working conditions in the new mills

Although the mills were massively more efficient, this increased production came at a cost. Mill owners had to produce as much as possible, neglecting the basic safety measures that we expect today. For example, the great machines weaving cotton clogged up with small pieces of fluff and had to be cleaned. To avoid losing time by stopping a machine, owners hired young children to reach into the machine while it worked. There were many accidents when children's hands and arms were caught up

▼ **Source 1.32** Working in mines was difficult and dangerous work, and often undertaken by children. Pictured is an engraving of a woman and a boy working in a coalmine, Bolton, Lancashire, 1848

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KEY TERMS

laissez-faire unwillingness to get involved in or influence other people's activities

capitalism an economic system based on private ownership of property and business, with the goal of making the greatest possible profits for the owners

social conscience if you have a social conscience, you worry about people who are poor, ill, old and so on, and try to help them

in the machinery, causing serious injury and even death.

The problem of child labour

The use of child labour was a serious problem. Historian Tony Taylor reminds us that child labour did exist before the Industrial Revolution. In country families, children traditionally did work such as collecting stones, minding animals and scaring off birds.[6]

The Industrial Revolution simply continued this practice, but on a much larger scale and with more dangerous tasks. The new industrialists knew that they could cut costs – and maximise profits – if they hired children to do minor tasks, avoiding hiring an adult, whose wages were higher.

In our own times, there are strict laws controlling the employment of young people. During the Industrial Revolution, there were no such laws for some time. Young people could be employed to do heavy, exhausting and dangerous work. On top of this, they were often beaten or abused.

Factories become centres of settlement

The new industrialists also understood that they must keep their workers close at hand, so no time was lost coming from home to work. The factory owners built whole villages of houses around their factories. These houses were often of very poor quality and unhealthy.

The idea of responsible capitalism

It is common to see the Industrial Revolution as a very bad experience for working people. We immediately think of huge polluting factories, with workers labouring in dangerous conditions, for little pay. We imagine greedy factory owners concerned only for profit, exploiting women and children like slave labour. Much of this was possible because of the belief in a policy called ***laissez-faire***, which meant that a government should not interfere in the way the industrialists ran their factories.

In some cases, this ugly picture is correct, but in others it is not. One of the most exciting developments of the Industrial Revolution was that some of this new breed of manufacturers wanted to use their wealth to build a good-quality community for their workers. They provided housing, education and other services that these workers never had back in their poor villages. This was what we might call responsible **capitalism**.

A man of vision and humanity: Sir Titus Salt

Sir Titus Salt (1803–1876) was the owner of a large complex of woollen mills near Bradford in West Yorkshire, opened in 1853. His factory, Salt's Mill, drew water from the nearby River Aire.

▲ **Source 1.33** Sir Titus Salt

Salt also belonged to the Methodist religion, which teaches what we now call **social conscience**. Salt felt responsible to ensure that his workers had decent living and working conditions. He had made his fortune by experimenting with new wools, such as Russian wool from the Don River region and Alpaca wool from South America.[7] He then spent much money in creating good conditions for his workers.

He paid architects Lockwood and Mawson to build a 'model' village – that is, a well-designed, healthy settlement – for his workers. The result was Saltaire, a name made by joining the owner's name with the name of the local river. Salt built clean stone houses for his workers, ensuring that they all had bathrooms and laundries with running water on tap. He also built a hospital and a school. He even created a library, a concert

6 Read more about child labour and more on the Industrial Revolution in Tony Taylor, *The Industrial Revolution*, 2014.
7 To find out more about Sir Titus Salt, search Biography Online for 'Sir Titus Salt'.

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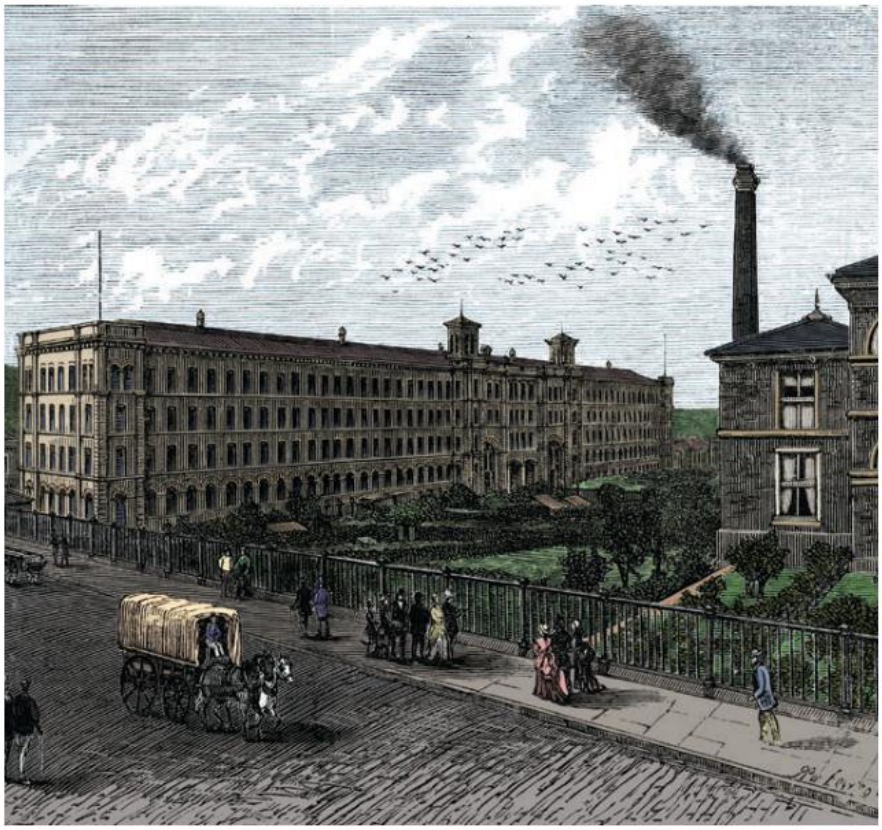

▲ **Source 1.34** Engraving of the mill at Saltaire

FAMOUS FACE

ROBERT OWEN (1771–1858)

Robert Owen was a Welsh industrialist who believed that he had a responsibility to run his factories well, to treat his workers fairly and to use his wealth to help improve their lives. His New Lanark Mills in Scotland showed that it was possible to provide good housing and education for workers. In his 'model' village, he provided a shop that sold goods at fair prices, and he also employed hundreds of poor children from orphanages.

ACTIVITY 1.1

Research and creative task

Using the sites listed in footnotes 7 and 8, research the life and work of Sir Titus Salt.

Investigate these questions:

1. What does the Methodist religion teach about our responsibility to fellow human beings?
2. Why might this belief clash with the business of creating industries and making money from them?
3. What were conditions like in the more usual industrial estates in England?

When your research is complete, use your notes to complete the following creative writing task.

Topic: Imagine that you are an ordinary factory worker who has just secured a position in the woollen mill at Saltaire. You have previously worked in very bad conditions in the factories in nearby Bradford and lived among the slum houses of that city. Write a letter to your elderly parents, who are also factory workers, describing the conditions at Saltaire. Be sure to explain exactly how and why they differ from the conditions in most industrial cities in England. Draw comparisons in terms of houses, facilities and your working conditions.

room and a gym. He created a park and a lake, providing boats so his workers could enjoy rowing in their free time. This impressive 'model' village can still be visited today.[8] Salt was not alone. Other industrialists thought the same. Edward Akroyd did this for his workers at Copley and so did Henry Ripley at Ripley Vale.

Even during the Industrial Revolution, thoughtful people noticed its effects on ordinary working people. Many new industrialists were tough businessmen interested only in profits. They believed working people were only poor because they were lazy or drunk. Others saw that the Industrial Revolution itself was creating bad

8 To find out more about Saltaire, visit the Saltaire Village website.

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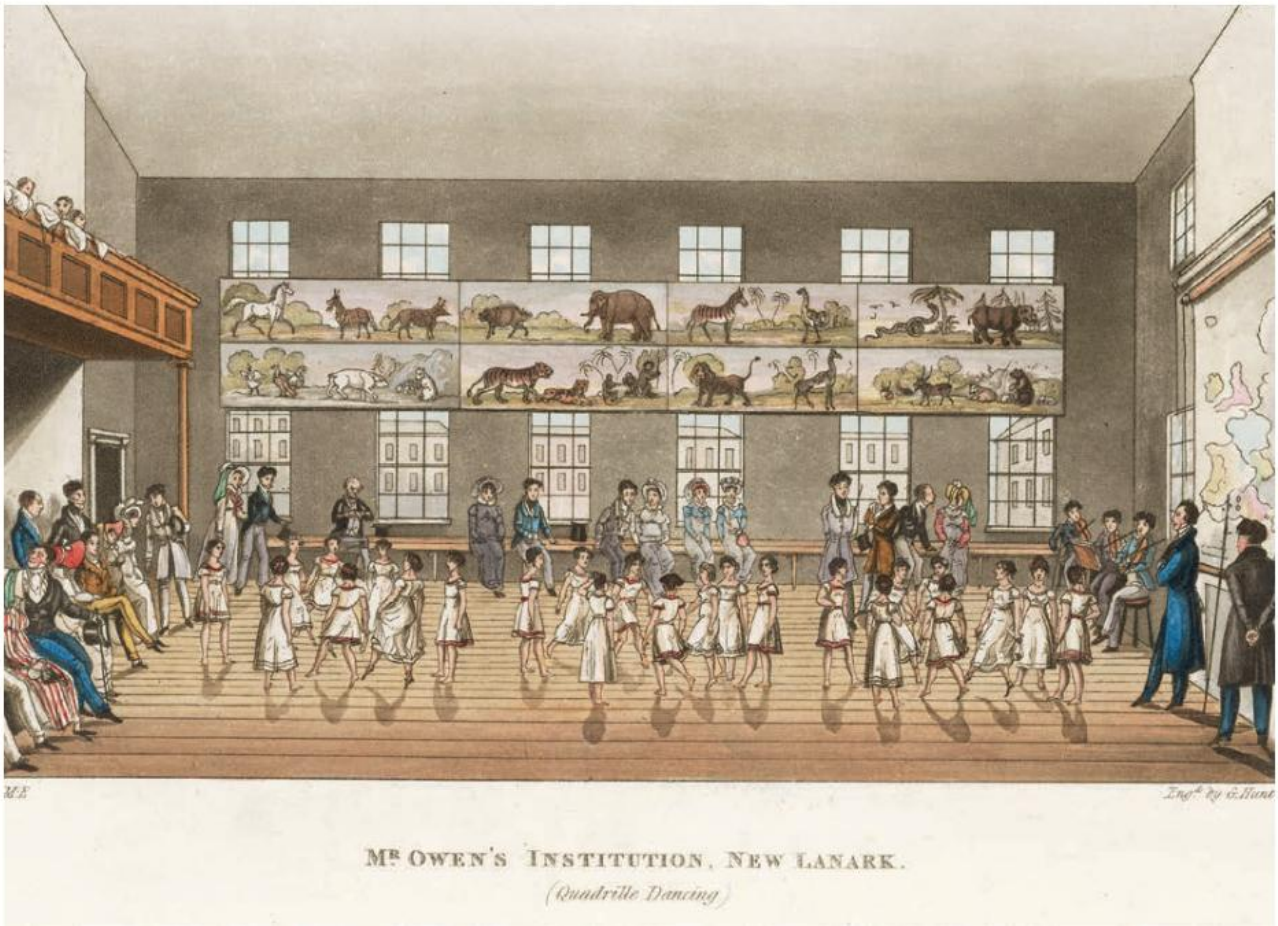
▲ **Source 1.35** This image shows how much could be done when an industrialist improved his workers' lives. Robert Owen designed his mill at New Lanark to be clean and healthy. Large windows gave air and light. There was good sanitation. He even built a little school so that his workers' children could be taught to read and write.



▲ **Source 1.36** This image shows us the inside of the facilities at New Lanark Mills in Scotland, about 1825. Visitors watch as workers' daughters are taught to dance in a clean, airy schoolroom. Notice the colourful educational pictures on the walls.

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working conditions, low pay, bad housing, poverty and unemployment.

Robert Owen bravely stated that bad conditions were the main cause of the dirt, violence and crime in the industrial cities. He argued that if owners took responsibility to improve factory conditions, people's lives would improve.

To demonstrate his theory, Owen built a 'model' (ideal) mill at New Lanark. It had large windows for light and air, good-quality baths, toilets and drains. He reduced working hours, so that workers had more rest and free time. He encouraged them to read or to exercise during that time. He also refused to employ young children.

He hoped that other factory owners would be convinced by his working example and be inspired to do the same. Later, he persuaded Sir Robert Peel the Elder to present laws in parliament regulating factory conditions. Most remarkably, he even explained to his workers how to form a trade union! Finally, he was so passionate about their welfare that he spent his fortune improving the lives of his workers.[9]

END-OF-SECTION REVIEW 1.4

Digital quiz
Please see the Interactive Textbook to access digital activities

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. What were the main disadvantages of the old-fashioned system of 'cottage production' (making goods with a few people working at home)?
2. What was the main way the new industrialists changed the way people worked?
3. What was wrong with employing child labour in mines and factories?
4. What is meant by 'responsible capitalism'?

Interpret

5. Why could the concentration of workers in one large, unregulated factory complex have bad effects on the employees in terms of health and safety?
6. In what ways could a well-run and well-planned factory complex improve the lives of workers?

Argue

7. Evaluate the significance of the new mills and factories in making an enormous increase in output possible. How might the Industrial Revolution have coped had it stayed with cottage production?

Extension

1. Investigate the career of Australian clothing manufacturer Fletcher Jones. In what way was he an example, in our own country, of 'responsible capitalism'? Do you believe that regulation of working conditions should be done by the government of a country or by responsible managers or both?

9 Do you want to know more about this remarkable man? Look up 'Children & Cotton' on the New Lanark Learning Zone website.

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1.5 The revolution in transport

FOCUS QUESTION

How did new transport technologies change the world forever?

Limitations on transport before the Industrial Revolution

The invention of new machines allowed massive increases in the scale of production in England. This created two new problems: it was now necessary to transport greater amounts of raw materials (coal, wood, iron ore, cotton) to the factories, and once production was completed, to then transport the manufactured goods. For industry to make profits, both processes must happen as quickly and as cheaply as possible.

Existing transport could not cope with such heavy traffic. Existing roads were too slow. The English stage wagon shown in Source 1.37 needed six horses to carry heavy loads over long distances on very poor road surfaces. If factory owners relied on this slow transport, they would never get enough materials to run their production.

Ships could also carry heavy loads along the English coast. There were also many rivers, including the Thames, the Mersey and the Severn, upon which barges would carry heavy loads. If, however, a city did not have access to a river, transport options were limited.

Canals: men build their own rivers

The new industrialists first used existing rivers, widening them and deepening their channels. This meant, however, that areas with no rivers, or no deep rivers, were useless for industry.

In 1753, a group of businessmen in Liverpool made an important advance: if there was not a river where needed, you created one. They employed the engineer Henry Berry to build a canal from the coalmines at St Helens to the town of Warrington. The Sankey Brook Navigation was opened for business by 1757 and quickly proved that creating a canal where there wasn't a waterway could provide the heavy transport that factories needed.

▼ **Source 1.37** A traditional English stage wagon, pulled by multiple horses

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The great maker of high-quality pottery, Josiah Wedgwood (1730–1795), suggested the construction of a canal to join the Trent River with the Mersey River. He cleverly bought a property in Stoke-on-Trent for 3000 pounds, knowing that it would become more valuable once it was served by a canal. The canal was begun in 1766 – when Wedgwood himself turned the first spadeful of earth – and completed in 1777. It ran for about 150 kilometres and vastly increased the area served by water transport. Wedgwood built his house on one side of the river and his Etruria Pottery Works on the other.

As the engraving in Source 1.39 shows, the heavy materials needed for pottery, such as clay, were quickly transported by water right to the front door of Wedgwood's factory. In this system, just one narrow barge, pulled by a horse and guided by one man and a boy, could pull 30 tonnes of raw materials.[10]

▲ **Source 1.38** An example of the pottery made by Wedgwood at the Etruria Pottery Works

Historian Phyllis Deane argues that the first great leap forward in the 'transport revolution' was in canals. She argues that they greatly helped the situation in early Britain: they created its industrial take-off. She explains that the first urgent problem was to increase the supply of coal for heating homes in the growing industrial cities; otherwise, the cities would have been unsustainable. In Manchester, for example, coal prices fell by 50 per cent when transported cheaply on the Bridgewater Canal.

The second problem was to move huge amounts of raw materials into the factories. She argues that by 1800 Britain had an enormous network of inland navigable waterways of 3200 kilometres, one-third being canals built in two intensive campaigns in the 1760s and 1770s.[11]

▲ **Source 1.39** A canal system in England. Canals offered a cheap and viable method to transport goods relatively quickly before the development of steam engines. Note the horse pulling the barge along.

10 To find out more about transporting loads via canal, read Tony Taylor, *The Industrial Revolution*, 2014.
11 Want to know more? Find out more about Britain's canals by reading Phyllis Deane, *The First Industrial Revolution*, 1979, pp. 78–9.

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▲ **Source 1.40** Canal transport in England and Wales in 1800

▲ **Source 1.41** William Hedley's *Puffing Billy* (1813)

FAMOUS FACE

RICHARD TREVITHICK (1771–1833)

Richard Trevithick was a mechanical engineer whose inventions changed the face of the world forever. His main achievement, described in more detail on the next page, was to link up the newly invented steam engine for transport, creating the first steam-driven carriage and then a locomotive which could pull a train as early as 1803. His invention made it possible to haul the vast amounts of coal needed to fuel the factories and mines of the Industrial Revolution, and to transport heavy goods such as iron.

Railway trains: weaving an iron web over the world

When we look at the first railway trains today – now historical exhibits in science museums – it is difficult to imagine a time when they must have seemed as new, exciting and amazing as the first spacecraft were in the twentieth century.

The second great revolution in transport occurred in the eighteenth and nineteenth centuries, when inventors moved away from boats on canals and imagined a steam-driven machine pulling carriages along iron rails instead. While other new machines were located inside factories, the train was seen by everybody across Britain. It completely changed the way most industries worked. It also allowed people to travel at speeds and over distances far greater than ever before.

When we can observe steam trains today – such as the much-loved *Puffing Billy* in the Dandenong Ranges, Melbourne – they now seem charming and old-fashioned. Compared with our modern high-speed trains, the old steam engines appear delightfully slow, noisy and uncomfortable.

The idea of a railway was first used by the ancient Greeks, who built simple tracks made of wood, to carry carts. Well before the Industrial Revolution, the British were also using carts to move coal from the mines, but these were pulled by animals and could not carry heavy loads.

The idea of a railway started in 1802 when the Surrey Iron Railway Company opened a line from the Thames docks in London to Croydon. The carriages were, however, still only drawn by horses, and loads were limited in terms of the weight that the horses could pull.

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Mr Trevithick's extraordinary inventions (1801–05)

One of the most significant inventions occurred when Richard Trevithick wondered whether the newly-invented steam engine could be placed on a vehicle to carry heavy loads. Trevithick was successful. His first attempt was a steam-driven vehicle called a 'Puffer' or 'Puffing Devil' (1801), but it was only designed to ride on roads, not tracks.[12]

In 1804, he was challenged by ironmaker Samuel Homfray to design a vehicle that would run on tracks and be strong enough to carry five wagons, a coach, 10 tons of iron and 70 passengers about 16 kilometres from his Penydaren Ironworks in Wales to the Glamorganshire Canal.

In 1808, Trevithick set up a circular railway track in Euston Square in London, to demonstrate the possibilities of steam trains. People had to pay a shilling for a ride – as much money as a working man earned in one day – to ride on the train *Catch Me Who Can*.[13]

George Stephenson (1781–1848) and his early trains

George Stephenson took up from Trevithick and designed a total of 17 innovative steam locomotives between 1814 and 1821. Importantly, he was also more successful than Trevithick in publicising them and was responsible for their widespread use.

The historic Stockton to Darlington ride (1825)

Stephenson's career took off when, in 1821, he was made the engineer in charge of a bold new project, a 42-kilometre-long railway line from Stockton to Darlington. This opened in 1825. He designed the engine, *Locomotion*, which made the historic journey, proving that steam trains could be used effectively to haul heavy industrial loads such as coal.

▲ **Source 1.42** An engraving of Trevithick's 1808 train demonstration in Euston Square, London, called *Catch Me Who Can*

12 Richard Cavendish, 'Richard Trevithick's First Steam Carriage. The 'puffing devil', the first passenger-carrying vehicle powered by steam, made its debut on a road outside Redruth in Cornwall on 24 December 1801', in *History Today*, Volume 51, Issue 12, December 2001.
13 Want to know more? Look up 'Richard Trevithick's Puffing Devil on Trevithick Day 2017' on YouTube.

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The triumph of *Rocket* (1829)

In 1829, George Stephenson demonstrated the power of his locomotive *Rocket* at Rainhill. He beat two other engines by completing the journey at a record speed of 42 kilometres per hour. In 1830, the important Liverpool-to-Manchester Railway was opened, joining two of Britain's greatest industrial cities.

Additional content
Visit the digital versions of this textbook for 'The rules and regulations for the workers of George Stephenson'. This provides a good idea of the strict conditions the workers suffered.

Railway mania

Trevithick's and Stephenson's inventions caused a virtual explosion of plans for new railways. People at the time referred to it as 'railway mania'. All these developments proved that the modern railway train – a steam-driven engine running on strong metal rails – was the key to massive increased industrial production. New railway lines were planned across Britain. Clever businessmen saw the enormous possibilities of rail transport.

The experiences of the 'navvies'

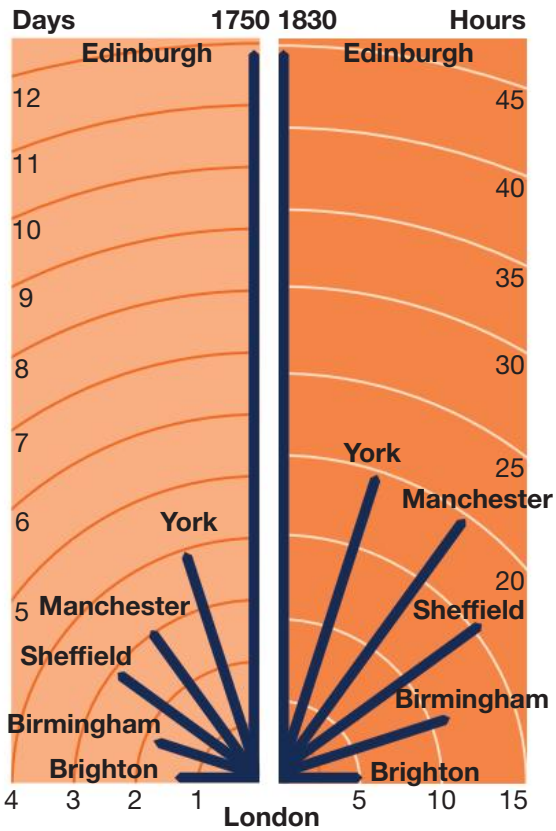
We know a great deal about the men who invented the railway system, but very little about the men who built it. Stephenson's railway line cost only one million pounds, due mainly to the fact that iron was plentiful and labour was cheap. In particular, desperately poor unemployed Irish workers flocked to England to do the heavy work of digging the railways, as they had for the canals. The canals were called navigations and the workers were called 'navvies', a term still used today. Their only equipment consisted of a wheelbarrow and a spade.

The shrinking of Britain

By 1830, almost 100 locomotives were at work in Britain. The network of railways began to expand. In 1838, a company opened a new line from London to the central city of Birmingham. By 1840, others had built lines between London, Brighton, Exeter, Leeds and Manchester. By the 1860s, new lines reached the furthest parts of Britain, including Cornwall in the south, Wales in the west and Scotland in the north, with lines in Ireland as well. By 1850, Britain's railway network covered 11 000 kilometres. For ordinary people, Britain seemed suddenly to have 'shrunk'.

If you look carefully at Rossiter's painting (Source 1.44, middle), you will see people enjoying the completely new experience of travelling faster than on a horse, to visit a distant place – Brighton Beach in England. This carriage has a roof, which means that these people can afford to travel at least in Second Class. How can we tell that they are well-to-do from their clothing?

We are so accustomed to the high-speed transport of the twenty-first century that the railway train seems almost like a charming and leisurely way to travel. It is very nearly impossible to imagine how intensely exciting it must have been to travel at a speed greater than a horse, to have the visual



▲ **Source 1.43** How distance was shrunk by rail travel. In 1750 (left), the journey from London to a city such as Manchester was measured in days; by 1841 (right), it could be measured in hours.

> *By 1830, almost 100 locomotives were at work in Britain … By 1850, Britain's railway network covered 11 000 kilometres.*

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▲ **Source 1.44 (Top)** William Powell Frith, *The Railway Station*, 1862
(Middle) Charles Rossiter, *To Brighton and Back for three Shillings and Sixpence*, 1859
(Bottom) William Powell Frith, *Ramsgate Sands*, 1854

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experience of the scenery whizzing by, to feel the rush of wind and to hear the mighty hiss of steam and see the belching smoke. Above all, the train created the possibility of visiting places far away from your home. Historian Pauline Weston Thomas has described how massively this changed people's experiences of life:

> The railways moved goods, foods and people faster than canals or horse drawn wagons. They were the greatest factor in transforming Britain into an industrial nation. They were a huge employer of people either on the railways, building new tracks or being a goods delivery service. Government legislation was affected as suddenly Members of Parliament could get to London with relative ease from far flung country regions. The lives of millions were changed as suddenly the masses were able to travel further than ten miles in one direction. Now all could manage rare day trips to the new coastal seaside. Carriages were divided into categories called classes and the 1st class rail carriage was designed like a horse drawn coach. It had foot warmers, oil lamps and closed sides and roof. 2nd class carriages were roofed, but open sided. Third class carriages were simple unroofed trucks without seats. In third class, passengers could be blistered by sparks and choked. In the open sided carriage illustrated above [Source 1.44] an umbrella and a parasol are used for protection. The man protects his top hat from flying sparks and another man dons a blanket to keep off the chill and dusty smoke. By 1846 all carriages had to be roofed by law. Different types of people were emerging. Employers moved away from their industrial source of wealth. They bought country estates and several generations later were often considered landed gentry. On the outskirts of towns managers built villas. Owners built new streets of houses at the perimeter of town and these were occupied by skilled workmen and artisans.

▲ **Source 1.45** Pauline Weston Thomas, *Victorian Society*, 2019

[Railways] were the greatest factor in transforming Britain into an industrial nation.

ACTIVITY 1.2

Using historical sources as evidence

▼ **Table 1.1** Total mileage of railway construction sanctioned by Act of Parliament in the 1830s and 1840s

Year	Mileage	Year	Mileage
1832	39	1841	14
1833	218	1842	55
1834	131	1843	90
1835	201	1844	810
1836	955	1845	2816
1837	544	1846	4540
1838	49	1847	1295
1839	54	1848	373
1840	–	1849	16
		1850	7

Source: Neil Tonge, *Industrialisation and Society*, 1993, p. 162

Responding to the source

1. Describe this source. Who created it, and when was it created?
2. Which recent occasion might have inspired the sudden spike in railway building in 1833?
3. In which year was the greatest increase in railway construction relative to the preceding year (in number of miles not percentage terms)?
4. Can you discover the reason for the quite small number of approvals in 1838–41 and for the enormous increase in approvals in 1845–47?

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Revolutions in transport

Turnpikes and made roads

Another important improvement happened when inventors realised that roads could be an effective way of transport if their surfaces were improved. For centuries, roads had simply been paths worn into the land by traffic. Their surfaces were often uneven, with holes, boulders and deep grooves made by wheels. These slowed traffic and caused accidents.

The problem was that road repair was expensive in human labour and material. The first major solution was the simple invention of a **turnpike** road, a stretch of road that was sold to a developer, who paid to make the road smooth and financed the operation by charging every carriage a fee to travel over it. Since hundreds of carriages travelled the road each day, the steady flow of money allowed for regular upkeep.

The second major invention was a technique to improve the actual surface of the road, to allow for smoother, faster travel. Two inventors in particular are remembered for this quiet revolution in transport.

John Metcalf (1717–1810)

John Metcalf became a successful civil engineer and lived an active life until age 92. He is called 'the father of modern roads' in memory of his pioneering work to build good-quality roads in the north of England.

KEY TERM

turnpike a main road that you have to pay to use

In 1765, an opportunity presented itself to Metcalf: the British Government passed a law creating Turnpike Projects. This involved the private development of England's existing roads into good-quality routes. Since there were few people who had experience in road building, Metcalf boldly presented himself and was given the task of building the first five kilometres of road on the Harrogate–Boroughbridge route. He skilfully decided the best possible path for the road to take. His venture was a success, and he was commissioned to plan more roads.

▲ **Source 1.47** John Metcalf

▲ **Source 1.46** Tyburn Turnpike, London. Turnpike roads charged tolls for users – the better the road the more traffic and the greater profit.

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In all, Metcalf created nearly 300 kilometres of road. He designed his roads so that the surface had a slight curve on either side, to allow rainwater to drain off into roadside ditches. He amazed people by developing a special technique that could even carry his roads over swampy land.

John McAdam (1756–1836)

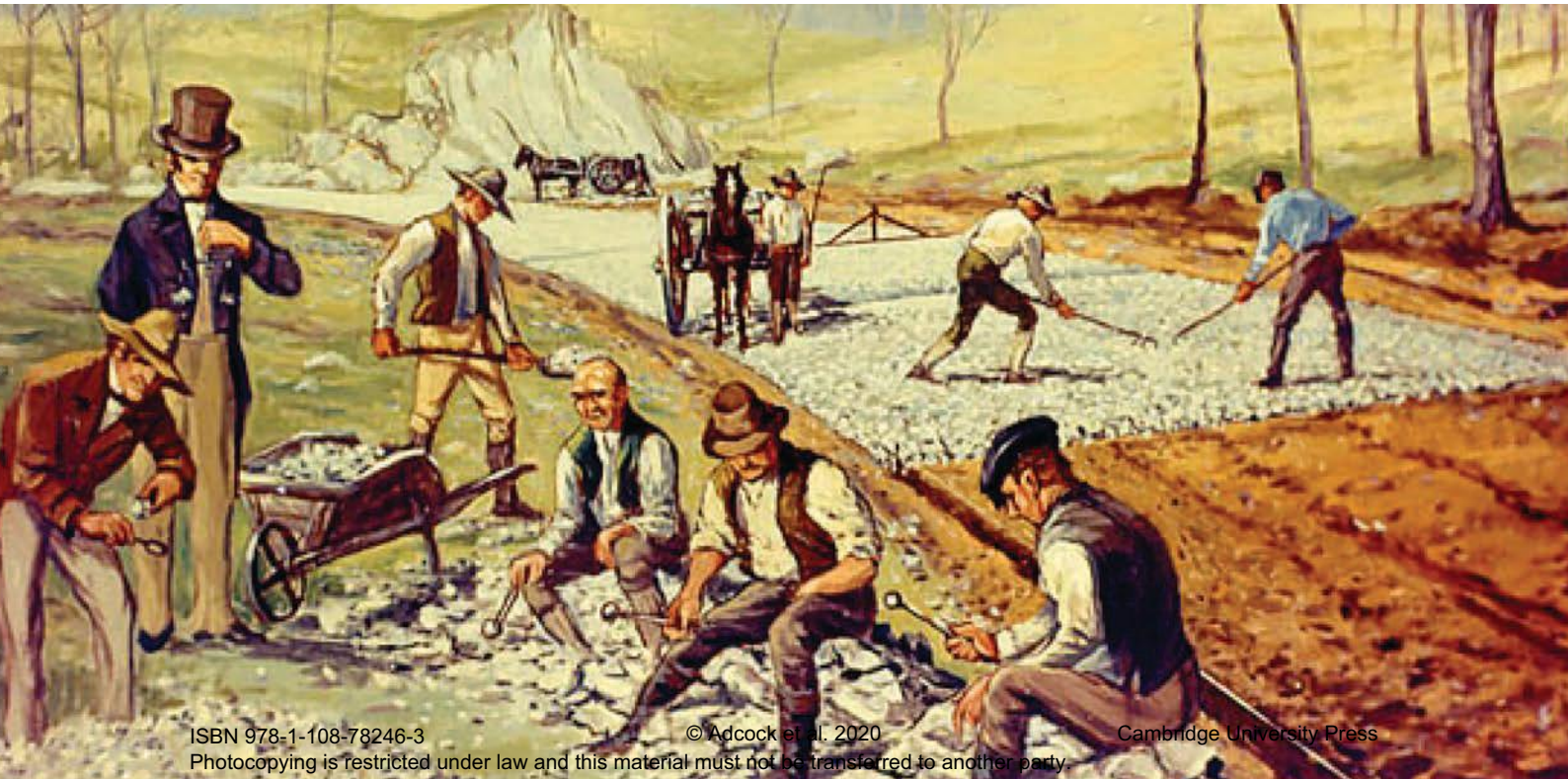
John McAdam's surname has given us the term for a type of road: the macadam road. This civil engineer had the vision that roads had to be built with thought and care. They needed to be above the surrounding landscape, so that they drained properly. They also needed to be made up of carefully arranged layers of crushed rock, so that they were hard-wearing, and offered a smooth surface for fast, efficient transport of goods. After the British parliament created the system of turnpike roads, McAdam became the manager of the Ayrshire Turnpike Road in 1783.

▲ **Source 1.48** John McAdam

Amazing but true …

John Metcalf was blinded by smallpox when he was six years old. Like many blind people at the time, he had been taught to play music on a fiddle to earn a living; he later branched out into selling horses. Amazingly, he also earned money by guiding visitors around his local area, pointing out from memory the local sights that he could not actually see. He later devised ways to explore a new region and to map out the best path for a new road across a landscape he had never seen before.

▼ **Source 1.49** *Construction of a Macadam Road*, Boonsborough Turnpike Road between Hagerstown and Boonsboro, Maryland, United States, 1823



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ACTIVITY 1.3

Check your understanding

1. Explain why the existing roads in Britain in the 1700s were not of a satisfactory quality.
2. Explain why the Industrial Revolution created an urgent demand for a good-quality system of roads.
3. Explain how the British parliament solved the problem of poor roads.
4. How did the turnpike system work?
5. How did John Metcalf design new and better roads?
6. How did John McAdam further develop a new 'technology of roads'?

Revolutions in transport: the steamship

Mastering the oceans of the world

Europeans had already explored much of the world from the fifteenth century onwards, but they did so in sailing ships, which depended entirely upon the wind for energy. This meant that long voyages were slow, and ships were at the mercy of insufficient winds – in which case they were becalmed – or too much wind and the danger of shipwreck in storms.

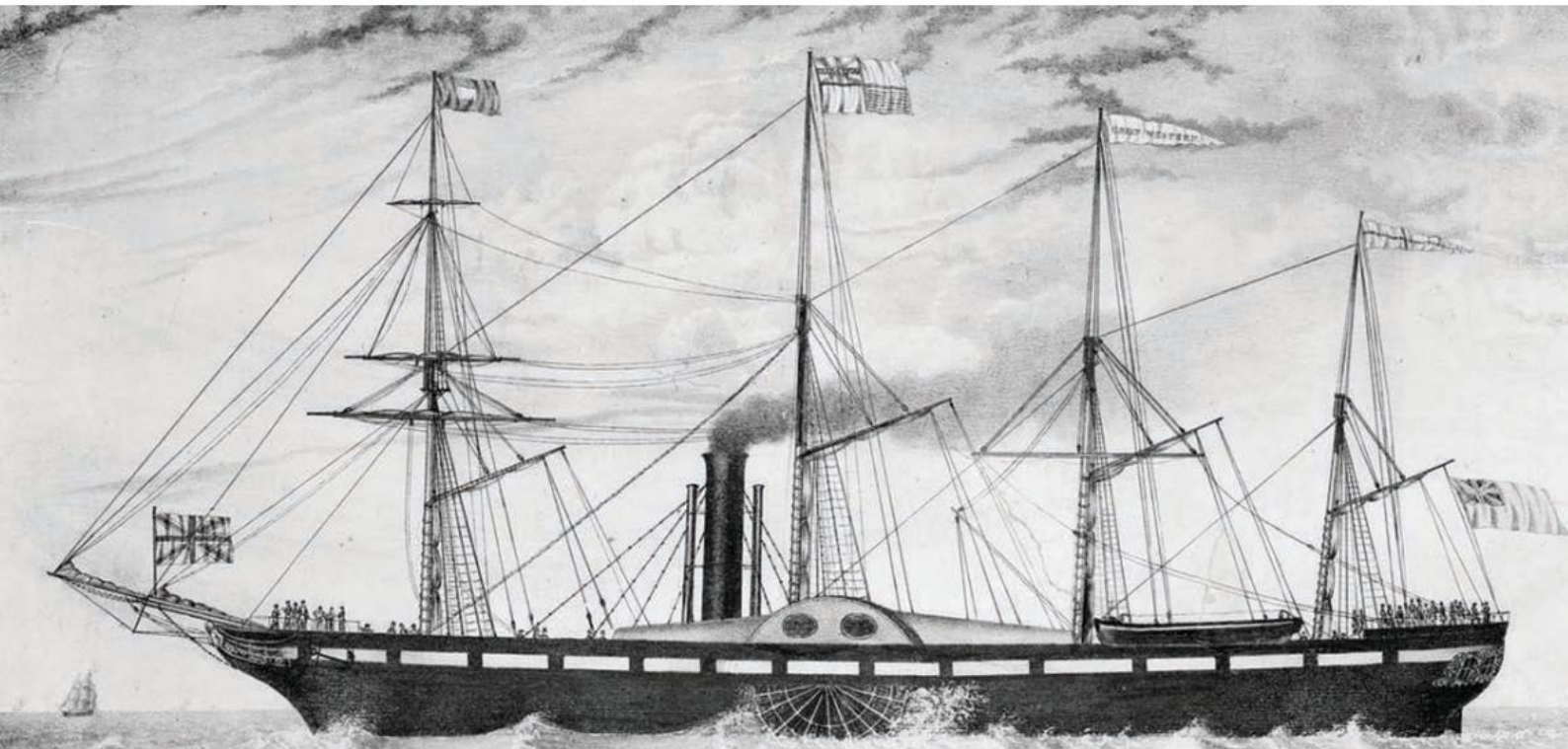
Two aspects of the Industrial Revolution – the harnessing of steam power and the improvement of iron production – allowed another revolution to take place. Engineers now discovered that ships could be made of iron and powered by a steam engine. New ships were designed and built in both Britain and America. At first, they were only powerful enough for river and coastal traffic.

The transatlantic race between the *Sirius* and the *Great Western*

In 1837, construction began on the *Sirius*, but it was only intended to travel from Cork, in Ireland, to London. The ship's hull was of wood, and it had two side paddle wheels, driven by a two-cylinder steam engine. It could travel at 12 knots (nautical miles per hour, which is equivalent to 21 kilometres per hour on land).

When it became known that Isambard Kingdom Brunel was building the *Great Western*, designed to prove that steamships could cross the Atlantic between Britain and America, the owners of the *Sirius* suggested that they should compete with

▼ **Source 1.50** Designed by Isambard Kingdom Brunel and launched in Bristol in 1837, the SS Great Western was the first purpose-built transatlantic steamship. This lithograph of the ship was created in 1838.



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FAMOUS FACE

ISAMBARD KINGDOM BRUNEL (1806–1859)

Born in Portsmouth to French migrant parents who had fled the French Revolution, Isambard Kingdom Brunel became one of the most influential engineers of the Industrial Revolution. He designed ground-breaking revolutionary ships and also railways, bridges, viaducts and tunnels, many of which are still in use today.

Isambard Kingdom Brunel, English inventor and civil engineer, pictured here before the anchor chains designed for his SS *Great Eastern* steamship

Brunel to complete the same journey. The *Sirius* reached New York on 22 April 1838 and the *Great Western* arrived the following day.

While Brunel had lost the race, he had really won the competition. The *Great Western* was also a wooden-hull ship driven by paddle wheels and a steam engine, like the *Sirius*. However, Brunel went on to design the *Great Britain*, launched in 1843.

It was a first in every respect: the longest vessel ever created, the first to be made entirely of iron and the first to be driven by a propeller rather than a paddle wheel. This does not mean that iron ships driven by steam engines immediately replaced sailing ships – the latter remained in use for some decades – but it does mean that the Atlantic had been crossed, and the world suddenly seemed a smaller place.[14]

END-OF-SECTION REVIEW 1.5

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. Why was the creation of the canal system so crucial to ensuring the success of the early Industrial Revolution?
2. What were the main techniques used to create a good road system capable of serving the needs of the Industrial Revolution?
3. What was Richard Trevithick's truly ground-breaking contribution to railway transport?
4. Why might Brunel's ship the *Great Britain* be seen as the birth of all modern shipping?

Interpret

5. How do we know that the great industrialists were very keen to see the development of railway transport, and why were they so?
6. Why was the Liverpool-to-Manchester railway line of particular importance?

Argue

7. Evaluate the argument that, without the revolution in the forms of transport, the Industrial Revolution as a whole would not have achieved the success that it did.

Extension

1. Investigate the impact of railways on the lives of ordinary people. The early trains were invented to carry industry's raw materials, but were later adapted to carrying human passengers. How might the new railway travel have changed the way people understood their nation and the world around them?

Digital quiz
Please see the Interactive Textbook to access digital activities

14 To make a virtual visit to this wonderful ship, which has been preserved in the English port of Bristol, access 'Brunel's SS Great Britain' on the Go Bath Bristol website.

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1.6 The revolution in coal mining

FOCUS QUESTION

In what ways did the Industrial Revolution increase the demand for coal?

New technologies allow deep mining

The mining of coal had long been practised in Britain, drawing on rich deposits in parts of England such as Lancashire, Wales and Scotland. The problem was that the miners could not dig too deep, because the mines filled with water. There was no method to pump the water out.

Between 1700 and 1800, two things caused a massive increase in demand for coal. One was the steady growth of Britain's population, which needed coal for heating the home. The other was the enormous increase in the use of steam engines in all sorts of factories. This meant that it was now urgent for miners to be able to dig ever more deeply, which then caused problems with ventilation of bad air and drainage of water. Until these problems were solved, Britain's industrial growth was held back.

The steam engine provided the solution. Inventions such as the Thomas Savery's Pumping Machine (invented 1698) proved that coalmines, tin mines and lead mines could be drained much more efficiently by a machine than by men with buckets. Thomas Newcomen (1664–1729) and his partner John Calley (1663–1717) created a better pumping engine that, though slow, was safer and more effective. Newcomen described his machine in these terms:

> Whereas the invention for raising water by the … force of fire, authorized by Parliament, is lately brought to the greatest perfection, and all sorts of mines, etc., may be thereby drained and water raised to any height with more ease and less charge than by the other methods hitherto used, as is sufficiently demonstrated by diverse engines of this invention now at work in the several counties of Stafford, Warwick, Cornwall, and Flint. These are therefore, to give notice that if any person shall be desirous to treat with the proprietors for such engines, attendance will be given for that purpose every Wednesday at the Sword Blade Coffee House in Birchin Lane, London.

▲ **Source 1.52** Inventor Thomas Newcomen, writing in *The London Gazette*, 14 August 1716

▼ **Source 1.51** *An English Miner*, 1814, by George Walker

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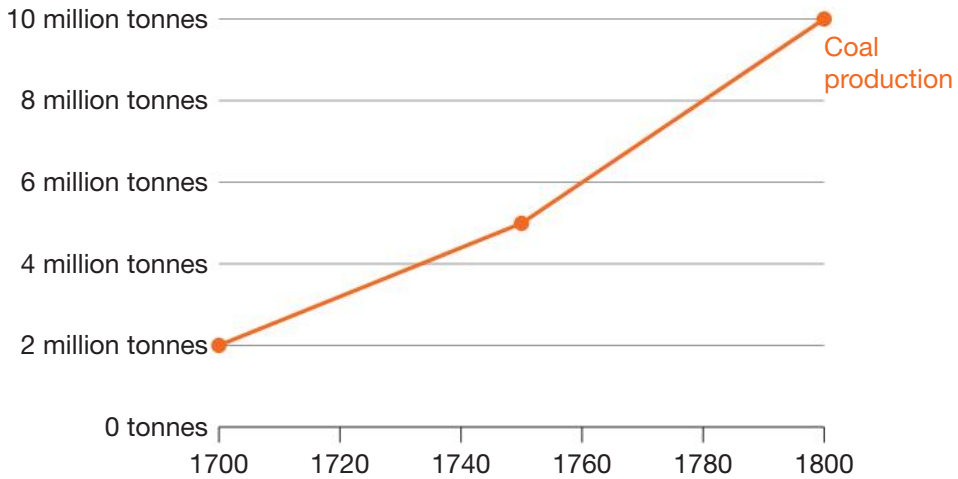
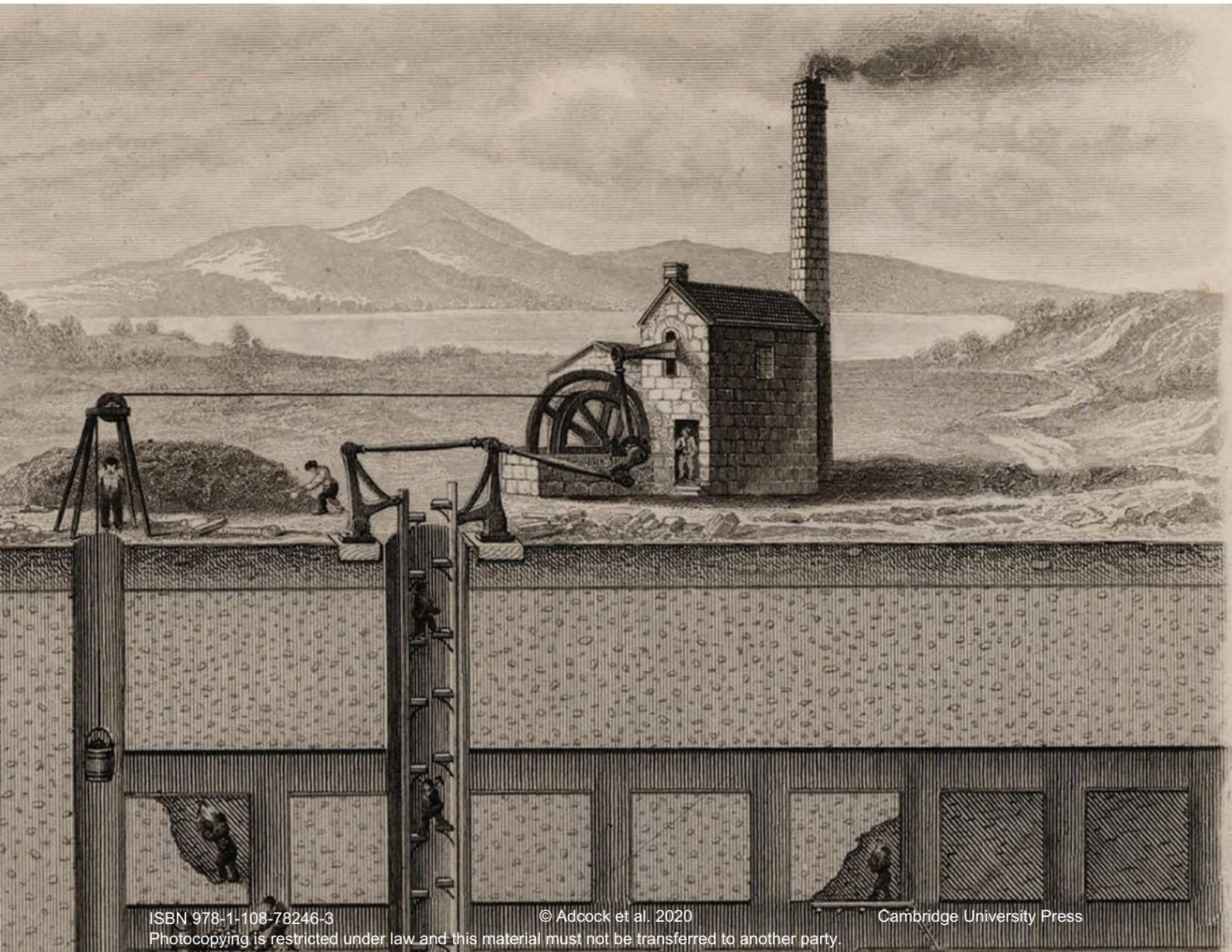
This caused enormous excitement among industrialists: coal could finally be dug more quickly, more safely and more cheaply. Hundreds of the steam pumps were sold and installed in coalmines and metal mines across England.



▲ **Source 1.53** Coal production in the United Kingdom, 1700–1800.
Source: UK Department for Energy and Climate (DECC), 2019.

▼ **Source 1.54** Cross-section of a mine in the Devon and Cornwall area of England, showing the engine house containing the steam engine that powered the man-engine or moving lift and the raising of ore in buckets in a separate shaft on the left



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END-OF-SECTION REVIEW 1.6

Digital quiz
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Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What was the most serious limitation to large-scale coal mining in Britain? How was this problem overcome?

2 What were two reasons why it became urgent to be able to dig much more coal by about 1700?

3 How did the development of large-scale coal mining put further pressure on people to develop transport systems such as canals and railways?

4 How did Thomas Newcomen's inventions contribute to the development of the modern coal industry?

Interpret

5 How do you think that coal masters viewed the Industrial Revolution compared to workers, such as child labourers?

To find out more about the effect on common people during the revolution, see section 1.9

Argue

6 Evaluate the argument that the energy of coal was absolutely crucial to the development of industry in the 1700s. Investigate why, by contrast, the use of coal to generate energy in present-day Australia is so controversial and heavily criticised by many.

Extension

1 Investigate the career of Thomas Newcomen, and explain the nature of the improvements he made to give the steam engine far greater power.

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1.7 The revolution in the metal industries

FOCUS QUESTION

How did changes in the metal industries affect the world?

Early production of poor-quality iron

The iron industry existed well before the Industrial Revolution, but it was much smaller in scale and its techniques were less developed. In particular, the use of coal in furnaces to make iron gave poor results. Coal contains sulphur, which produced impurities when smelting. This made the iron weak and likely to break under strain. It was strong enough for small items, but was too weak to make larger ones. It could never, for example, be strong enough for the mighty beams needed for bridges and ships.

In 1709, malt mill maker Abraham Darby solved this weakness. He abandoned coal and used coke (a solid fuel made from coal) instead. He discovered that if coal were heated with the absence of air, it produced a hard, grey fuel without the impurities that weakened the iron. His factory at Coalbrookdale was the origin of an invention that would literally change the physical world that humans could build.

Steam driven air-bellows

Some years later, in 1742, Abraham Darby II installed one of Newcomen's steam engines to powerfully drive the bellows that pumped air into his furnace. This too resulted in an increase in the quality of the iron.

▼ **Source 1.55** Adolph Menzel, *The Iron Rolling Mill*, circa 1870. This painting depicts the methods for working with iron that had evolved from the pioneering work of Abraham Darby (Abraham Darby II was the son of the first Abraham Darby).

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These apparently small technical innovations had two momentous effects. First, iron could now carry much heavier loads: it was strong enough to span rivers and to build large structures such as the first iron ships. Second, as forges adopted the steam engine, the demand for coal increased; suddenly, thousands of tons of coal were needed weekly. This in turn urgently required new, efficient forms of transport of heavy raw materials – such as coal and iron ore – resulting in the birth of the canal system, and then of the railway system. The railway system, in particular, was successful precisely because there was strong iron available to build locomotives and tracks.

The Iron Bridge at Coalbrookdale

By 1777, the new, strong iron was ready for its greatest challenge. Abraham Darby III commissioned John Wilkinson to build the world's first metal bridge over the River Severn near Coalbrookdale (Shropshire). Given that people had only ever seen bridges made of solid stone, this must have been a breathtaking, possibly frightening, sight. Apart from the stone approaches, the entire semi-circular span of the bridge was made of iron. It had five ribs, made up of two 70-foot metal spans bolted together at the top. The ribs were held together by lateral bars of metal.

▼ **Source 1.56** The Iron Bridge at Coalbrookdale, today. To modern eyes, this is merely a metal bridge. To people at the time it was built in 1777, it must have been an amazing sight, like a spider's web of iron. People travelled to Coalbrookdale just to stand there and marvel at the sight.

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The Crystal Palace Exhibition, Hyde Park, London (1851)

The era of the First Industrial Revolution closed with another invention – again made possible by good-quality iron – the international **exhibition**. Once strong iron was available, it was possible to build not only factories, but truly vast pavilions for displays of goods. Probably the most famous was England's so-called Crystal Palace, built for the Great Exhibition of 1851.

KEY TERM

exhibition large trade shows that showed off new technologies and innovations

The idea of a great exhibition of a nation's products was not new – the French had held one in 1840 – but the enormous scale of England's equivalent was impressive. The idea was suggested by a civil servant, Henry Cole. He saw the Paris exhibition and decided that industrial Britain should also display its achievements to the world. He argued that it would make British businesses world-famous and increase their sales and trade. Given the massive final success of his plan, it seems amazing that many contemporaries tried to stop the project. Fortunately, Queen Victoria's husband, Prince Albert, firmly backed the project all the way to completion.

The Crystal Palace was new because it took an existing technique using iron and glass – usually used on smaller buildings, such as greenhouses – and translated it onto a massive scale never seen

▲ **Source 1.57** An image of the exterior of the Crystal Palace building, London, 1851, taken from a magic-lantern (a type of early projector) picture popular at the time

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▲ **Source 1.58** The interior of the Crystal Palace, filled with exhibitions of the greatest inventions of the day from around the world

before. Its designer, Joseph Paxton, was Head Gardener to the Duke of Devonshire and had already built just such a garden greenhouse of iron and glass. He also described himself, not quite accurately, as an architect. When Queen Victoria announced a competition for a large display palace, Paxton submitted his plan and won. Many people disliked his design and made ridiculous criticisms that in summer visitors would be burned to death by the sunlight coming through the panes of glass. Prince Albert's faith in Paxton did, however, prove justified.

Over eight months, Paxton successfully directed an army of 2000 workers to install 300 000 panes of glass in the metal framework. He made another discovery that would prove important to industry: pre-fabrication – that is, making parts of the building, such as columns or roof beams, elsewhere and bringing them to the palace ready to be bolted into place. The finished building was opened on 1 May 1851 by Queen Victoria.

The later triumphs of iron during the Second Industrial Revolution (1870–1914)

If the great Industrial Revolution was completed by the 1850s, a second phase started in the late nineteenth century and the early twentieth century, between about 1870 and 1914.

The strength and power of the new iron was dramatically organised in several projects of a scale never dreamt of before, such as the construction in Paris of the gigantic Statue of Liberty that would be erected in New York Harbour.

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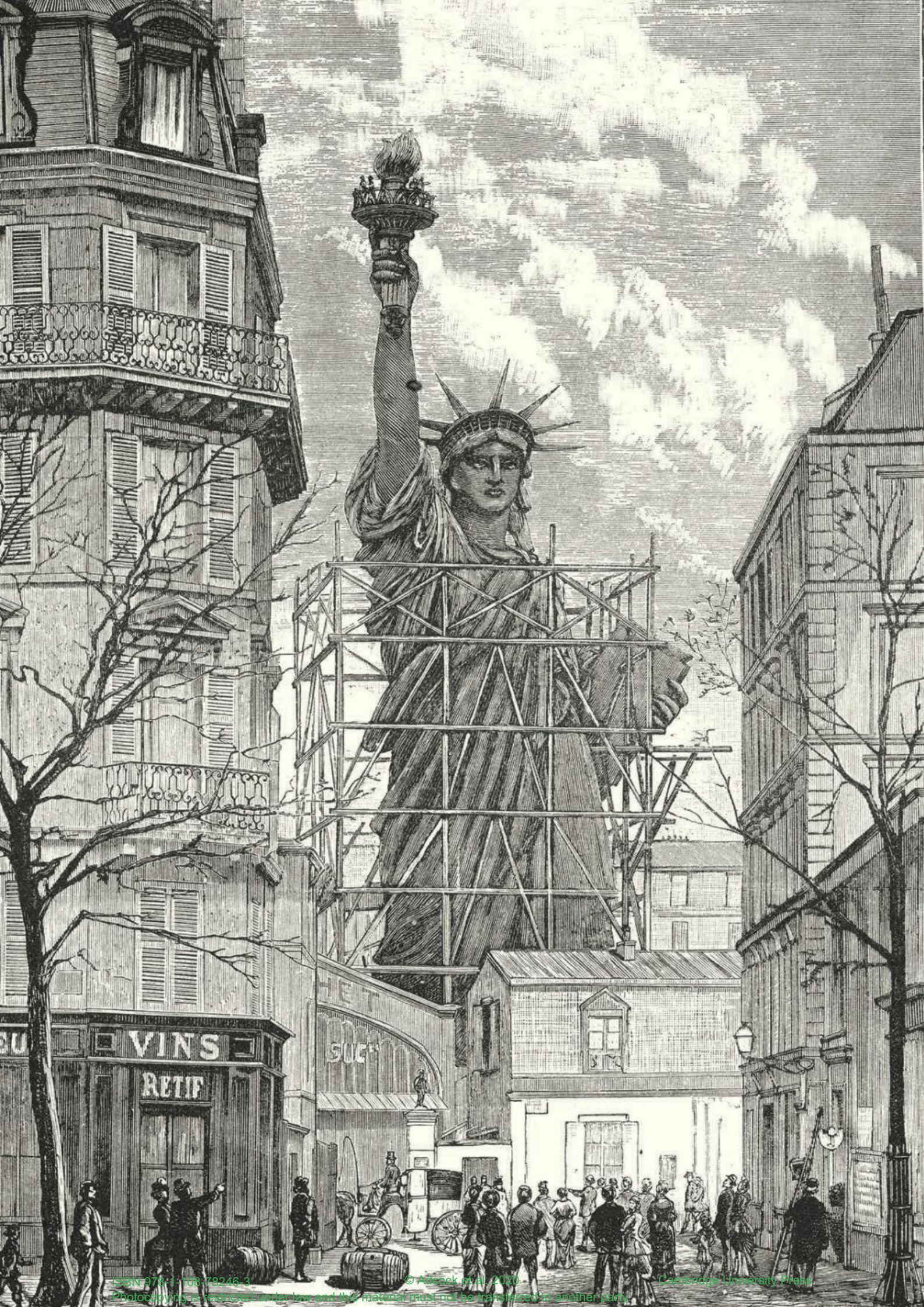

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The Statue of Liberty, New York (1865–86)

The idea of building a gigantic female figure of Liberty for New York was suggested in 1865 by the anti-slavery campaigner Edouard de Laboulaye. He intended it to celebrate the centenary of America's War of Independence. He invited the French sculptor Auguste Bartholdi to design a statue whose formal title was to be *Liberty Bringing Enlightenment to the World*. The sculptor travelled to New York in 1871 to identify a suitable site and chose Bedloe's Island as the most visible place for passengers entering the city by ship. He then hired a studio in Paris, where he assembled the gigantic statue.

Bartholdi made the outside of the statue of copper to provide its distinctive green colour, but hired Gustave Eiffel to construct its inner structure of iron. The sculptor had the first parts ready by 1876, then the entire figure was carefully assembled between 1881 and 1884. When completed, it was formally presented to the American ambassador to France, then disassembled and shipped to America. It was finally assembled in New York in 1886.

The Eiffel Tower, Paris (1888–89)

The Eiffel Tower was built between 1887 and 1889, to be ready in time for the Paris Universal Exposition of 1889. Gustave Eiffel was the master of large-scale iron construction, as seen first in the great bridges he built in France. Now he wanted to move from horizontal span to vertical height, proving that iron technology could be used to build the tallest building ever. From 1889 to 1930, it was indeed the tallest building in the world, until overtaken by the Chrysler Building in New York.

Public reaction varied. Many hated it. Some critics said it was just a Parisian rubbish bin upside down. Some people actually sold their apartments because they were sure the tower would fall on them. The novelist Guy de Maupassant had his dinner in the restaurant on the tower every night. His friends asked him why, when he hated it so much. He replied: 'Because that is the only place in Paris where I cannot see the horrible thing!'

▲ **Source 1.60** The Eiffel Tower under construction in 1888

The Royal Exhibition Buildings, Melbourne (1880)

During the nineteenth century, the Industrial Revolution began to change our way of working and living in Australia. Like their British cousins, Australian colonists were proud of the industries and crafts that had developed here and copied the British idea of showing them off. They organised the Melbourne International Exhibition in 1880 to encourage industry and technology at home and trade abroad. The emphasis was on industrial technology, science education and the arts. The construction was entrusted to the architects Reed and Barnes, who made extensive use of the new material of steel. The large complex of buildings was completed in just 18 months. The exhibition attracted 1.459 million visitors. The buildings were used again for the Melbourne Centennial Exhibition (1888). The remaining section we see today is in fact only the central Great Hall of a much bigger complex of buildings, most of which were later demolished or destroyed by fire.

◄ **Source 1.59** The Statue of Liberty was first constructed in Paris. It is 93 metres tall.

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Characteristics of the Royal Exhibition Building

- The Exhibition Building we know today was part of a much bigger complex of buildings constructed for vast international expositions in Melbourne in 1880 and again in 1888
- The great dome was inspired in part by the dome of the cathedral of Florence
- With its massive dome, the Exhibition Building was the largest building in Australia in 1880 and the tallest in Melbourne. The viewing deck around the dome offered an unprecedented view of the city of Melbourne
- The main building was flanked on the east and west by two brick buildings
- Note the horse-drawn public transport in Nicholson Street
- In addition, there were other halls built of timber and corrugated iron to serve as temporary annexes to provide extra exhibition space.

▲ **Source 1.61** Lithograph of the Exhibition Buildings, Carlton, built for the Melbourne International Exhibition, 1880

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 1.7

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Why was Britain's production of iron initially of very poor quality?
2 Which two inventions allowed the production of stronger, high-quality iron?
3 Why did improvements in iron production cause greater demands on the coal industry?
4 What was so very new about the construction of the bridge at Coalbrookdale?

Interpret

5 Explain how the great exhibitions served as the 'shopfront' of the Industrial Revolution and helped increase trade.
6 Explain how Gustave Eiffel's expertise in the use of iron allowed Auguste Bartholdi to build the massive Statue of Liberty.

Argue

7 Evaluate the overall importance of the iron industry to transport and trade during the Industrial Revolution.

Extension

1 Investigate the next stage of the use of iron during the Second Industrial Revolution. Explain how the invention of the Bessemer Process allowed the quick production of high-quality steel, and provide examples of what it was used for.

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1.8 The revolution in textile-making

FOCUS QUESTION

How did the Industrial Revolution change textile-making?

Introduction

As any Australian shopper knows, the word 'manchester' now refers to the section of a department store that sells fabrics for the home. This term comes from the name of one of England's greatest industrial cities, Manchester, which was a centre of fabric production. The revolution in textile-making that occurred there is one of the most important developments of the Industrial Revolution.

Small-scale production of textiles in cottages

Before the Industrial Revolution, the production of textiles (cloth) was a very slow process. Cloth was made in the cottage industry – that is, hundreds of private homes. Merchants first delivered raw material, such as wool or cotton, to individual spinners who worked at home, spinning the material into thread on spinning wheels. The merchants then had to pick up the thread and take it to the workshop of a weaver, who used a loom to weave the actual cloth. This did not produce very much cloth, and it was expensive and of poor quality.

The first textile inventions

The textile industry urgently needed to modernise itself. The British population was growing, and there was a strong demand for more, cheaper fabric. Clearly, there was money to be made, and profit drives invention.

Spinning (making thread)

The first priority was to increase the speed and output of spinning, the process that takes raw wool or cotton and turns it into a thread. It was urgent to produce much finer threads and in much greater quantity.

James Hargreaves' hand-powered Spinning Jenny (1764)

The first step was to abandon the traditional single-wheel spinning machine and to imagine one machine with many spindle wheels that could all turn at once and produce several threads. James Hargreaves invented a machine that initially had eight spindles turning, then 16. As the machine was improved, the number of spindles rose to over 100, all of them powered by just one man turning one wheel. Hargreaves called the machine a Spinning Engine, and his workers shortened the name to 'Jenny'. The machine was still, however, worked by hand and by human energy. Moreover, it could still be used by workers in their cottages and did not yet require the building of the great mills.

▲ **Source 1.62** A Spinning Jenny

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FAMOUS FACE

RICHARD ARKWRIGHT (1732–1792)

Richard Arkwright transformed the manufacture of cloth during the Industrial Revolution by inventing a machine that could spin thread far more quickly than the human hand. His Spinning Frame (1769) was followed by a Carding Machine (1775), which helped refine raw cotton before it was spun into thread. He also pioneered the use of water power to drive his mill at Cromford (1771), again with the effect of massively increasing the amount and quality of cloth that could be made. He is respected as 'the father' (the inventor) of the modern factory system that is still in use today.

Arkwright's Water Frame (1769)

It was Richard Arkwright (1732–1792) who really started the textile revolution in Britain. He began his working life as a barber and wig maker but seems to have turned his thoughts to the new spinning machines that were then the talk of the town. He imagined a machine with hundreds of spindles, powered by horse energy. Arkwright crossed technologies to ask a clockmaker to design the machine for him and devoted all of his time to the invention. His business suffered, as did his family's finances, but he persuaded a local businessman to finance his venture.

In 1769, Arkwright moved to Nottingham to avoid any threat from angry textile workers. There, he found two new business partners ready to invest in his idea. Arkwright faced criticism from other cloth manufacturers frightened by the competition, and anger from workers afraid of being put out of work. He moved his business to the small town of Cromford, near Derby. He had already tried to drive a spinning factory by horsepower and failed because it cost too much. Later, Arkwright discovered how to use water power to turn all the spindles. His machine was now called a Water Frame and used water pumped up from a nearby mine. This was successful, and his business expanded. When the mill needed even more water, Arkwright bought a Watt and Boulton steam pump to pump water. Later, he simply connected the steam engine directly to his water frames.

Cromford Mill: 'the factory age had arrived'

Cromford Mill expanded quickly. The mill towered six storeys high. Importantly, every machine in every room was powered by just one huge water wheel at the base. Moreover, this factory was strictly regulated. Historian Anthony Burton states:

> The factory bell rang out over Cromford announcing when work was to start. It rang again to announce the end of the working day. With the establishment of the mill at Cromford, the factory age had arrived.

▲ **Source 1.63** Anthony Burton, *The Rise and Fall of King Cotton*, 1984, p. 33

Arkwright now built good-quality houses near the mill for his workers, as well as a church, a school and even shops, sporting facilities and a tavern for them.

The invention was a vast success. Cotton mills sprang up across England and were soon full of water frames being run in 12-hour shifts, from 6 a.m. to 6 p.m.[15]

Samuel Crompton's Spinning Mule (1779)

Samuel Crompton took the development of spinning a stage further by inventing the Spinning Mule. This machine was capable of making extremely fine thread to make delicate fabrics like muslin. This was an important step forward, but Crompton's story turned to tragedy. He innocently agreed with a group of Manchester businessmen to hand over his invention to them, on the understanding that they would club together money for him. They wrote a letter of agreement, but cunningly omitted to state how much they were going to pay. In the end, they only paid him £60 for an invention that would make them many thousands of pounds. Crompton died a bitter, disappointed man. He wrote, sadly: 'I found to my sorrow I was not calculated to contend with men of the world' (Anthony Burton, *Remains of a Revolution*, 1975, p. 144).

15 To learn more about cotton mills and Cromford Mill, read Tony Taylor, *The Industrial Revolution*, 2014.

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Weaving

The second urgent need was to improve weaving (turning thread into cloth) to produce more cloth and of a finer sort.

The flying shuttle (1733)

The inventor John Kay first developed a device called a flying shuttle in 1733, which allowed just one weaver to produce almost double the amount of cloth.

Edmund Cartwright's power loom (1784–85)

Edmund Cartwright made the mental leap of designing a power loom, but the first one he built in 1784 did not actually work. He created a more workable model in 1789, but it still had limitations, and his business went bankrupt in 1793.

END-OF-SECTION REVIEW 1.8

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. What were the two main challenges to textile makers as demand for fabrics increased at the time of the Industrial Revolution?
2. Why was the production of fabrics traditionally so slow?
3. How did John Hargreaves and Richard Arkwright improve both the volume and the quality of the spinning of thread?
4. How did Edmund Cartwright's Power Loom improve the weaving of cloth?

Interpret

5. What were the most important turning points in the long process by which the mass production of textiles began?
6. Explain why the first inventors in the textile industry faced jealousy from other producers and anger from some workers.

Argue

7. Evaluate the extent to which the revolution in textile-making changed people's fashions and social lives.

Extension

1. Investigate the career of Richard Arkwright. Describe the nature of the gigantic mills he built, and explain why his strict work routines signalled the beginning of the Factory Age.

Digital quiz
Please see the Interactive Textbook to access digital activities

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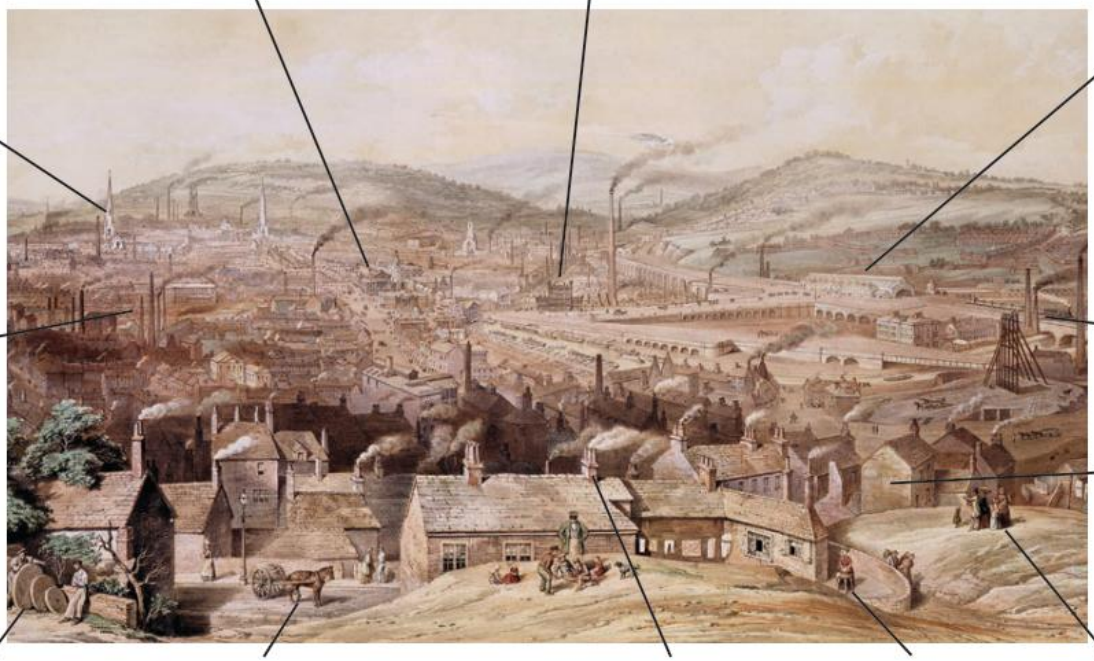
1.9 How did the Industrial Revolution affect the lives of ordinary people?

FOCUS QUESTION

What was life like for people living during the Industrial Revolution?

A view of life in a typical industrial city: Sheffield, England



▲ **Source 1.64** View of Sheffield, the great steel-making town, circa 1870

MAKING THINKING VISIBLE 1.2

What makes you say that?

Step 1: what is going on in the image?

Look carefully at every single detail of this painting showing the industrial town of Sheffield.

Based on the details you have noticed, how would you judge living conditions in Sheffield during the Industrial Revolution?

Step 2: what makes you say that?

What particular details in the image support your position? Do you think the image is a positive or a negative portrayal of life in Sheffield at the time?

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Opportunities

The history of the Industrial Revolution might seem black-and-white, a strong contrast of good and bad. Historians always acknowledge the extraordinary leap forward in invention and in technologies, simply because it is undeniable. They also tend to speak of the darker side of the Industrial Revolution – that is, the social effects upon working people and the environment. We are still very much influenced by the views of commentators such as the analysts Karl Marx and Friedrich Engels, the novelists Charles Dickens and Elizabeth Gaskell, the poet William Blake, and painters such as Thomas Kennington and Hans Herkomer.

Until recently, nobody has thought to check what ordinary working people themselves actually thought of the Industrial Revolution. One reason for this is that it was usually assumed that working people, being illiterate, never wrote anything about what they went through.

The historian listens to lost voices of the Industrial Revolution

Historian Emma Griffin recently startled the world by announcing that the Industrial Revolution was – as she put it – actually an 'Age of Opportunity' for British working people. She states that there are some 800 autobiographies written by working people of the Industrial Revolution, although – sadly – most are by men, with few recorded by women. These autobiographies contain a common message: the Industrial Revolution (a name the writers would not have known or used) simply increased the amount of work available.

The economy of the countryside offered only desperately hard work in farming, for little or no financial return. By contrast, the cities and the factories of the Industrial Revolution offered enormous opportunities in employment. The skilled and the unskilled, the young and the old, male and female, could find jobs. In the countryside, a skilled worker could make goods, but nobody could afford to buy them. In the industrial cities, the factory workers had cash and could buy goods. The factories needed workers to work all through the year, as opposed to farms, where work was seasonal; there was not much to be done in winter. Indeed, the factory owners – keen to make great profits – were anxious to keep their factories operating all the time. They actually competed to get good, reliable workers. It is still true that conditions were harsh. In country areas, the average age at which children began work was 10 and a half years old; in industrial towns, the average age was eight and a half.

If you choose to continue your studies of History in the coming years, you will become very familiar with the ideas of Marx and Engels!

Horrible jobs, dangerous workplaces

On the other hand, there is no denying that most people worked very long days – often 12 to 14 hours – and that much of their work was either dangerous or bad for their health.

◄ **Source 1.65** The Industrial Revolution provided employment opportunities, but work was often dangerous. Engraving showing women climbing ladders to carry coal up a mineshaft. Scotland, early nineteenth century.

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Worksheet available

ACTIVITY 1.4

Research task: the most horrible jobs of the Industrial Revolution

Imagine that you run an employment agency during the Industrial Revolution. Your job is to advise people who have just moved from the country to the city and who want to find a job. Their main problem is that new industries create new jobs, and new jobs create new titles for the workers who do them. These job titles would be like a foreign language to a newcomer.

Task: Using Leon Gray's *Horrible Jobs of the Industrial Revolution* (2016) or online research, find out what each of the following terms means. For each job, provide a simple explanation of the work involved, and include advice you would give to the newly arrived people. You can do this either on a separate piece of paper, or in the Interactive Textbook.

To find out more about matchstick girls, go to p. 81

Job Title	Illustration of Job
Matchstick girls Workers that worked in match factories often suffered from phossy jaw.	
Mule scavenger	
Navvy	
Coal hurrier	

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Coal trapper	
Iron puddler	
Pure finder	

Fear of machines

The invention of powerful new machines delighted the mill owners, but they caused fear among some workers. When, for example, Richard Arkwright invented his powered loom to weave thread into cloth at high speed, working people feared that this machine would take away their jobs. In a panic, these workers formed protest groups, and first threatened, then attacked mills that were using the new machines. This came to be known as the Luddite Movement. Arkwright's own mill at Chorley was one of the first victims. It was burned to the ground in 1779.

▲ **Source 1.66** *The Leader of the Luddites*, 1812. In the background, a factory burns.

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DEVELOPING HISTORICAL CONCEPTS AND SKILLS 1.4

Understanding different experiences and perspectives

Our course of study challenges us to understand the different experiences people had of the Industrial Revolution and to identify their **perspectives** (points of view). In all history, and in the Industrial Revolution especially, the same event can cause totally opposing points of view, depending on who the individual is, and what they experienced.

Historians are also very keen to examine any written sources dating from the Industrial Revolution. Sadly, ordinary working people leave relatively few written records, either because they cannot read or write, or because they are simply too busy working. (It is the educated middle classes that have the time and the literacy to write extensive records such as letters and diaries.) Historians are therefore very interested by the few documents that do exist, such as petitions (letters of requests or demands to their employers), which give us a direct expression of working people's experiences, problems, grievances and fears.

Source A

This letter was written by workers to express their fear that the new machines might take away their jobs, leaving them unemployed. While the factory owners might have been very pleased with the new and efficient machines – which really did do the work of dozens of human workers – working people had good reason to fear unemployment and, with it, the horrors of living in the grim poorhouses.

> To the merchants and clothiers, The Humble address and PETITION of Thousands, who labour in the Cloth [Industry].
>
> That the Scribbling Machines have thrown thousands of your petitioners out of employ[ment], whereby they are brought into great distress, and are not able to [earn a living] for their families, and deprived them of the opportunity of bringing up their children to labour.
>
> The number of Scribbling-Machines extending about seventeen miles south-west of LEEDS, exceed all belief, being no less than one hundred and seventy! And as each machine will do as much work in twelve hours, as much as ten men can in that time do by hand and they working all night and day, one machine will do as much work in one day as would otherwise employ twenty men – Upon a moderate computation twelve men are thrown out of employ[ment] for every single machine used in scribbling; thus it may be supposed that full four thousand men are left to shift for a living how they can, and must of course [rely on charity from] the Parish.
>
> We therefore hope that feelings of humanity will lead those who have it in their power to prevent the use of those machines, to give every discouragement they can do to what has a tendency to be [harmful] to their fellow creatures.

▲ **Source 1.67** A letter written by workers, quoted in L. James et al., *Industrial Revolution: Primary Sources*, 2003, pp. 57–8

Source B

> At the meeting, attended by almost every merchant in the Town, the facts did clearly appear, and after a discussion of the merits of various inventions, and the improvement in [the making of cloth] likely to be derived from them, it appeared to them all absolutely necessary that this town should [take part in] the benefit of all sorts of Improvements that can be made in the, making of their cloths, to prevent the decline of business, of which the town of Leeds has for ages had the greatest share.

▲ **Source 1.68** L. James et al., *Industrial Revolution: Primary Sources*, 2003, pp. 57–8

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Source C

▼ **Table 1.2** Comparative table of the number of power looms and hand looms in Britain

Date	Power looms	Hand looms
1795	0	75000
1813	2400	212000
1820	14000	240000
1829	55000	225000
1833	100000	213000
1835	109000	188000
1845	225000	60000
1850	250000	43000
1861	400000	7000

Understanding and using primary sources

1. Study the statistics in Source C and construct an argument about the true severity of the impact of power looms on hand-loom workers, at least as shown by these figures. When did this process start and by what date was it virtually completed?
2. Study Source A and make a note of the actual concerns of the people presenting this petition against power looms. What were their main concerns?
3. As part of their argument, these workers offer their own statistical calculation of the impact of power looms on employment. What figure do they offer?
4. Do some research to find out why the power looms had such a serious impact on the loom workers, who really were left permanently unemployed. Why could they not just go to another job, as many people have to do today?
5. Study Source B. The merchants make the opposite case, and urge the introduction of power looms in their area. Why might they have done so? What are their arguments in favour of power looms?

Source D

I mentioned the mob which had assembled in the neighbourhood of Bolton. It had not yet done much damage; they had only destroyed a machine or two near Chowbent. We met them again on a Saturday morning, but I believe we did not see the main body of the mob. On the same day, in the afternoon, the large crowd attacked an important mill and machine near Chorley, but because of its location the mob could only approach it by only one path. This situation allowed the owner, with the help of some neighbours, to fight off the crowd and to save his mill. Two of the crowd were shot dead on the spot, one drowned in the river, and several were wounded. The mob had no guns, and did not expect such a strong defence. They were very angry, and swore to get revenge. They spent all of Sunday and Monday collecting weapons and ammunition, and they melted their pewter dishes to make bullets. They were now joined by the coalminers of the Duke of Bridgewater, who numbered about 8,000, and marched to the beat of the drums and with flags flying to the mill where they had been defeated on Saturday. They now found Sir Richard Clayton with fifty veteran soldiers who were armed with weapons, but this small force was no match for the enraged thousands of workers. The veterans were happy to just watch as the crowd destroyed some mills valued at 10,000 pounds. [The crowd plans] to destroy all the machines, not only in these places, but throughout all of England. How far they will be able to put their threats into practice, only time will tell.[16]

▲ **Source 1.69** Extract from a letter from Josiah Wedgwood to Thomas Bentley

16 This text has been changed to plain language by the author of this textbook chapter. The original text can be seen in Humphrey Jennings, *Pandemonium, 1660–1886: The Coming of the Machine as Seen by Contemporary Observers*, 2012, pp. 76–7.

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Dramatic dialogue/role play

Imagine a scenario of confrontation like Koehler's *The Strike* (see Source 1.1). In this case, the highly skilled loom workers have gathered to protest to the factory owner regarding his introduction of the new power looms.

Write a dramatic dialogue, containing the following elements:

1. The workers explain the nature of their request.
2. The workers outline their concerns for their future and their families.
3. The factory owner gives his reply, explaining why he has no choice but to buy power looms.
4. A trade union leader asks the factory owner to compromise or provide for his workers.
5. The factory owner refuses to give any assistance, explaining that the only purpose of business is to make profits.
6. The owner cites town locations and numbers of the new power looms installed recently.
7. The crowd threatens violent action against the factory and its new power looms.

If possible, do an enactment of this scene in the classroom, preferably without actually breaking anything.

Strikes

As we saw at the start of the chapter, the Industrial Revolution prompted the birth of the trade union movement. Sometimes, in order to fight for better pay and conditions, trade unions would instruct their members to go on strike. Workers tried to force their employers to listen to them by temporarily not performing their jobs, which caused enormous stresses on workers and their families.

One danger was that the factory owners could employ other workers, or import workers from distant districts, and employ them in their factory. This left the striking workers permanently unemployed, in danger of going to the poorhouse or becoming beggars. The workers hated the people who replaced them and referred to them as 'blackleg labour'. Their anger often erupted into violence, as the unemployed workers attacked the newly arrived workers.

▼ **Source 1.70** Magazine engraving of police escorting blackleg miners to the mine in Ohio, United States, 1884

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ACTIVITY 1.5

Using historical sources as evidence

Working people had one important form of expression: the popular song. Song was not just an entertainment, but an important way of commenting on life. It was a way of complaining about the hard work or the harshness of the employer, about hunger, cold, poverty or unemployment. Given that life was difficult for most working people, song was one of the few comforts available to them. Once the Industrial Revolution began, new popular songs appeared describing the harsh conditions in the factories.

For example, the song 'The Blackleg Miner' (Source 1.71) expresses the anger and hatred of workers who are on strike against other workers who chose to continue working. They felt that these 'blackleg' workers had betrayed them and treated them very harshly.

KEY TERMS

duds clothing

hew dig

hoy throw

Song: 'The Blackleg Miner'

It's in the evening after dark
When the blackleg miner creeps to work,
With his moleskin pants and dirty shirt,
There goes the blackleg miner.

Well, he grabs his **duds** and down he goes,
To **hew** the coal that lies below,
There's not a woman in this town row
Will look at the blackleg miner.

Oh, Delaval is a terrible place,
They rub wet clay in the blackleg's face,
And around the heaps they run a footrace
To catch the blackleg miner.

And even down near the Seghill mine,
Across the way they stretch a line
To catch the throat, to break the spine
Of the dirty blackleg miner.

They grabbed his duds, his picks as well,
And they **hoy** them down the pit of hell,
Down you go, we pay you well,
You dirty blackleg miner.

It's in the evening after dark
That the blackleg miner creeps to work,
With his moleskin pants and dirty shirt,
There goes the blackleg miner.

So join the union while you may,
Don't wait 'til your dying day
For that may not be far away,
You dirty blackleg miner.

▲ **Source 1.71** The lyrics to 'The Blackleg Miner'[17]

17 To listen to this song performed by the folk group Steeleye Span, look up 'Blackleg Miner' on YouTube.

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Responding to the source

1 Describe this source. Who created it, and when was it created?
2 What does the term 'blackleg' literally mean in this context?
3 What is the attitude of the singer towards this miner?
4 What are some of the punishments the other workers have for a miner who does not join their strike? Make a list of their actions against him.

Extension

1 How reliable do you believe popular songs might be as primary sources and evidence about the experiences of ordinary working people? Give reasons for your answer.
2 Why exactly would the other miners feel so very strongly against a person who does not support their strike?
3 In your opinion, should any worker have the right to refuse to join a strike?
4 If you were a judge at this time, would you consider strikes to be illegal? If so, why?

Accidents

Workplace accidents were common long before the Industrial Revolution. As factories and machines grew bigger and more complicated, accidents increased. Mill owners happily spent money on new machines to produce goods, but were generally unwilling to waste money on safety precautions. Many workers found themselves losing limbs when caught in the machines they worked.

The mining industry was particularly dangerous because of the danger of cave-ins. There was pressure to dig deeper and faster, with no time for safety mechanisms such as shoring up the mineshaft. In Australia, as in Britain, there were often terrible accidents.

Their victims might have been forgotten, except for artists such as John Longstaff, who painted *Breaking the News* in 1887 (Source 1.72). Longstaff witnessed a mining accident in his

▼ **Source 1.72** John Longstaff, *Breaking the News*, 1887, The Art Gallery of Western Australia

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hometown of Clunes, Victoria, when he was a boy. In this painting, he barely shows the dead miner – his body is wrapped up on a stretcher outside the cottage – but he focuses on the moment when an elderly foreman tells the man's wife that her husband has been killed in an accident. The woman holds a very young baby and has set out afternoon tea on the table for her husband. Longstaff perfectly captures the moment of complete shock – of fear mingled with horror and grief – when the woman understands what the man is telling her. If we look deeply into this painting, we can begin to feel the tragedy of working lives in the Industrial Revolution.[18]

The poor

The most common image we have of the Industrial Revolution is that of the poor people who lived in cities. This image is not wrong: every city had large numbers of people who were unemployed, injured or sick, or simply unable to look after themselves. The poor were a common sight, often begging for money or selling flowers. Painters like Augustus Mulready painted sentimental pictures of the poor – usually children – appealing to kindly people who felt sorry for the unfortunate. Sadly, feeling sorry for the poor is not the same as helping them and, in this respect, Britain did not cope well with the problem.

▲ **Source 1.73** Augustus Mulready, *Uncared For*, 1871

The *Poor Law 1601*

Queen Elizabeth I in 1601 recognised people's right to work and food, and set up poorhouses to help them. Each parish set up a home to take in beggars, the sick, the elderly and the unemployed. The managers of poorhouses were to provide food and small sums of money.

By the 1700s, this system showed serious weaknesses. By 1776, there were 2000 poorhouses in England and Wales, holding 100 000 inmates.[19] The managers used these people as cheap labour, to do dreadful tasks such as smashing up animal bones into powder to create fertiliser. The managers often stole the money and gave people small serves of poor-quality food called gruel. Many a poor person must have died miserably and disappeared without a trace. We only know of one case because of the actions of an investigator who exposed the deaths of a family and did a drawing to prove them. The British Library records:

> On 23 January 1769, James Eaves, his wife and two of their children were found starved to death, their naked bodies lying on straw, in a poor house in Datchworth, Hertfordshire. Their third child, a boy of about 11, was still alive but unable to stand. It transpired they had been taken ill three weeks before and had only been given 2s 6d – which even for a farm labourer was only two day's wages – from the overseers during that time.
>
> Villagers tried to cover up the affair, but the Datchworth incident received wide publicity when the author and eccentric Captain Philip Thicknesse (1719–92) wrote an exposé, in this pamphlet. There was an inquest, though in the event no one was punished. A plaque in the village now commemorates the family and their wretched fate.

▲ **Source 1.74** An account of the Datchworth incident, British Library, *An Account of Four Persons Starved to Death in a Workhouse*, 2019

18 To learn more about this wonderful work, look up 'Breaking the News by John Longstaff' on YouTube.
19 To learn more about the *Poor Law 1601*, read Jonathan Downs, *The Industrial Revolution*, 2010, pp. 76–7.

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MAKING THINKING VISIBLE 1.3

See, think, wonder, evaluate

In this chapter, we will evaluate the historical skill of interpreting visual sources to gain some sense of people's experiences of poverty in Britain.

▲ **Source 1.75** A view of the poorhouse at Datchwell, where four people starved to death, 1769, by Philip Thicknesse

1. **See:** What is shown in this image?
2. **Think:** How has this tragedy probably occurred?
3. **Wonder:** How accurate is this visual source as a record of the experience of the poorhouses?
4. **Evaluate:** Investigate the author of the report, Captain Philip Thicknesse (1719–1792). From what you discover, evaluate the reliability of his report and drawing as a historical source.

The *Poor Law* of 1834

In 1834, the government passed the *Poor Law Amendment Act*, which set up much stricter conditions for the poor in England. Historian Tony Taylor explains that the politicians who drafted the law were not guided by humane intentions, but by a fear that people might seek poor relief simply because they were too lazy to work. To prevent this, the lawmakers decided to create a new system of poorhouses so strict, so mean and so unpleasant that nobody would want to go to them unless they really had to.

Once a family went to the poorhouse (or workhouse), they were given uniforms and housed like prisoners in a large barracks-like building. They had to work hard, and were subjected to discipline that was harsh and brutal. Children were separated from their parents, and could only see them once a week. The officials were meant to provide basic meals, but they simply offered bread and gruel, and kept the rest of the money. People starved. The people were so hungry that they often tore off rotten meat from the bones. Sometimes, dreadful fights broke out over a scrap of meat. By 1861, there were some 14 000 people in England's poorhouses.[20]

20 To learn more about the *Poor Law* of 1834, read Tony Taylor, *The Industrial Revolution*, 2014.

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Warning voices: James Greenwood visits a workhouse

While the poor on the streets were always highly visible, those in workhouses were not. Theirs was a lonely misery, and many preferred to commit suicide than go there. Fortunately, there were many thinkers, writers and painters who *were* aware of this poverty. They felt ashamed that poverty could exist in such a wealthy society. They felt genuine pity for the human suffering it caused. They were also determined to shock the public into being aware of the real nature of poverty.

ACTIVITY 1.6

Using historical sources as evidence

Journalist James Greenwood (1832–1927), for example, actually dressed himself up in filthy clothes like a beggar, to gain admission to a poorhouse and to write a report of conditions inside. He argued that we hear much about the poor, but we never actually meet them.

Speaking of his tattered, filthy figure as 'he', Greenwood wrote:

> He was bound for the Lambeth workhouse, there to learn by actual experience how casual paupers are lodged and fed, and what the 'casual' is like, and what the porter who admits him and the master who rules over him; and how the night passes with the outcasts whom we have all seen crowding about workhouse doors on cold and rainy evenings … No language with which I am acquainted is capable of conveying an accurate [idea] of the [sight] I then encountered. This far too airy shed was paved with stone, the [floor] so thickly encrusted with filth that I mistook it at first for natural earth … My bedfellows lay … distributed over the flagstones in a double row on narrow bags scantily stuffed with straw. My appalled vision took in thirty of them, thirty men and boys which put only six inches of comfortable hay between them and the stony floor.

▲ **Source 1.76** James Greenwood, *A Night in a Workhouse*, 1866, quoted in Peter Keating, *Into Unknown England*, 1976, pp. 34, 37

Responding to the source

1. Describe this source. Who created it, and when was it created?
2. From what you have been told about James Greenwood, what aspects of his writing make this document clearly a primary source about the Industrial Revolution?
3. What was Greenwood's rationale (reason) for putting himself through such a horrible experience?
4. What evidence is there, from his description, that the authorities in this poorhouse might not have spent the government money allocated to them to provide decent lodging conditions for the poor?

Warning voices: Luke Fildes and the misery of the streets

In 1871, painter Luke Fildes set out on a cold winter's night to explore a poor area of London around the Portland Road. What he found shocked him. He found a long line of people standing outside a police station, waiting to be registered so that they could then go to a free night-shelter for the homeless. They were the most desperately poor of the poor, resembling ghosts dressed in tatters. Fildes asked a policeman what had thrown these people into such misery and heard their stories.

On the far left, there is a respectable gentleman in a top hat. Why would he need a night in a poor shelter? He had given all his money to his son, who had become a criminal and spent it all. The woman with a baby and a child had been evicted from her home after her husband had assaulted her. He had been arrested, imprisoned, and the family had no money to pay the rent. Near the middle of the line is a fat man in a top hat who

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▲ **Source 1.77** This 1874 painting by Luke Fildes is called *Applicants for Admission to the Casual Ward*. The painter visited the poor areas of London and saw for himself the number of poor people and their hopeless misery.

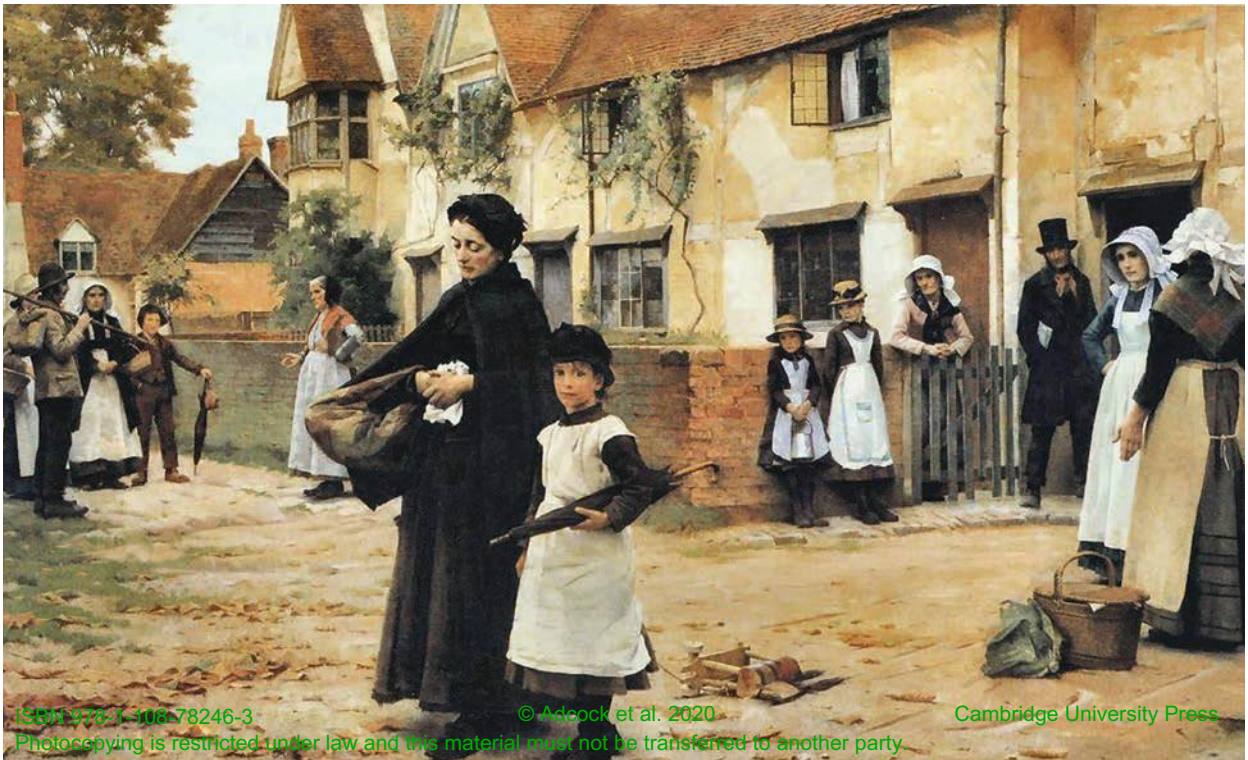
had lost his good job and wealth because of alcohol. To his right, a working man is holding a baby, beside his sick wife.

By 1872, Fildes was working on an enormous painting, hoping to display it in London's annual art exhibition. He studied every one of these figures carefully. He went into poor areas and asked people to pose in his studio. They did not have to dress up to look poor: they already were. One man was so filthy that Fildes made him stand on brown paper soaked with disinfectant.

By 1874, the painting was ready for display. It caused a sensation. So many people crowded to see it that Fildes had to place a handrail and a police guard in front of it. Some people described it as 'repulsive' and said that the figures 'appal and disgust'. Others said that these 'deformed and wretched creatures' were upsetting, but that they were still true. Some praised it, saying that 'morally and socially', this was the best painting of the year, because people would walk away wondering what they could do to solve poverty.

The painting was immediately bought by Thomas Taylor, one of the great industrialists who ran a cotton mill at Wigan. In this way, Fildes had held up the true state of poverty to the face of his generation, and nobody could now ignore it.

▼ **Source 1.78** Blandford Fletcher, *Evicted*, 1887



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Homelessness

During the Industrial Revolution, educated people could not help notice how quickly a family could fall into poverty, especially if the father lost his job or, worse, was accidentally killed. Painters such as Blandford Fletcher felt especially sorry when they saw mothers and young children being evicted (forced out) from their homes. Paintings of evictions were very popular with the public and sold well.

In this work (Source 1.78), Fletcher has shown a real set of old houses in Steventon, Berkshire, and then set up a scene in which a young mother and her daughter have just been evicted for not paying the rent. The bailiff (legal official) is still standing aggressively by the front door.

The picture contains a clue about what has happened. The young woman is dressed all in black, meaning that her husband has recently died, leaving her a widow without income. Her lowered head suggests that she already knows her situation is almost hopeless, unless she can remarry. It is very revealing that all the local working people watch her depart with real sympathy, but nobody offers to help her. They are simply not in the position to do so.

END-OF-SECTION REVIEW 1.9

Review questions

Answer these questions on paper or in the Interactive Textbook.

Digital quiz
Please see the Interactive Textbook to access digital activities

Recall

1. What were the main concerns raised by the workers who met to protest against the 'scribbling machines' (Source 1.67)?
2. What was the main argument of the merchants who supported the introduction of cloth-making machines?
3. Why did the *Poor Law* of 1834 have the opposite effect from that of helping those in need?
4. How did artists and writers try to make the British public more aware of the poverty around them?

Interpret

5. What does Table 1.2 tell us about the impact of the Industrial Revolution on one specific group, the highly skilled workers of hand looms?
6. Evaluate whether the concerns of the Luddites regarding unemployment caused by new machines did become a reality.

Argue

7. Re-evaluate the true nature of the Industrial Revolution in terms of its effect on ordinary working people. In all, should it be seen as an age of hard work and brutal exploitation, or as an age of new opportunity?

Extension

1. Investigate the career of novelist Elizabeth Gaskell, who criticised the Industrial Revolution and warned that its social problems were causing misery and might cause revolution. By either reading her novel *North and South* or by viewing the recent BBC film of the novel, explain what her criticisms were. Is there any evidence that 'social conscience novels' such as this one did actually influence public opinion and force the British Government to make reforms?

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1.10 How did women experience the Industrial Revolution?

FOCUS QUESTION

What was life like for women during the Industrial Revolution?

Women of the educated classes

Many of the great inventions of the Industrial Revolution were made by architects, engineers, inventors and chemists – all professions heavily dominated by men. Any woman who wished to enter these fields faced enormous obstacles, far greater than those they still face today. Nonetheless, some women did manage to enter the race for invention and production, and their achievements were remarkable.

FAMOUS FACE

ELEANOR COADE (1733–1821)

Before the later invention of cement (made from concrete), there was an urgent need for a material from which to mould statues. Some inventors had tried to make what they called 'artificial stone', although it was technically a ceramic, but the results had been poor. In 1769, Eleanor Coade purchased a struggling factory in Lambeth and investigated the production process. She discovered that it required 70 per cent kaolin clay – found in Dorset – mixed with elements of crushed flint, quartz, silica and alumina. She perfected the mix, then found a way of keeping the baking ovens at an unchanged heat over several days. The result was a very strong liquid mix that, when it hardened into a statue, looked for all the world like a superb work of art carved out of the finest marble. Indeed, her 'artificial stone' was better than real stone, because it did not weather (become stained), as real stone does.

Coade sold hundreds of statues to the great houses of England, where they still decorate gardens and rooftops, and look as fresh and new as they were 200 years ago. Her business prospered, and she remained director of the company until her death in 1820.

▲ **Source 1.79** The Nelson Pediment, Old Royal Naval College, Greenwich, designed by Eleanor Coade

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FAMOUS FACE

LADY MARY WORTLEY MONTAGU (1689–1762)

One of the most remarkable women of science was Lady Mary Wortley Montagu, whose medical advocacy work saved incalculable millions of human lives.

Montagu was born into a noble, but not wealthy, English family. She might have lived a genteel life in a great mansion, except for the fact that she married the wealthy Edward Montagu, who in 1716 was appointed English ambassador to the imperial court of Turkey.

Although the family only stayed there for 15 months, Mary discovered her talent for travel and her ability to observe other cultures on their own terms. Rather than assume that her own culture was superior, she admitted that the Turks possessed sophisticated learning and an advanced civilisation. She became a thoughtful observer, intelligently and respectfully studying another culture, and using it to think critically about her own society.

Montagu also recognised that the Turks were by no means 'primitive'. In many ways they were more advanced than Europeans. In one letter to Miss Sarah Chiswell, she described the Turkish practice of what is now known as inoculation, by which people were injected with a small amount of smallpox, which gave them a mild case of the illness, but ultimately gave them resistance to the disease. In doing so, she admitted that Turkish people had advanced medical and scientific knowledge – in this case, a simple and safe technique that was unknown in England.[21]

ACTIVITY 1.7

Using historical sources as evidence

I am going to tell you a thing that will make you wish yourself here. The small-pox, so general and so fatal amongst us [in England], is here [in Turkey] entirely harmless by the invention of ingrafting. There is a set of old women who make it their business to perform the operation every autumn, in the month of September … People … make parties and when they are met (commonly fifteen or sixteen together), the old woman comes with a nut-shell full of the matter of the best sort of small-pox, and asks which vein you please to have open. She immediately rips open [the vein] that you offer with a large needle (which gives you no more pain than a common scratch), and puts into the vein as much matter as can lie upon the head of her needle and, after that, binds it up with a hollow bit of shell; and in this manner opens up four or five veins … Then the fever starts to seize them, and they keep to their beds two days, very seldom three. They have very rarely about twenty or thirty [small pox] in their faces, which never mark; and in eight days' time they are as well as before their illness … There is no example of anybody who has died of it; and you may well believe I am well satisfied with the safety of the experiment, since I intend to try it on my own dear little son. I am patriot enough to take pains to bring this useful invention into fashion in England; and I should not fail to write to some of our doctors particularly about it.

▲ **Source 1.80** An extract from Montagu's letter to Lady Sarah Chiswell, circa 1716, quoted in Margaret C. Jacob, *The Enlightenment: A Brief History with Documents*, 2001, pp. 152–3

Responding to the source

1. Describe this source. Who created it, and when was it created?
2. What exactly is 'the matter of the best sort of small-pox' that the women put into people's veins?
3. What is actually happening when 'the fever starts to seize them'?
4. Why are these people 'as well as before their illness' after eight days? Why have they not died of the illness, as they did in England?
5. Why might some of Montagu's contemporaries have been surprised or shocked to discover that the Turks had medical knowledge that the English did not have?

21 If you would like to find out more about Lady Montagu, her travel diaries have been vividly published in book form as *Embassy to Constantinople: The Travels of Lady Mary Wortley Montagu. Introduced by Dervla Murphy*, 1988.

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▲ **Source 1.81** A doctor vaccinating a child against smallpox

Working women

For working women, as for men, the Industrial Revolution did offer an escape from the hard labour of farm work and a chance to earn a wage rather than simply grow crops. They might have worked long shifts of 12–14 hours, but this was still less than the unending work on the land.

Young women could earn a quite significant wage. It is true that they earned less than men, but this meant that factory owners were more keen to recruit women and children as a way of economising on wages. In Manchester in 1850, the lowest paid man earned 13 to 15 shillings, whereas the highest paid woman earned between 7 and 11 shillings.[22]

The Industrial Revolution also made luxury items, including clothing, jewellery and ceramics, much more affordable. For the first time, working women had a disposable income that they could spend on such luxuries.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 1.5

The contestability of evidence

As historians, we are always looking for reliable evidence that will show us what the Industrial Revolution was really like. One sort of evidence is the **primary source** – that is, a record made by somebody alive at the time. But this alone does not guarantee that the information is completely accurate. All human beings have their own point of view, and some have very strong reasons for giving a particular view of a historical event.

22 Want to learn more about working women in the Industrial Revolution? Find out more by reading Jeff Horn, *The Industrial Revolution: Milestones in Business History*, 2007.

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▲ **Source 1.82** Eyre Crowe, *The Lunch Hour at Wigan*, 1874

Consider this painting by the artist Eyre Crowe. He actually went to the English industrial city of Wigan to study the women factory workers and made careful sketches of them. This scene is accurate in so far as it shows known buildings such as the Victoria Mills – at the left of the scene – owned by the industrialist Thomas Taylor. Moreover, this painting was bought by the factory owner, and it is unlikely that he would have accepted it if it did not show his buildings very accurately. For these reasons, this picture is a good record of a great factory late in the nineteenth century.

But this evidence must also be challenged. Although Crowe actually went to Wigan and really observed this scene, his painting still has some limitations as a primary source for the historian. Artists also knew that the industrialists were very proud of their factories and would dislike any painting showing bad aspects of the factory. For example, the picture only shows the factory girls resting, not working. They are taking a meal break, and seem happy and relaxed. They are well-dressed – only one is barefoot – and clean and healthy. A policeman patrols the street behind them, suggesting that everything is orderly. The lunch 'hour' was actually quite a short break in very long working shifts of 12 hours or more.

The painter might have found a very different scene if he had actually gone inside the factory. In most factories, people worked exhausting shifts and received low pay. If the workers demanded better wages, the owners dismissed them and took on the desperately poor workers instead. Finally, the factory you see in the background probably lacked safety equipment. The industrialists argued that safety equipment cost money but made no profits, so there was no point buying it. In the cotton mills, for example, young women like the ones you see in the painting worked for years in a factory where the air was full of fine cotton dust. When they breathed it in, it filled their lungs, causing lung disease and finally death. It was possible to buy large extractor fans to remove the cotton dust, but many industrialists argued that it was cheaper just to hire new workers when the first ones died.

We can get a better sense of the lives of these factory girls from this painting by Frederick Shields, showing the event of the Old Clothes Fair held in Manchester every Monday and Saturday. The painter observed this scene in 1875 and was amazed by the enormous number of women workers in the industrial city and by their desperation to buy second-hand clothing cheaply. There are only a few men visible in the entire crowd.

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Some young women could earn a solid wage in the factories, but they tended to economise by buying used clothing; the painter noted that many of these clothes were in very poor condition and had been cleverly repaired to make them look acceptable. In general, these women had to wear strong, plain, practical clothing for work purposes, but the woman in the foreground is looking longingly at a quite stylish gown. Working women would not normally be able to buy such a garment new, and so the fair was the only chance to purchase one second-hand. Another expensive item was good leather boots; at the right, a young woman carefully tries on a pair of second-hand boots while a man looks on.

▲ **Source 1.83** Frederick Shields, *Factory Girls at the Old Clothes Fair*, Knott Mill, Manchester, 1875

Responding to the sources

1. Describe these sources. Who created them, and when were they created?
2. How do we know that Eyre Crowe's painting of the Victoria Mills at Wigan must have been quite accurate?
3. Why do you think the industrialist Thomas Taylor bought a 'portrait' of his factory rather than of himself personally?
4. The painting in Source 1.82 shows workers who Crowe really saw and studied, but they are outside the factory and at their lunch break. How does this limit the value of Crowe's record of life in the Industrial Revolution?
5. If Crowe had gone inside the factory with his sketchbook, what else might he have seen?
6. Why would the Old Clothes Fair at Manchester have been a very important opportunity for working-class women?

FAMOUS FACE

ANNIE BESANT (1847–1933)

One of the most important and radical thinkers during the Industrial Revolution was Annie Besant (1847–1933). She was given a good education by her foster parents, and she married a clergyman in 1867. Increasingly, she turned to radical ideas, first criticising religion and speaking in favour of atheism. She wrote: 'No philosophy, no religion, has ever brought so glad a message to the world as this good news of Atheism'. She left her husband in 1873 and threw herself into two organisations: the National Secular Society and the Fabian Society. She became a supporter of what was called Free Thought (meaning the right to criticise accepted religious beliefs) and of **socialism**. She went on to found and to write her own newspaper, the *National Reformer*, which addressed quite radical subjects, notably workers' rights and the role of trade unions in protecting them. The newspaper also addressed women's rights such as the right to vote and the need for better education on methods of birth control. Since it was illegal at that time to provide advice about birth control, Besant was taken to court under charges of obscenity (making indecent comments). She won her case.

KEY TERM

socialism a political doctrine sympathetic to working people and proposing that the production and distribution of goods and wealth should be shared collectively by society

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Besant once wrote: 'Better remain silent, better not even think, if you are not prepared to act'. She chose to act. She became a committed activist on behalf of both workers generally and women specifically. One of her most dramatic protests occurred in 1888, when she turned her attention to the problems of women workers at the Bryant & May match factory in London.

The matchstick girls

In 1888, people became aware of one very toxic and dangerous aspect of the Industrial Revolution. Thousands of young women worked in the Bryant & May match-making factory in East London,[23] often doing 14-hour shifts. The factory owners had discovered that if you add white phosphorous to a match, it will light more easily.

Phosphorous is, however, poisonous, and the 'matchstick girls' had no protective clothing. Their skin became soaked with the poison. Soon, they suffered a terrible condition called 'phossy jaw', which ate away the jaw bone and even the cheeks, leaving the inside of the mouth visible. Some young women were so poisoned that they glowed a dull green colour in the night. Doctors had to remove the jaw to avoid the poison reaching the brain, because this would cause a terrible death.

The situation seemed hopeless. The factory owners felt no sense of responsibility for their workers, and the workers, being poor Irish women, had no choice but to work in conditions that would ultimately kill them.

At this point, the activist Annie Besant stepped in and wrote an article accusing industrialists of 'white slavery in London'. The managers tried to bully their workers into signing a declaration that they were happy with their pay and conditions. Besant hit back by organising a strike of some 1400 women. They gained their demands. The government, however, did not ban the use of phosphorous until 1906.

▲ **Source 1.84** Bryant & May 'Pearl' safety matches from 1890–91

◄ **Source 1.85** Cartoon showing police brutality against the match makers' demonstration, 1871, from English newspaper *The Days' Doings*, May 6, 1871. Though this protest took place before the phossy jaw protests of 1888, it shows that female matchstick workers were prepared to fight for their rights.

23 There is a Bryant & May match-making factory in operation today, but it is not the same company – despite the name – and it is not responsible for any poisoned workplaces.

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Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 1.10

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 How did Eleanor Coade create a career for herself in the male-dominated Industrial Revolution?
2 How could it be argued that the Industrial Revolution was really quite favourable to women?
3 What did Annie Besant do to try to improve life for working women?
4 What was one of the main health risks of working in a cotton factory?

Interpret

5 What does the case of the matchstick girls tell us about the dangers of industrial production without legal safety regulations?
6 What are the limitations of 'social conscience' paintings as primary sources about the Industrial Revolution?

Argue

7 Describe how a working-class woman might evaluate her decision to leave the farm and come to the city for industrial work. Draw up a list of positives and negatives, and draw a conclusion as to which are dominant.

Extension

1 Investigate the career of Lady Mary Montagu. Using the internet, discover how the process Montagu calls 'ingrafting' (inoculation) works to protect people from a disease like smallpox.

Conclusion: why does it matter today?

Some lingering questions about the Industrial Revolution

In this final section of the chapter, let's consider some of the burning questions arising from this topic.

Did the Industrial Revolution cause an increase in the slave trade?

The trade of slaves from Africa existed well before the Industrial Revolution. However, the Industrial Revolution caused a massive increase in the demand for raw materials, such as cotton. This led to a reliance on cotton from the American plantations, and plantation owners bought thousands of slaves who were shipped to America in inhuman conditions. It is true, however, that Britain pursued a successful campaign against the practice of slavery and succeeded in having the trade abolished in its colonies.

KEY TERM
colonies settlements belonging to a nation that are made on land in another country

Did the Industrial Revolution cause the spread of European empires?

Empires had risen well before the Industrial Revolution. However, the Industrial Revolution increased the *need* for **colonies** and also provided the *means* to take over and control more countries.

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The first cause of the new wave of **imperialism** was need. The second cause of imperial expansion was the means. European countries were by now equipped with powerful steamships that could sail efficiently around the globe. These ships were also equipped with much more efficient and deadly cannon, another product of the Iron Revolution.

Did the Industrial Revolution contribute to the outbreak of World War I?

The Industrial Revolution was not the main cause of the outbreak of war in 1914. It was, however, the cause of tensions between the European powers before the war. Countries such as Britain, France and Belgium competed to take over poorer countries to make them into colonies.

Owning colonies was a form of prestige, but more importantly they created wealth. A colony was the source of raw materials for European factories, of cheap labour and of a market for Europe's goods. When the newly formed country of Germany began competing for colonies, tensions increased. For example, in 1911, the Agadir Crisis – an argument between France and Germany over land in Morocco – very nearly sparked armed conflict, but was resolved.

Did the Industrial Revolution help create global warming?

Ever since the beginning of history, human beings have consumed food and other materials, and have left waste behind them. The Industrial Revolution, however, created an enormous increase in the amount of natural resources being used, in the amount of goods produced, in the amount of energy used to transport them and in the amount of waste left behind. For some time, humans were so focused on the gigantic process of production that they might have assumed that natural resources were endless.

Nonetheless, this view of the northern industrial city of Manchester in 1854 (Source 1.86) makes it very clear how much smoke was being pumped into the atmosphere. Contemporaries did notice this pollution and commented on how dirty the cities were. It still took some time for people to really think about the impact upon the planet.

▲ **Source 1.86** William Wyld, *Manchester from Kersal Moor*, 1852

Curiously, it was not until the moon landing in 1969 – when astronauts looked back and saw Earth spinning in space – that many people realised that Earth and its atmosphere were finite (limited) and that humans could not go on making pollution endlessly. If the Industrial Revolution had a fatal weakness, it was that it devoted all of its energy to *using* natural resources and producing goods, but very little to *controlling and disposing* of waste. It is only now that we are playing the catch-up game of recycling, but it may be too little, too late.

Additional content
Why do historians still debate for and against the Industrial Revolution?

The problem of waste is most dramatically seen at Ghazipur in New Delhi, India. A 'rubbish mountain' there is rising by 10 metres each year and has now

KEY TERM
imperialism the domination of one or more nations by another, which seeks to use the wealth and people of the dominated nation for its own interests

▲ **Source 1.87** Photograph of Earth seen from the moon, taken in 2015

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KEY TERM

global warming a rise in Earth's average temperature due to the atmosphere's inability to release heat because of the growth of greenhouse gas emissions

reached a height of 65 metres, almost as tall as the famous palace of the Taj Mahal. It covers the same area as 40 football ovals.[24] The mountain continues to grow, because no site has been found for a new one. People who live in the area have been forced to move out. New Delhi also has the worst air in India.

What might a fifth Industrial Revolution look like?

After thinking about the impacts of the four Industrial Revolutions, it might be time to consider what a fifth Industrial Revolution might look like. We might start our reflection by attending a funeral. In August 2019, the people of Iceland held a solemn funeral, not for a person, but for a natural feature: a glacier. They marked the death of Iceland's first glacier, due to **global warming**. They erected a plaque (pictured in Source 1.90):

A letter to the future

Ok is the first Icelandic glacier to lose its status as a glacier.

In the next 200 years all our glaciers are expected to follow the same path.

This monument is to acknowledge that we know what is happening and what needs to be done.

Only you know if we did it.

▲ **Source 1.88** Inscription on the plaque dedicated to the Ok (Okjökull) glacier

▲ **Source 1.89** The gigantic rubbish mountain at Ghazipur, India

24 Want to find out more about the giant rubbish pile in India? Use Google to find articles on this man-made problem.

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▲ **Source 1.90** Photo of the actual plaque dedicated to the Ok glacier in Iceland

Additional content
To learn more about the Ok glacier, visit the digital versions of this textbook.

David Attenborough's warning: are we seeing the final stage of the Industrial Revolution?

The Industrial Revolution had significant environmental impacts, and we who are living through its later stages today are witnessing them. In 2019, eminent naturalist Sir David Attenborough warned in an interview that humanity was approaching its last chance to moderate its impact on the global environment. He stated that, if we do not decrease global warming, within a few years it will be too late to save the planet.

In vivid terms, he described how humanity enjoys enormous power – so much so that we can destroy whole ecosystems (systems of life in the natural world) without even being aware that we have done so. When asked to explain why, he said that there is a basic disconnection between human society and the natural world. He stated that this disconnection began with the Industrial Revolution and has been speeding up ever since.

Sadly, the older generation of people who write books like this one have largely failed to reverse, or even to slow, the process of life-threatening environmental damage. This means that the generation of people who are reading these pages in secondary classrooms now will inherit this global problem and will be challenged to solve it. If they can do so, they may well achieve the greatest Industrial Revolution of all time.

Additional content
To learn more about David Attenborough's research, visit the digital versions of this textbook.

▲ **Source 1.91** David Attenborough

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Making thinking visible

I used to think that the Industrial Revolution was …
Now I think that …

In this visible thinking routine, you are asked to track the difference between what you knew about the Industrial Revolution before starting this chapter and what new understandings you have acquired at the completion of this chapter.

Using these stem sentences, write a paragraph explaining what you previously knew about the Industrial Revolution and another paragraph explaining what you now understand, additionally, about this event.

1A I used to think that the Industrial Revolution started in the twentieth century …
1B Now I understand that the Industrial Revolution began in …

2A I used to think that the Industrial Revolution was a bad experience for working people because …
2B Now I understand that the Industrial Revolution …

3A I used to think that the Industrial Revolution did nothing but pollute the environment and cause global warming …
3B Now I understand that the Industrial Revolution had positive outcomes …

4A I used to think that the Industrial Revolution only improved life in Britain …
4B Now I understand that the Industrial Revolution …

5A I used to think that the Industrial Revolution was only about machines.
5B Now I understand that the Industrial Revolution …

6A I used to think that the Industrial Revolution was all good because it was about modern technology and progress.
6B Now I understand that the Industrial Revolution …

7A I used to think that the Industrial Revolution only happened way in the past.
7B Now I understand that the Industrial Revolution …

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3 Key terms and names

For each key term or name from the chapter, write a sentence explaining its significance:

1. Enclosure Movement
2. railway mania
3. Luddites
4. inoculation
5. Coade stone
6. *Poor Law*
7. blackleg labour
8. petition
9. Sankey Brook Navigation.

4 Research task

Visit the Interactive Textbook to access three different research tasks:

- Talent quest: Who was the most significant inventor of the Industrial Revolution and why?
- Industrial Revolution time capsule
- The Industrial Revolution in the world at large.

5 Extended-response question

'Despite appearing to promise great benefits by industrial progress, the Industrial Revolution has done more harm than good.'

Do you agree with this statement? Explain some of the benefits of the Industrial Revolution. Explain the problems it caused. Decide whether it has in fact done more harm than good. In your answer, quote facts, figures, names, dates, and statistics.

6 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about the Industrial Revolution

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CHAPTER 2

Aboriginal or Torres Strait Islander peoples should be aware that this chapter contains images and names of people who have passed away.

Australia (1750–1918)

Setting the scene: what we have forgotten

What looks like a grey concrete slab sits unobtrusively on what is now the city campus of RMIT University in the centre of Melbourne. It is relatively unadorned and often used by students and passers-by as a place to sit in the sun to have their lunch or to take a break from busy city life.

Most people passing by do not understand the significance of the concrete slab or the names of the two proud Australians that are engraved on the side of it:

'Tunnerminnerwait' and 'Maulboyheenner'

These names are unknown to many Australians; these names are significant to all Australians.

The grey concrete slab commemorates two fallen Australians who fought for their country against an invasion. It commemorates a war that took place across Australia. It commemorates a conflict some deny ever happened.

KEY TERM
massacre the killing of large numbers of people

The year was 1842 and 6000 Melburnians gathered at the intersection of what is now Franklin and Bowen Streets to witness the execution of Tunnerminnerwait and Maulboyheenner. It was the first public execution in Melbourne.

▼ **Source 2.1** Tunnerminnerwait (left) and Maulboyheenner (right) were hanged in Melbourne in 1842

Tunnerminnerwait and Maulboyheenner were from Tasmania. They had been captured as boys and brought to Melbourne (then called the Port Phillip District). They had been brought over by George Augustus Robinson, the 'Protector of Aborigines', to help him establish a relationship with the First Australian nations in the Port Phillip District. Robinson was investigating violent conflict in the western parts of the district between First Australians and white settler groups. The conflict had seen hundreds of First Australians massacred by whalers. After witnessing the site of the **massacre**, Tunnerminnerwait and Maulboyheenner, along with three women, abandoned Robinson's side and waged a six-week guerrilla war against the whalers that had massacred so many of the local people.

In the course of the conflict, Tunnerminnerwait and Maulboyheenner stole several rifles and killed two white whalers. The circumstances surrounding these deaths is unclear, with some experts suggesting it was in response to the white whalers mistreating women from the local First Australian nations. Tunnerminnerwait and Maulboyheenner were captured and tried in Melbourne for the murder of the two white men and were sentenced to be hanged for the crime. They were defended in their trial by the famous lawyer Redmond Barry, who would go on to become the inaugural Chancellor of the University of Melbourne.

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◄ **Source 2.2** Ballarat artist Aunty Marlene Gilson's depiction of the hanging, *Tunnerminnerwait and Maulboyheenner*, 2015

Many in Melbourne protested the sentence, including several prominent newspapers. Eventually, the execution was carried out. Tunnerminnerwait and Maulboyheenner were hanged in Melbourne for fighting to defend their people against violent invaders from another country

The hangman assigned to their execution made several errors, and one of the two men died a slow and agonising death. They were buried in a cemetery that now sits under the site of the Queen Victoria Market.

In 2016, the City of Melbourne erected the memorial for the execution of Tunnerminnerwait and Maulboyheenner. This was the first monument in Australia to recognise what has become known as the Frontier Wars between white settlers and First Australians defending their land. The Frontier Wars took place across Australia but remain, to many, an unknown chapter in the long history of our country.[1]

▲ **Source 2.3** The memorial site artwork designed by artists Brook Andrew and Trent Walter lies largely ignored in Melbourne's CBD. Their artwork, *Standing by Tunnerminnerwait and Maulboyheenner*, is situated on a small reserve at the intersection of Victoria and Franklin Streets, close to where the two men were hanged.

MAKING THINKING VISIBLE 2.1

I used to think …

Based on what you have read so far, complete the following two sentences

I used to think …

But now, I think …

1 The story of Tunnerminnerwait and Maulboyheenner can be found in more detail in Kate Auty and Lynette Russell's *Hunt Them, Hang Them: 'The Tasmanians' in Port Phillip 1841–42*, 2016.

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Chapter overview

Introduction

Australian history is long – very long. Australia is home to the longest continuing civilisation in the entire world. First Australian history on the continent can be traced back beyond 65 000 years ago. In that time, First Australians managed and lived sustainably with the Australian landscape.

Since 1788, Australia has been radically transformed – environmentally, politically and socially. British invasion and settlement had devastating impacts on First Australian cultures and led to widespread dispossession and violence. The discovery of gold in Victoria brought waves of immigration and helped make Melbourne one of the richest cities in the world at that time. As the British colonies developed over the decades, working-class Australians fought to make the country fairer. Australia became known as a 'working man's paradise' as it began to take its place in the world at the end of the nineteenth century.

This chapter explores the history of Australia from pre-invasion Australia through to Federation and the eve of World War I.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What was the significance of the British invasion of Australia in 1788?
- What were the key features of Australian colonial society?
- What were the causes and effects of British contact and settlement on Australia's existing nations and environment?
- How did significant ideas shape post-invasion Australian society?
- How did life change and how did it stay the same in colonial Australia for various groups?
- What were the perspectives of different groups in colonial Australia?
- How did different groups in Australia respond to global changes towards the end of the nineteenth century?

Historical skills

After completing this chapter, you should be able to:

- Explain what 'chronology' and 'continuity and change' mean in the study of History
- Understand and evaluate different historians' points of view
- Develop historical empathy with people from the past
- Interpret primary sources in both print and visual form
- Evaluate the reliability of primary sources
- Correctly use special terms specific to the topic under study
- Use factual evidence (dates, statistics, examples) to support an argument.

► **Image on next page:** Detail from a painting by John Glover, 1831, titled *The Bath of Diana, Van Diemen's Land, 1837*. By the time John Glover arrived from England in Tasmania (originally named Van Diemen's Land) in 1831, it was too late (it is thought) to see Aboriginal people living freely in the bush. However, from the moment of his settling in the colony, Glover was acutely interested in the Aboriginal people. Here, he presents an imagined scene of their idyllic and untroubled life before the European invasion.

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Timeline of key events

What came before this topic?

- **Creation:** According to the histories of the Kulin people of the Port Phillip area, the great eagle spirit Bunjil created the mountains, rivers, flora, fauna and laws for humans to live by.
- **120 000–65 000 BCE:** Scientific research suggests that First Australians progressively arrive on the continent, eventually spreading to the Torres Strait Islands and Tasmania.

Aboriginal rock painting at Bunjil Shelter, located in the Black Range Scenic Reserve near Stawell, Victoria. This is the only known rock art painting of Bunjil.

Aboriginal people digging for yams

James Cook

8000 BCE
First Australians develop agricultural practices, such as fire-stick farming, aqua-farming, yam farming and other land management techniques

1000 BCE First Australian villages and trade routes develop across Australia

1606
Dutch Captain Willem Janszoon becomes the first European to set foot on Australian soil

1650
Makassans trade with First Australians

1770
British Lieutenant James Cook reaches the eastern coastline of Australia

1788
The First Fleet arrives in Port Jackson, creating a British colony on lands of the Eora peoples

Timeline questions

1 Consider the timeline. How old are First Australian histories? Compare this to the histories of ancient civilisations such as Egypt, Greece and China.

2 Research and note down what is meant by the term 'Frontier Wars' with reference to the early 1800s. Why do you think these wars would be significant?

First Fleet lands at Botany Bay

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What came after this topic?

- **1914–18:** World War I erupts in Europe. Thousands of Australians fight overseas, including approximately 1000 Aboriginal and Torres Strait Islander peoples.
- **1939–45:** World War II erupts. Australia is threatened with invasion by Japan.
- **1967:** The Aboriginal referendum passes, counting First Australians as part of the general population for the first time.
- **2007:** 'The Apology' is made to the Commonwealth Parliament. The Prime Minister, Kevin Rudd, formally apologises to Aboriginal and Torres Strait Islander peoples for the Stolen Generations.
- **2017:** The *Uluru Statement from the Heart* calls for the establishment of a 'First Nations Voice' in the constitution.

An Australian soldier lies wounded in the foreground, as hundreds of other soldiers move among the dead and wounded on the beach at Anzac Cove at Gallipoli in Turkey on 25 April 1915, during World War I

1803
The city of Hobart is founded on the lands of the Mouheneenner people

1804
Beginnings of the Stolen Generations

Early 1800s
European explorers cross from Van Diemen's Land (Tasmania) to found the city of Melbourne on the lands of the people of the Kulin nation

Early 1800s
The Frontier Wars rage across Australia, with conflict and violence against First Australians widespread

1851
The Port Phillip District (Victoria) becomes an independent British colony

1850s
The gold rush in Ballarat brings waves of immigration to Victoria and vast wealth to Melbourne

1854
The Eureka Stockade brings conflict between goldminers and authorities in Ballarat

Eureka Stockade

1901
The British Colonies in Australia federate to form the Commonwealth of Australia

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2.1 The British invasion of Australia

FOCUS QUESTION

What was the significance of the British invasion of Australia in 1788?

Introduction

When the British arrived in Australia, they declared it ***terra nullius*** (literally: 'nobody's land') and progressively established **colonies** across the continent. This declaration ignored the fact that Australia was home to the longest continuing civilisation in the world with more than 65 000 years of history on the Australian continent. The colonies that the British **founded** were settled on land that had, for tens of thousands of years, been managed and cared for by the various First Australian nations. These nations had lived sustainably with the land since before the emergence of any ancient civilisation in Egypt, China or India.

KEY TERMS

terra nullius the British legal term meaning land that did not belong to anyone

colonies settlements belonging to a nation that are made on land in another country

founded when a city is established

First Australians before invasion

First Australians have lived on and managed the continent of Australia for tens of thousands of years. Current research suggests that continuing First Australian cultures can be traced back beyond 65 000 years ago, making it the longest continuing civilisation on Earth. Compared to other civilisations, First Australian cultures and civilisation are ancient and, more importantly, still exist with us today, unlike any other ancient civilisation.

Traditional beliefs

The histories of the Kulin people of Melbourne state that the great eagle spirit Bunjul created humans and taught them how to survive and the laws to live by. This is one of many creation stories from around Australia. It is important to know that Aboriginal and Torres Strait Islander cultures are diverse and there are many different languages and creation stories that vary from nation to nation. There is not one set of beliefs or language; there are hundreds spread across the different nations of First Australians. There is no one 'Aboriginal and Torres Strait Islander culture'; rather, there are hundreds, each special and unique in its own way.

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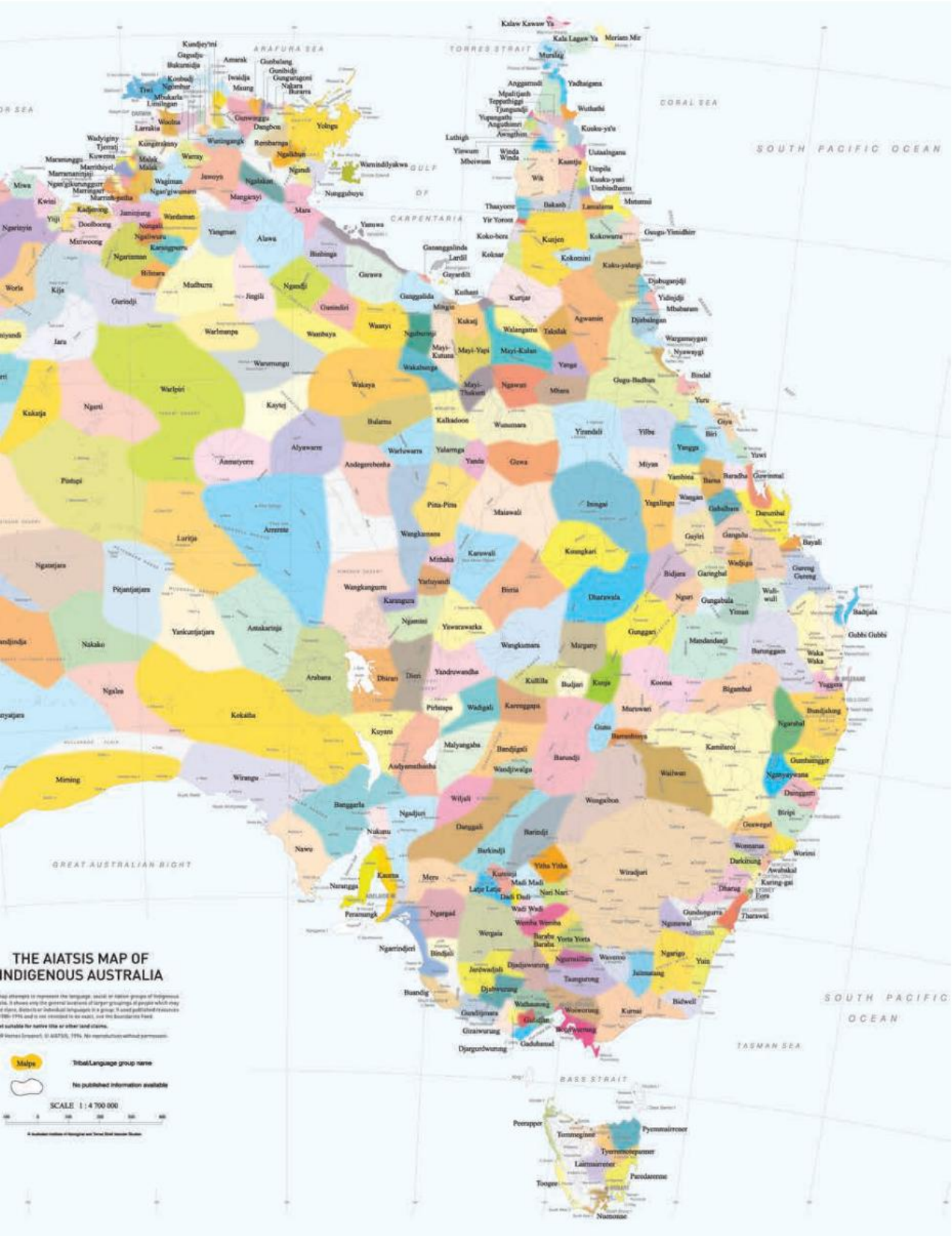
▼ **Source 2.4** This map attempts to represent the language, social or nation groups of Aboriginal Australia. It shows only the general locations of larger groupings of people, which may include clans, dialects or individual languages in a group. It uses published resources from 1988–94 and is not intended to be exact nor the boundaries fixed. It is not suitable for native title or other land claims. David R. Horton (creator), © Aboriginal Studies Press, AIATSIS, and Auslig/ Sinclair, Knight, Merz, 1996. No reproduction without permission. To purchase a print version visit: www.aiatsis.ashop.com.au/



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Video
Australia before Endeavour

Scientific research

Scientific research indicates that First Australians migrated to the continent more than 65 000 years ago. During this time, the Australian mainland was connected to Asia via a land bridge that gradually disappeared following sea-level rises at the end of the last glacial period around 6000 years ago. A similar land bridge also allowed First Australians to eventually arrive in Tasmania from the mainland.

Over thousands of years, First Australians worked and managed the land in a variety of ways. Fire-stick farming, eel traps and yam farming are just a few examples of the ways that First Australians used agriculture and land-management techniques to cultivate food crops and live sustainably on the land.

Think back to what you have previously learned about First Australian cultures in previous years. What do you already know?

▼ **Source 2.5** The First Australians developed sophisticated agricultural practices over thousands of years, cultivating the land for generations. In this sketch by one of the first of the British colonists, women are shown digging for yams at Indented Head, near Geelong, Victoria, in 1835.

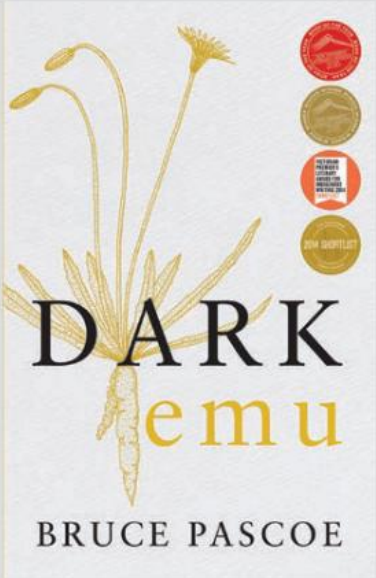
MAKING THINKING VISIBLE 2.2

Connect, extend, challenge

1. **Connect:** How are the ideas and information presented connected to what you already knew?
2. **Extend:** What new ideas did you get that extended or pushed your thinking in new directions?
3. **Challenge:** What is still challenging or confusing for you to get your mind around? What questions do you now have?

ACTIVITY 2.1

Using historical sources as evidence



▲ **Source 2.7** Bruce Pascoe's *Dark Emu*

In the last few years, there have been a number of significant books written about the history of Australia before European arrival. These books specifically focus on the relationship between First Australians and the land they managed. Following are excerpts from three of these books. Bruce Pascoe's work is particularly interesting as he uses the journals and diaries of the Europeans to show how they saw First Australian land management practices.

> These journals revealed a much more complicated Aboriginal economy than the primitive hunter-gather lifestyle we had been told was the simple lot of Australia's First People. Hunter-gatherer societies forage and hunt for food and do not employ agricultural methods or build permanent dwellings; they are nomadic. But as I read these early journals I came across repeated references to people building dams and wells, planting, irrigating and harvesting seed, preserving the surplus and storing it in houses, sheds or secure vessels, creating elaborate cemeteries and manipulating the landscape – none of which fitted the definition of hunter-gatherer. Could it be that the accepted view of Indigenous Australians simply wandering from plant to plant, kangaroo to kangaroo in hapless opportunism was incorrect?

▲ **Source 2.6** Bruce Pascoe, *Dark Emu*, 2018, p.2

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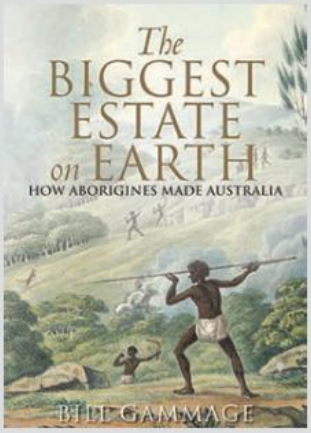
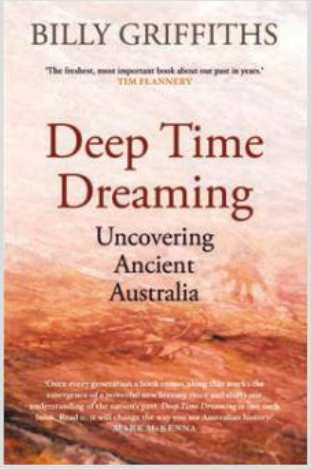


▲ **Source 2.9** Bill Gammage's *The Biggest Estate on Earth*

What plants and animals flourished were related to their management. As in Europe land was managed at a local level. Detailed local knowledge was crucial. Each family cared for its own land, and knew not merely which species fire or no fire might affect, but which individual plant and animal, and their totem and Dreaming links. They knew every yard intimately, and knew well the ground of neighbours and clansmen, sharing larger-scale management or assuming responsibility for nearby ground if circumstance required.

▲ **Source 2.8** Bill Gammage, *The Biggest Estate on Earth*, 2012, p. 3



▲ **Source 2.11** Billy Griffiths's *Deep Time Dreaming*

Over millennia, they [First Australians] explored and colonised every region, transforming the terrain as they moved, making the country their own through language, song and story. They harnessed flame to create new ecosystems, dug the earth to encourage crops, and built water controls to extend the natural range of their resources … Theirs is a remarkable story of transformation and resilience.

▲ **Source 2.10** Billy Griffiths, *Deep Time Dreaming*, 2018, p. 1

Responding to the sources

1. Undertake some research on each author.
   - a What is their background?
   - b When did they write their book?
   - c Why did they write their book?
2. Identify some key vocabulary in each excerpt.
3. What are the key claims being made by each author?
4. What are the similarities between the excerpts? Are there any differences?
5. Using the sources, explain how First Australian peoples interacted with the land. In your response, quote from some of the excerpts from Sources 2.6, 2.8 and 2.10.

Europeans reach Australia

First Australian cultures spread across Australia over thousands of years, but these cultures were not isolated from the rest of the world. First Australian nations established trading relationships with societies beyond the Australian continent into the Asian and Pacific region. One of the most well-known of these traders is the Yolngu people of the Northern Territory. The Yolngu people established trading relationships with communities in Indonesia, known as the Makassans, hundreds of years before the British arrived in Australia. While historians disagree about exactly when this trade began, it is generally agreed to have begun well before Lieutenant James Cook reached Australia.

Europeans discovered sea routes to Australia and began to visit in the seventeenth century. Dutch, British and other explorers came to Australia over an extended period of time. The first European to reach Australia and set foot on the continent was Dutch Captain Willem Janszoon in 1606, landing on the western shore of Cape York in Queensland. In the decades that followed, multiple Europeans are recorded as travelling to, and landing on, the shores of Australia.

KEY HISTORIAN
BRUCE PASCOE

Video
Historian Bruce Pascoe

Bruce Pascoe is a historian of Tasmanian, Bunurong and Yuin descent. He is an award-winning author whose book *Dark Emu* has opened new conversations about Australia's agricultural history.

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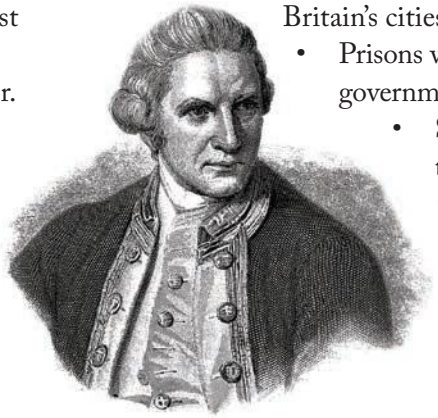
British Lieutenant James Cook, often incorrectly listed as the first European to reach Australia, reached the eastern coastline of Australia on 19 April 1770. He observed First Australian groups at Brush Island near Bawley Point several days later. Lieutenant Cook made landfall on the continent itself on 29 April at what he would call Botany Bay because of the unique species he found there. Cook made direct contact with the First Australian groups in the region.



▲ **Source 2.12** James Cook

The First Fleet

Lieutenant James Cook returned to England. His voyage did not spark any immediate push to colonise the continent, but around 15 years later the British Government decided to establish a **penal colony** in what is now New South Wales. The decision to establish a colony was driven by several factors, including the following:

KEY TERM

penal colony a colonial settlement where a country sends its prisoners

- Britain had a policy of transporting its prisoners to its colonies, but after the American Revolution of 1776 Britain needed a new location.
- The Industrial Revolution was overcrowding Britain's cities, leading to a rise in crime.
  - Prisons were overflowing and the government needed a solution to the crisis.
    - Sir Joseph Banks, who had travelled with Lieutenant Cook, told a parliamentary inquiry that Botany Bay would be a perfect place to establish a penal colony.
      - Significant natural resources meant the British believed a colony at Botany Bay would be able to sustain itself.

Lieutenant Arthur Phillip, a retired naval officer, was chosen to lead a fleet to Botany Bay and establish a British colony. Phillip arrived at Botany Bay on 18 January 1788 but did not like the conditions there. He sailed the fleet north to Port Jackson, which he described as the 'finest harbour in the world'. He named the town he established there after British Home Secretary Lord Sydney (the minister who had sent him on his journey). Arthur Phillip established his colony on the lands of the Eora people who had managed this land for tens of thousands of years.

▲ **Source 2.13** The route of the First Fleet in 1787–88

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The early years of the colony were hard, and the convicts found it difficult to adapt to the new environment and climate of Sydney. The Eora nations of the surrounding area reacted in different ways to the invasion of their lands by the British. Some communities were generous with the **colonisers** while some were combative. As the colony expanded, it took over many areas of cultural significance to the Eora people. These sites remain areas of significance to Eora people today.

Different colonies, different contexts

The Sydney colony was followed by the establishment of a second colony in Risdon Cove in Van Diemen's Land (what is now Hobart, Tasmania) in 1803. This colony was established on the lands of the Mouheneenner people and also served as a penal colony for the British Empire.

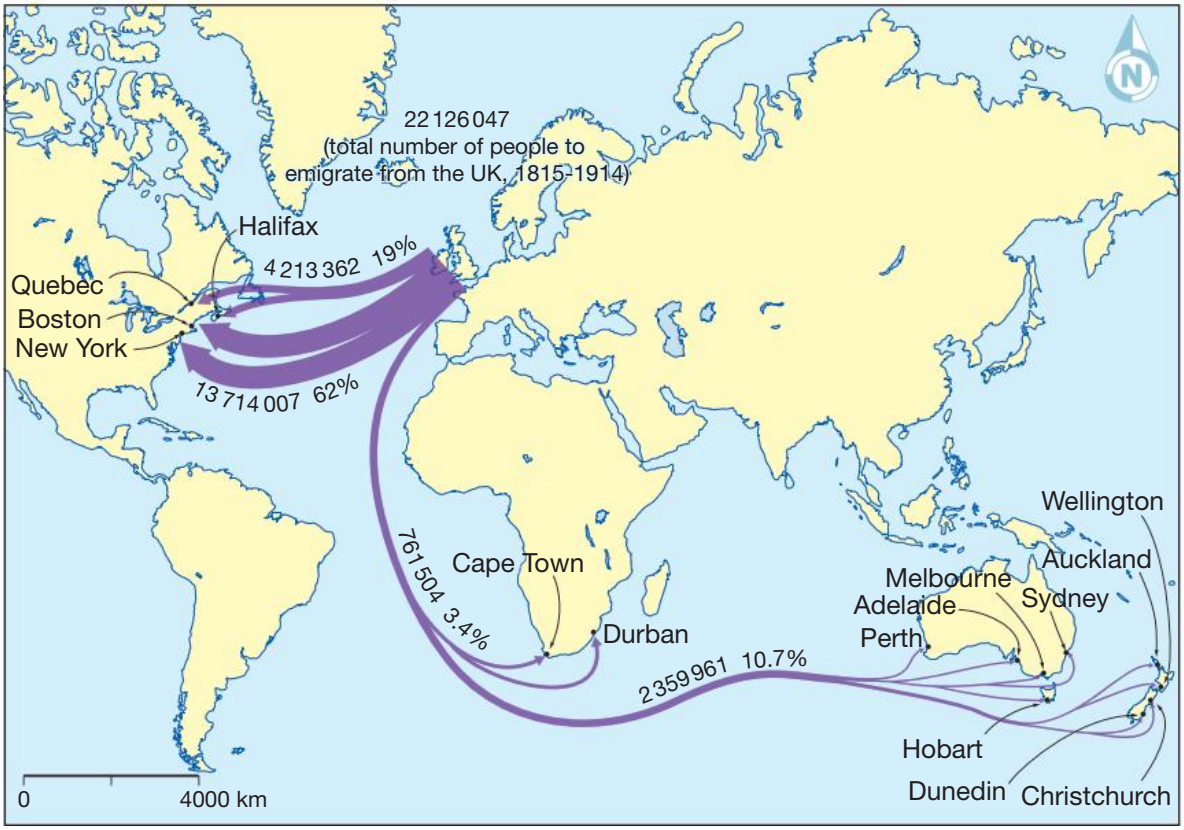
Other colonies were established over the following decades around the continent:

- 1829 – Establishment of the Swan River Colony (shortly afterwards renamed Western Australia)
- 1836 – Establishment of the Province of South Australia
- 1851 – Establishment of the independent colony of Victoria
- 1856 – Van Diemen's Land is renamed as the colony of Tasmania
- 1859 – Establishment of the colony of Queensland

Each of these colonies had unique characteristics, and each was established on the lands of First Australians. The areas the colonies controlled gradually expanded, eventually covering the entire continent.

KEY TERM

colonisers individuals who set up settlements in other countries for their home nation



▲ **Source 2.14** Emigration patterns from the United Kingdom over the period 1815–1914, showing immigrants from the UK by numbers and as a percentage of the total number who left the UK. In total, some 22 126 047 people emigrated from the UK in this time.

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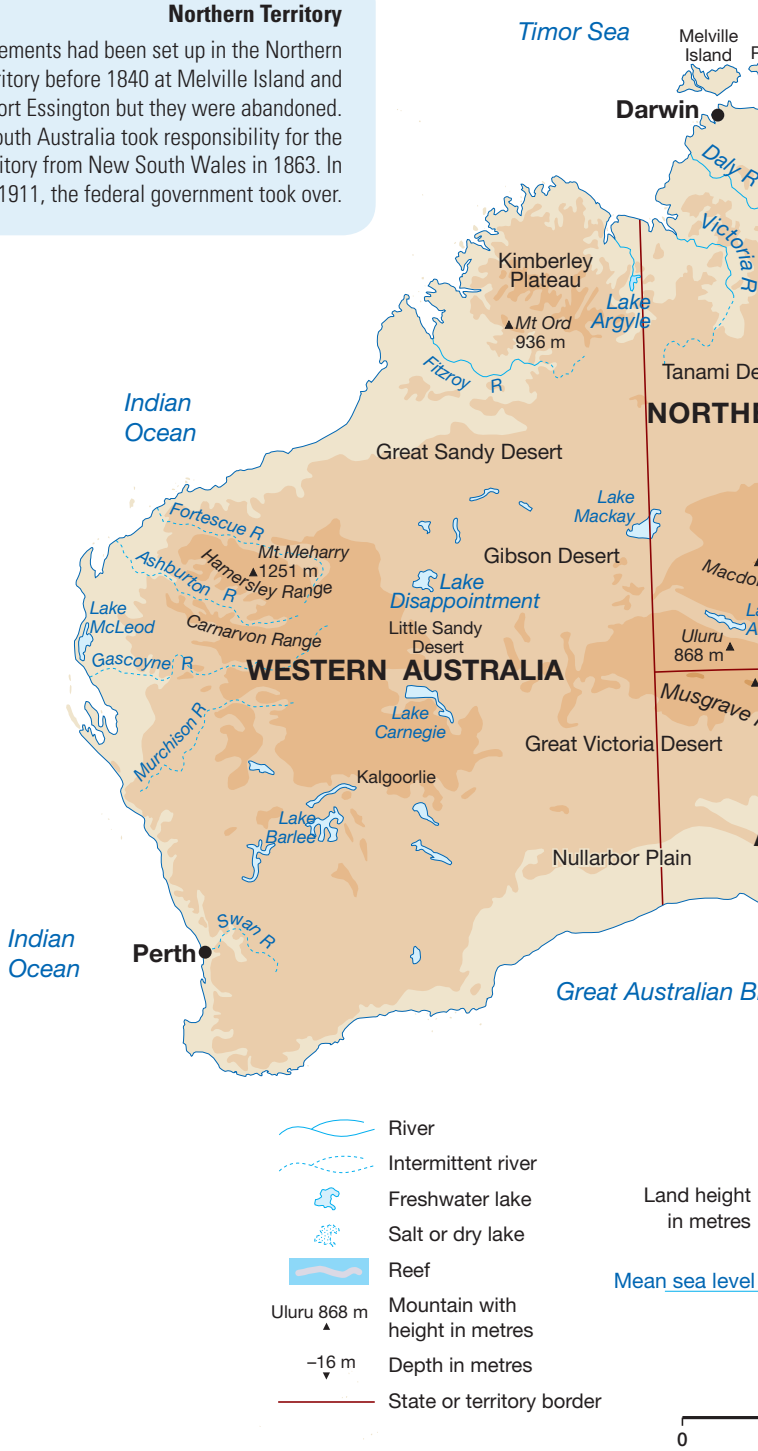
The establishment of the other Australian colonies

Northern Territory

Settlements had been set up in the Northern Territory before 1840 at Melville Island and Port Essington but they were abandoned. South Australia took responsibility for the territory from New South Wales in 1863. In 1911, the federal government took over.

Western Australia

Concerns over French interest and exaggerated reports of the area's fertility prompted the British Government to support a scheme by Thomas Peel to establish a settlement around the Swan River. James Stirling was appointed governor and by 1830, 4000 migrants had arrived. However, richer settlers grabbed the best land first. There was a shortage of labourers and the soils were not as fertile as first thought. By 1832, the population had dropped to 1500. To assist the growth of the colony, the British Government agreed to transport convicts to the colony; transportation eventually ended in 1868. It took the discovery of gold at Kalgoorlie in the 1890s to finally attract large numbers of free settlers.



South Australia

Unlike the other colonies, South Australia was established in a planned manner based on a theory of colonisation, worked out by Edward Wakefield. Wakefield argued that the price of land should be kept relatively high. Poorer migrants could then provide a labour force for the richer settlers. Money gained from land sales could be used to subsidise poor labourers to emigrate. In 1833, he formed the South Australia Association. The first colonists landed at Kangaroo Island in 1836. However, the colony's surveyor-general, Colonel William Light, found a much better spot where today Adelaide stands. Governor John Hindmarsh accepted Light's choice. Wakefield's principles did not work out and the colony accrued debts. By 1842, Governor George Grey had taken control and sought to run the colony along similar lines to the other colonies. Grey's careful economising, the development of wheat and later mineral discoveries meant South Australia prospered.

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▲ **Source 2.15** The establishment of the other Australian colonies

Queensland

In 1824, NSW Governor Thomas Brisbane established a place of secondary punishment at Moreton Bay. A convict settlement was established at Redcliffe but soon moved to the present site of Brisbane. The convicts were removed in 1839 and from 1842 free settlers were allowed to take up land grants. Moreton Bay developed quickly and became a key export post for wool farmers in the Darling Downs west of the ranges. In 1859, Queensland became a separate colony. Queensland produced wool and beef, and became a major sugar cane exporter. Kanaka labourers from Pacific Islands were often kidnapped and forced to work on the sugar plantations.

Van Diemen's Land (Tasmania)

John Bowen settled at Risdon Cove in the south in 1803. Collins' group arrived in 1804 and he moved the settlement to Hobart. By 1806, a settlement under William Paterson had been set up at Launceston in the north. In 1821, a place of secondary punishment was started at Macquarie Harbour; another was set up at Port Arthur in 1832. Habitual convict offenders and the most difficult convicts to control received secondary punishment in isolated locations. Conditions were primitive and punishments were extremely severe. The main economic activities were wheat, sheep and whaling, and mining became significant from the 1870s. The island became a separate colony in 1825 under Governor George Arthur. In 1856, the name was changed to Tasmania.

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Founding of Melbourne and the Port Phillip District

The establishment of Melbourne was a key moment in Victorian history. Unlike New South Wales, the Port Phillip District – the name the British gave to the lands of the Kulin Nation – was not established as a penal colony.

In 1803, French explorers were discovered mapping Port Phillip, causing alarm in Sydney and in England. The French were colonial rivals of the British. British authorities wanted to ensure that the French did not establish a presence on the Australian continent. Some attempts were made by Lieutenant Colonel David Collins to establish a settlement, but they failed. Collins and his soldiers then crossed over to Van Diemen's Land (Tasmania). It was not until 1835 that explorers from Van Diemen's Land returned to Victoria and established a small settlement in the Portland region of western Victoria.

John Batman, in 1835, established an unofficial larger settlement in the Port Phillip region. This settlement was eventually made official and named after the British Prime Minister of the day, Lord Melbourne. The first officially appointed British authority in the area was Lieutenant Governor Charles La Trobe. The Port Phillip District was officially a part of the colony of New South Wales until 1851, when it became an independent British colony and was named Victoria.

FAMOUS FACE

JOHN BATMAN (1801–1839)

John Batman is a significant figure in Victorian history. He founded the city of Melbourne, which he initially wanted to name Batmania. There are many things around Melbourne named after him, including a train station, a federal electorate in the northern suburbs (which was renamed 'Cooper' in 2018, after the First Australian activist William Cooper) and various streets and parks. Batman is most famous for the 'treaty' that he negotiated with the First Australian owners of the region. This 'treaty' and Batman's reputation are matters of historical **controversy**.

KEY TERMS

controversy a matter of debate or disagreement

Elders leaders in a community who have significant life experience

rogue an individual who is untrustworthy and unreliable

slaughter the killing of a large number of people

Batman's treaty is the only recorded agreement between the British colonisers and First Australian communities. There is disagreement about who exactly signed the treaty and what they understood about it. It is claimed that eight Kulin **Elders** from the Wurundjeri people signed the document. Some historians claim that the 'signatures' were actually made by one of the First Australians from the Sydney area that Batman had brought with him. Also, since no one present spoke the same language, it is doubtful that the local Elders understood what it was they were being asked to sign. Despite these doubts, Batman claimed up until his death that the treaty was valid.

Batman's broader legacy is also disputed. He engaged in Frontier Wars conflict in Van Diemen's Land (the 'Black War' of 1830), and many of his contemporaries described him in unflattering ways:

> a **rogue**, thief, cheat and liar, a murderer of blacks and the vilest man I have ever known – John Glover, neighbour of John Batman in Van Diemen's Land
>
> a bad and dangerous character – George Augustus Robinson, government official and 'Protector of the Aborigines'
>
> He has much **slaughter** to account for – George Arthur, Lieutenant-Governor of Van Diemen's Land from 1824 to 1836

▲ **Source 2.16** Contemporaries' views on John Batman's character

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▲ **Source 2.17** John Wesley Burtt, *Batman Signing the Treaty with the Aboriginals*, 1875

FAMOUS FACE

WILLIAM BUCKLEY (1780–1856)

William Buckley was a convict who was transported to Australia for 14 years from Great Britain for knowingly accepting a bolt of stolen cloth. He claimed he did not know it was stolen. He was sent to help establish a new settlement in Port Phillip (the first attempt, which eventually failed). When they found out that they were going to be sent to Van Diemen's Land, Buckley and several other convicts escaped into the bush.

Buckley spent the next 32 years living among the Waddawurrung people of the Bellarine Peninsula. He learned their language and became an individual of considerable respect among them. Buckley later made contact with John Batman's newly established settlement and was granted a pardon by Lieutenant-Governor Arthur of Van Diemen's Land. He became an interpreter for the local First Australian communities.

In one famous interaction while Buckley was working for the Port Phillip authorities, Buckley accompanied Joseph Gellibrand on a trip west of Melbourne. Gellibrand recorded the following in his diary:

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KEY TERMS

native individuals who are born and raised in a particular area

cooey (cooee) a loud, long call to attract attention

February 5th, 1836: I directed Buckley to advance and we would follow him at a distance of a quarter of a mile. Buckley made towards a **native** well and after he had rode about 8 miles, we heard a **cooey** and when we arrived at the spot I witnessed one of the most pleasing and affecting sights. There were three men five women and about twelve children. Buckley had dismounted and they were all clinging around him and tears of joy and delight running down their cheeks … It was truly an affecting sight and proved the affection which these people entertained for Buckley … amongst the number were a little old man and an old woman, one of his wives. Buckley told me this was his old friend with whom he had lived and associated thirty years.

▲ **Source 2.18** Diary entry of Joseph Gellibrand, 1836

Buckley spent the last 19 years of his life in Hobart until his death in 1856.

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 2.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What term did the British use to describe Australia when they invaded?
2 How long had First Australians lived and managed the land in Australia?
3 Who was the first European to set foot on the Australian continent?
4 When did Lieutenant Cook arrive in Australia?
5 When did the First Fleet arrive in Australia?
6 Who founded the settlement that would eventually become Melbourne?

Interpret

7 Why did the British establish a colony in Sydney?
8 Why was the Port Phillip District established?

Argue

9 Explain the significance of the British invasion of Australia in 1788.

Extension

1 Research and explain how the British invasion of Australia has been represented over time. How did historians describe it in the nineteenth century and the early twentieth century?

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2.2 Key features of Australian society post-invasion

FOCUS QUESTION

What were the key features of Australian colonial society?

Introduction

The colonies that were established around Australia created societies that were very different from the First Australian communities the British came into contact with. The interactions between these two societies led to significant conflict and violence that have become known as the Frontier Wars. They often resulted in significant loss of life for First Australian communities across Australia. Amid this violence, colonial settlements grew and developed into thriving and economically successful communities.

The Port Phillip District

The Port Phillip District would eventually become the colony of Victoria. It was not established as a penal colony and this made it different from Sydney and Hobart, the two initial British colonial settlements in Australia.

ACTIVITY 2.2

Using historical sources as evidence

Robert Hoddle, the famous **surveyor** and artist who designed the 'Hoddle Grid' that makes up the centre of the Melbourne CBD, described the area of Melbourne as:

> Prettily situated upon gently **undulating** hills … picturesque and park-like country, which the most fastidious observer of Nature's beauties cannot be insensible to. The soil in the immediate neighbourhood of the town is most excellent, which, with the park-like appearance of the surrounding country, forms a grand contrast to the barren scrub and sandy rocks of Sydney.

▲ **Source 2.19** Robert Hoddle, quoted in Bill Gammage, *The Biggest Estate on Earth*, 2012, p. 45

Responding to the source

1. Who was Robert Hoddle? Do some research on him.
   - a Where was he from?
   - b What was his job?
   - c Why did he write this?
2. What is the historical context of this source?
3. What is the key vocabulary used in this source?
4. What are the claims that Hoddle is making?
5. How does this source compare to what Pascoe, Gammage and Griffiths said in Activity 2.1? What is similar? Is there anything different?
6. What do you think Hoddle means when he refers to the 'park-like appearance of the surrounding country'? In your response also refer to Pascoe, Gammage and Griffiths from Activity 2.1 in Section 2.1.

KEY TERMS

surveyor an individual who maps the land

undulating moving up and down like waves

FAMOUS FACE

ROBERT HODDLE (1794–1881)

Robert Hoddle was born in London and was the son of a bank clerk. He became a geographer in the British army and eventually travelled to Australia where he assisted with the first survey that established the city of Brisbane. He came to Port Phillip in 1837 and was responsible for planning the layout of Melbourne, now known as the Hoddle Grid. He also planned the city of Geelong and was elected to the first Melbourne City Council.

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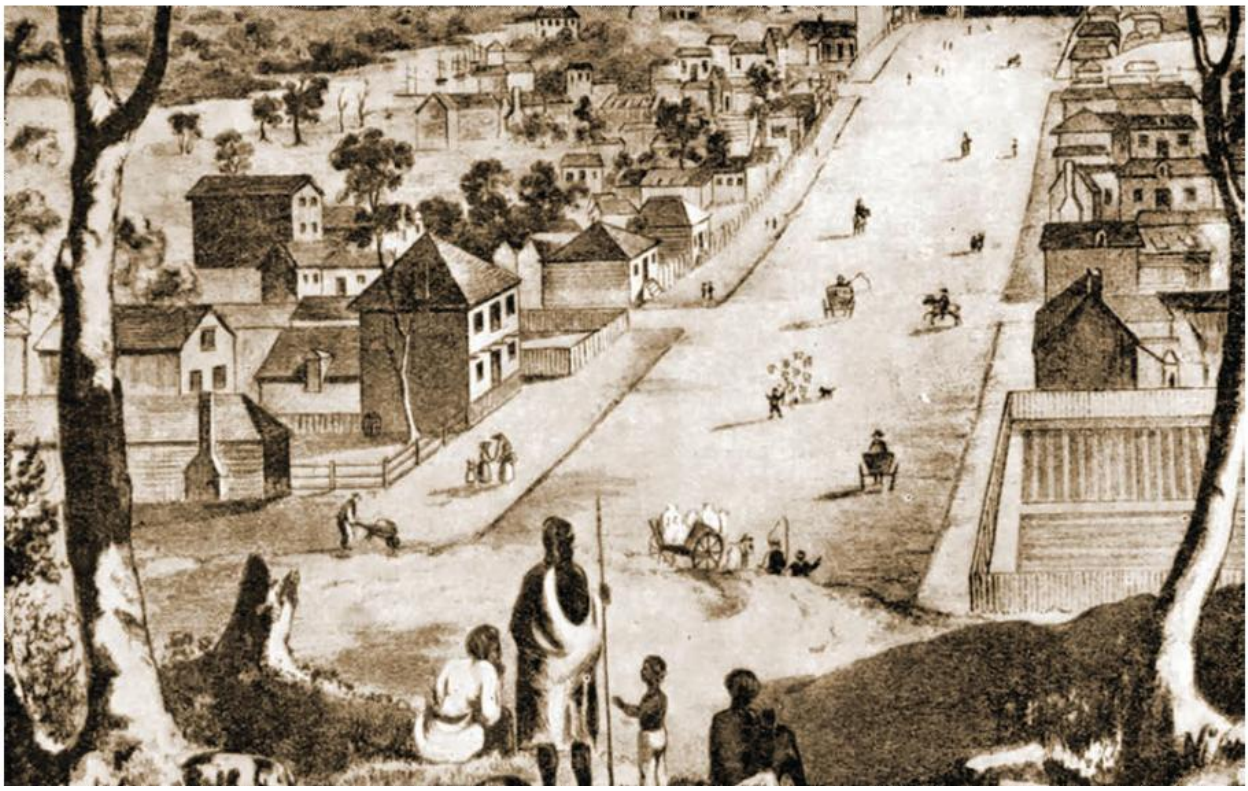
▲ **Source 2.20** Robert Hoddle, *Port Phillip, Racecourse and Survey Office*, watercolour, 1840



▲ **Source 2.21** An engraving showing Collins Street, Melbourne, around 1837, shortly after it began its monumental growth from 13 dwellings after being laid out by Robert Hoddle during the first survey of Melbourne

The lands of the Kulin Nation

This land of the Port Phillip District had, for thousands of years, been home to a number of First Australian nation groups. Melbourne itself exists on the land of some East Kulin communities, namely the Watha wurrung, Woi wurrung and the Boon wurrung. Members of each community had a strong connection to the land of their birth; this connection was essential

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▲ **Source 2.22** Image of a **corroboree**, where First Australians would meet, dance and interact with each other and the Dreamtime, painted by famous First Australian activist William Barack

in how they viewed their place in the world. The groups managed the land and each community also traded with other groups, including other Kulin communities and other First Australian communities further away.

These eastern Kulin groups had been living and managing the land around Melbourne for over 40 000 years before the British established their colonial settlements in the region. Kulin land management practices had a significant impact on the environment of the region. The First Australians viewed the land as an integral part of their society. By occupying the land and creating exclusive settler areas, the British were **alienating** the connection that the Kulin people had to the land and caused a direct negative effect on their culture and society.

Contact and violence

One of the most significant, and often unknown, aspects of early colonial history is the violence and conflict between First Australian communities and the British colonisers who were slowly taking over their land. These conflicts have become known as the Frontier Wars.

KEY TERMS

corroboree a traditional dance ceremony of Aboriginal Australians that can be used for a sacred ritual or an informal gathering

alienating being cut off from something

As the British colonisers began to spread out across the continent, they encountered First Australian groups who had lived on their lands for tens of thousands of years. Disputes over land ownership led to confrontations between these groups, often resulting in bloodshed. The conflict massively favoured the British colonisers, who possessed superior technology in the form of rifles and other weapons.

Researchers in the mid-1990s began to investigate these incidents of violence. One historian, Ian D. Clark, described it as 'unnecessary, indiscriminate killing of a number of human beings, as in barbarous warfare or persecution, or for revenge and plunder'. Clark and another

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▲ **Source 2.23** *Mounted Police and Blacks* depicts the massacre of Aboriginal people at Waterloo Creek by British troops. Tinted lithograph held at Australian War Memorial, W. Walton after Louisa and Godfrey Charles Mundy, 1852.

researcher, Peter D. Gardner, identified some common characteristics of the violence that the colonisers inflicted upon the First Australian groups. These characteristics include:

- Usually takes place in response to the Aboriginal killing of a white person, usually a male who had abducted and sexually abused an Aboriginal woman, or the alleged Aboriginal theft of colonial property such as livestock that had occupied Aboriginal hunting grounds.
- Planned rather than a spontaneous event.
- Intention is to destroy or eradicate the victims or force them to submission.
- Assassins and victims usually know each other.
- Takes place in secret.
- Code of silence in the aftermath, makes detection extremely difficult.
- Witnesses, assassins and survivors sometimes acknowledge the massacre long after the event when fear of arrest or reprisal from the assassins is no longer an issue.

Along the eastern coast of Australia there are more than 150 recorded sites where massacres of First Australians by colonisers have been verified. A massacre was defined as being the killing of six or more individuals from a single community. The researchers plotted these mass killings on a map to demonstrate how widespread acts of violence against First Australian communities was.[2]

The exact number of First Australians killed in the Frontier Wars is very difficult to calculate because of the lack of reliable data. Historian Henry Reynolds estimates that it runs into the tens of thousands of victims. The Frontier Wars had a devastating effect on First Australian communities; it drove them from the lands they had lived on and managed for tens of thousands of years.

Amazing but true …

There is evidence of First Australians travelling to the United States and fighting in the US Civil War of the 1860s.

2 To view the map they constructed, use the search terms 'Colonial Frontier Massacres, Australia (Date Range: 1780 to 1930)' in your internet browser.

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ACTIVITY 2.3

Using historical sources as evidence

The **Koorie** population in the Port Phillip District declined rapidly as the British settlements expanded across the region. Some estimates put the Koorie population at 15 000 at the time of the settlement, falling to as low as 1907 by 1863.

The violence and disease combined with many Koorie groups feeling there was no point in having children as their land was increasingly taken from them. Derrimut, a leader of the Boon wurrung, expressed this when he stated that:

> You see … all this mine, all along here Derrimut's once, no matter now, me soon tumble down … Why me have **lubra**? Why me have **piccaninny**? You have all this place, no good have children, no good have lubra, me tumble down and die very soon now.

▲ **Source 2.24** Derrimut, leader of the Boon wurrung, quoted in 'Report of the Select Committee of the Legislative Council on the Aborigines: together with the proceedings of Committee, minutes of evidence, and appendices' from the Victorian Colonial Legislative Council, 1858, p. 12

KEY TERMS

Koorie the name of a group of Aboriginal Australians from certain parts of NSW and Vic

lubra a First Australian girl or woman, *now an offensive term and should not be used*

piccaninny a black child, *now an offensive term and should not be used*

Another Kulin leader, Billibellary of the Wurundjeri, expressed a similar sentiment:

> The Black lubras say now no good children, Blackfellow say no country now for them, very good we kill and no more come up Pickaninny.

▲ **Source 2.25** Billibellary of the Wurundjeri, quoted in Bruce Pascoe, *Dark Emu*, 2018, pp. 11–12

Responding to the sources

1. Who were the authors of the two written sources? Do some research on them.
   - a Where are they from?
   - b Why did they write this?
2. What is the historical context of these written sources?
3. What is the key vocabulary used in these written sources?
4. What are the claims the authors are making?
5. Analyse the visual source. Describe whether this source would be useful for an historian researching the Frontier Wars.
6. Using these sources and your own knowledge, explain the impact the British invasion had on First Australian nations in the Port Phillip area.

► **Source 2.26** Images such as this proclamation from 1816 demonstrate that there were violent clashes between First Australians and European settlers

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ACTIVITY 2.4

Using historical sources as evidence

Responding to the source

1. Describe this source – what is it?
2. Why do you think a protester painted the 'genocide' slogan on the statue of Cook?
3. Why could the inscription 'Discovered this territory 1770' on the plinth be considered contentious?
4. What do you think of the protester's message? Is it ever justifiable to graffiti monuments in this way?
5. Discuss as a class: What, if anything, should be done about monuments that misrepresent the past, marginalise groups in society, or commemorate people for misdeeds?

▲ **Source 2.27** Statue of James Cook in Hyde Park, Sydney, 26 August 2017

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 2.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. According to scientific research, for how long have the Kulin nation existed in the Port Phillip area?
2. What was the name for the conflict between colonial settlers and First Australian communities that took place across Australia?
3. The Port Phillip District was established on the lands of which nations?
4. How many recorded sites of massacres against First Australians have been established?

Interpret

5. Why was the growth of British colonial settlements so damaging to First Australian communities?
6. What were the key elements of violence against First Australians in the Frontier Wars?
7. Why is it significant that Source 2.23 comes from the Australian War Memorial?

Argue

8. Outline the key features of Australian society following the British invasion.

Extension

1. Research and explain the different ways that First Australian communities were devastated during the Frontier Wars.

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2.3 Causes and effects of British contact and settlement

FOCUS QUESTION

What were the causes and effects of British contact and settlement?

Introduction

British settlement was motivated by many factors, some of which have been explained in the previous sections. There were significant political and economic factors that influenced the creation of the colonies and drove their expansion across the continent. The drive to create colonies for the transportation of convicts gave way to economic incentives to open up more land for agricultural and **pastoral** purposes.

Pastoral lands, native lands

One of the biggest drivers of British settlement was the opening up of vast tracts of land for pastoral use. These lands had long been used by First Australian communities and as the pastoralists grew in number the First Australian communities were increasingly shut out of, or driven off, their own land.

Sheep and cattle spread throughout the Port Phillip district, wreaking havoc on the careful **cultivation** of different food crops by the First Australian communities. The introduced species also disrupted the populations of native animals with some introduced species, like rabbits, rapidly spreading and disrupting ecosystems.

KEY TERMS

pastoral land used for grazing or agriculture

cultivation the growing of food crops

◄ **Source 2.28** By 1850, farmers and pastoralists had spread into inland Australia

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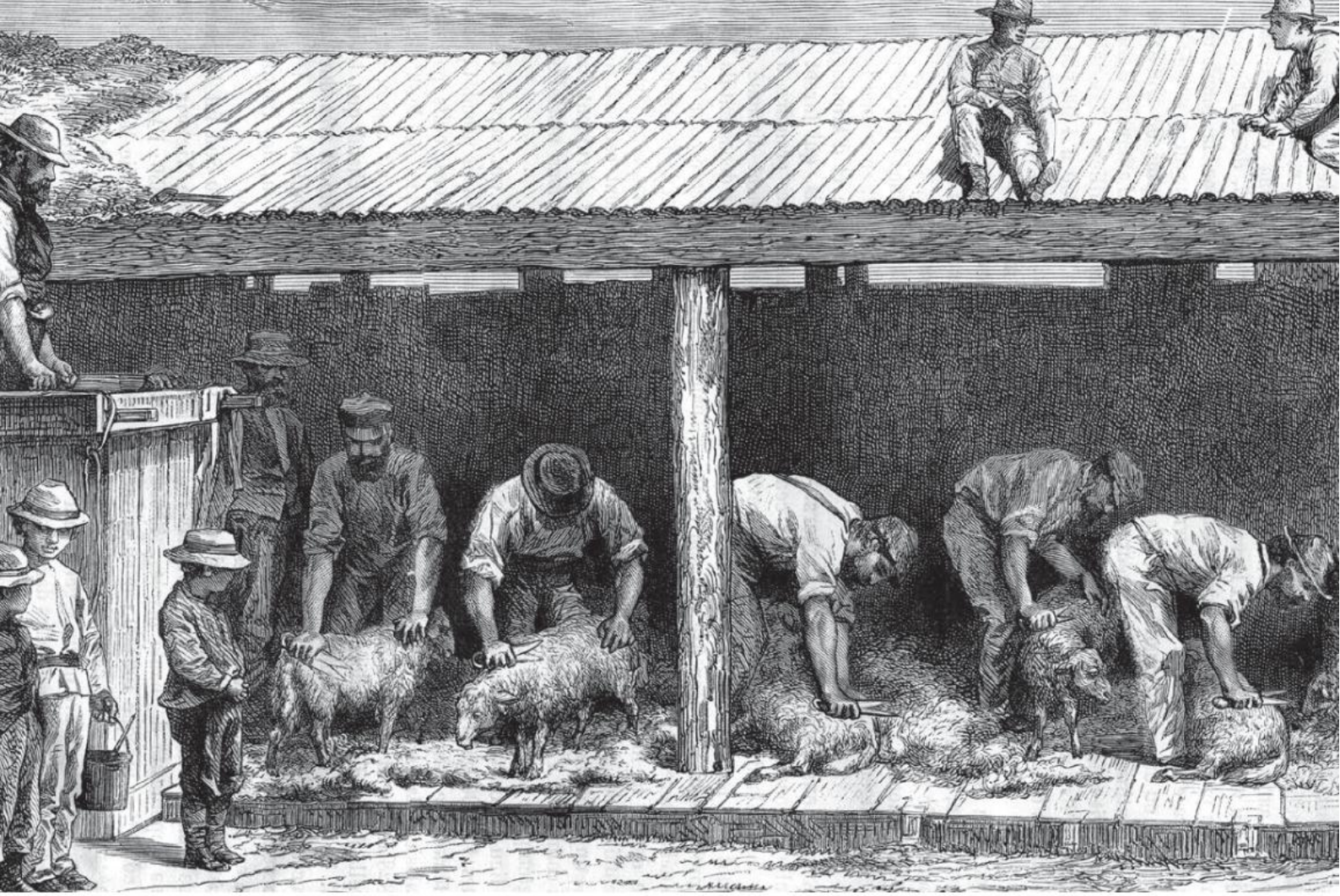

▲ **Source 2.29** A sheep shearing shed, 1880s

ACTIVITY 2.5

Using historical sources as evidence

Bruce Pascoe's research shows that as First Australians were driven off their land there was a deterioration in the soil. He states that:

> … the dispossession of Aboriginal people and destruction of their villages was followed by an equally rapid deterioration in the soil, the foundation of the pre-contact economy.
>
> Farmers noticed the alarming drop in productivity over a mere handful of years as sheep ate out the croplands and compacted the light soils. 'In Australia thousands of years of grass and soil changed in a few years. The spongy soil grew hard, the **run-off** accelerated and different grasses dominated.'
>
> The fertility encouraged by careful **husbandry** of the soil was destroyed in just a few seasons. The lush yam pastures of Victoria disappeared as soon as sheep grazed upon them, as the **dentition** of sheep allowed them to eat growth right to the ground, destroying the basal leaves.
>
> The English pastoralists weren't to know that the fertility they extolled on first entering the country was the result of careful management …
>
> … Colonial Australia sought to forget the advanced nature of the Aboriginal society and economy, and this amnesia was entrenched when settlers who arrived after the depopulation of whole districts found no structure more substantial than a windbreak, and no population that was not humiliated, debased, and diseased.

KEY TERMS

run-off water that flows away from high areas to low areas

husbandry farming

dentition the number, type and arrangement of teeth in a person or animal

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This is understandable because, as is evidenced by the earlier first-hand reports, villages were burnt, the foundations stolen for other buildings, the occupants killed by warfare, murder, and disease, and the country **usurped**. It is no wonder that after 1860 most people saw no evidence of any prior complex civilisation.

▲ **Source 2.30** Bruce Pascoe, *Dark Emu*, 2018, pp. 11–12

KEY TERM

usurp to take a position of power, especially without having the right to

Responding to the source

1 What is the key vocabulary used in this source?
2 What are the claims the author is making?
3 Explain the consequences to the land after First Australians were driven from their ancestral homes. Use evidence from the source in your response.

The Koorie population in the Port Phillip District declined rapidly following the establishment of Melbourne. The reduction in population numbers was due to a number of factors. One of the most significant of these was the spread of disease among Kulin nation communities to which they had no resistance. It is estimated that as much as 60 per cent of the deaths in Kulin nation communities were due to disease. Diseases that had the biggest impacts included smallpox, influenza, tuberculosis, venereal disease and pneumonia.

ACTIVITY 2.6

Using historical sources as evidence

As the colonisers spread across the continent, they began to **appropriate** land use according to European practices. Read the following sources on this topic.

KEY TERM

appropriate take ownership of and claim as one's own

The very spots most valuable to the aborigines for their productiveness, the creeks, water courses, and rivers – are the first to be occupied – Edward Parker

Nearly all the Stations are near the very Waters, that the natives were in the habit of camping at, before the country was settled – T.S. Powlett

Warrung … flourishes where the best feed for stock is found. Hence the usurpation of the ground and the secret destruction of the aborigines – John Wollaston

▲ **Source 2.31** Colonial sources quoted in Bill Gammage, *The Biggest Estate on Earth*, 2012, p. 308

Responding to the sources

1 Who were the authors Gammage has quoted? Do some research on them.
   a Where are they from?
   b Why did they write this?
2 What is the historical context of these sources?
3 What is the key vocabulary used in these sources?
4 What are the claims the authors are making?
5 Describe the attitudes of the authors to land use. How did they view how the land should be used?
6 Compare the attitudes of these sources to those of Pascoe, Gammage and Griffiths from earlier in the chapter. What differences do you identify between them?

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Gold!

Discovery

The discovery of gold in Victoria is one of the most significant events in the history of the colony. It transformed Victoria, and Melbourne in particular, into one of the richest areas of the world. It brought thousands of people from across the world into the region and transformed Melbourne into an international city and, briefly, the richest city on the planet.

▲ **Source 2.32** Panning methods in the 1850s

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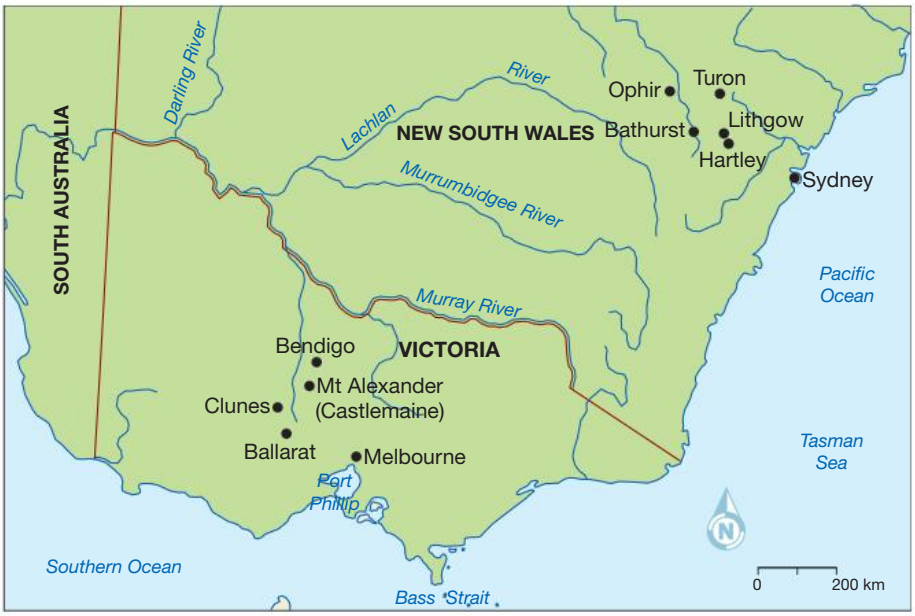

◄ **Source 2.33** The goldfields in New South Wales and Victoria

The Victorian goldfields became the centre of the gold rush of the 1850s

Gold had been found before the 1850s gold rush in New South Wales, so it was known that there were deposits scattered around the continent. Mines in New South Wales were bringing in people from across the world and the Victorian authorities quickly moved to encourage exploration in Victoria. The Victorian Gold Discovery Committee was formed to create incentives for explorers to search for gold within 320 kilometres of Melbourne.

It did not take long for discoveries to be made at Mount Alexander (now called Castlemaine), Bendigo, and, most famously, Ballarat. These goldfields were much richer than those found in New South Wales and were much closer to Melbourne than the NSW fields were to Sydney. This allowed the Victorian authorities to more effectively capitalise on the vast wealth the discoveries created.

The Victorian goldfields became the centre of the gold rush of the 1850s and brought thousands of **immigrants** into the colony to try their luck at finding their fortune. Gold fever became so strong that many industries in Melbourne struggled to stay operating as people abandoned their jobs and headed for Ballarat and other goldfields.

KEY TERM

immigrants people who move from one country to another. This can be for a variety of reasons.

▼ **Source 2.34** A painting depicting the gold rush

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Life on the goldfields

The life of a miner on the goldfield was tough. Most did not discover vast riches and the majority returned to their former homes and jobs without having made their fortune. Travelling to the goldfields was a difficult process, with no highways or public transport like exists today. While on the goldfields, miners worked extremely hard in **arduous** conditions just to make a living.

KEY TERM
arduous difficult and tough

The diet of a miner was limited with very few fruits or vegetables available. There were not many stores from which to buy fresh produce, and those that did stock it could charge a high price. The restricted diet of the miners resulted in poor health overall. Damp and unhygienic conditions contributed to outbreaks of typhoid and other diseases. These conditions, combined with the injuries that miners would suffer as they worked, made the process dangerous.

Most miners lived in tents, but some could not even afford this and just slept next to their work sites. A lot of settlements were temporary and could disappear overnight if there was news of a major discovery somewhere else. Permanent settlements were slow to appear but eventually were constructed in the Ballarat and Bendigo region as they became the centre of the Victorian gold rush.

As the towns of Ballarat and Bendigo developed, other people migrated to the region to profit from the gold rush in other ways. Store owners, merchants and other traders followed the miners to profit from their discoveries, often much more effectively than the miners themselves. Women also began to arrive on the goldfields, either to be with their husbands or to work as sex workers. Life was rough to begin with and violence was common. It took many years for law and order to be effectively established on the goldfields.

ACTIVITY 2.7

Using historical sources as evidence

Study the following two drawings and their titles:

▲ **Source 2.35** Samuel Thomas Gill, *Lucky Digger That Returned*, 1869

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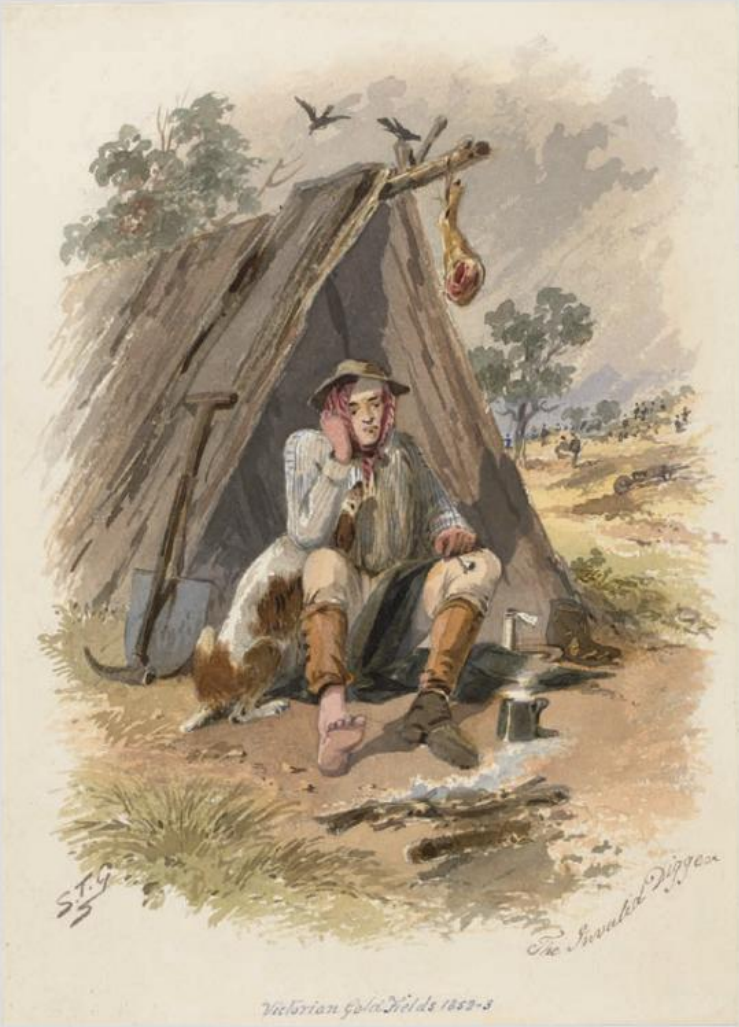
Responding to the sources

1. What is the historical context of these sources?
2. What are the key elements of these images?
3. What message is each painting giving?
4. Using the sources and your own knowledge, explain who benefited from the gold rush in Victoria in the nineteenth century.



► **Source 2.36** Samuel Thomas Gill, *The Invalid Digger*, 1869

Chinese immigration

One of the biggest consequences of the gold rush was the large numbers of immigrants who flooded into the colony to try to find wealth on the goldfields. These immigrants came from all corners of the planet including Britain, Ireland, California, and throughout the Asian and Pacific region. One of the most prominent groups of immigrants on the goldfields was the Chinese immigrants.

The 1850s gold rush brought large numbers of Chinese immigrants to the colony, many from the southern regions of China, who were attempting to make money to pay off debts. The majority of the immigrants borrowed money to travel to Victoria and had to send gold back to China to pay off these debts. Some 205 464 ounces of gold were shipped back to southern China in 1857 alone (note: this would be more than $4 billion AUD today).

By the mid-1850s, there were more than 17 000 Chinese immigrants working on the goldfields. The large number of Chinese immigrants, combined with their unique culture, made them the target of racial violence. The **antagonism** towards the Chinese people was further inflamed by 'fake news' spread by different groups about Chinese people. These fake news stories were varied, with a particularly widespread story about the Chinese being a threat to white women. These factors all combined to make Chinese immigrants a target.

KEY TERM

antagonism anger towards someone or something

The Victorian colonial authorities responded to these stories by imposing entry taxes on Chinese immigrants and passing registration legislation for all Chinese immigrants working on the goldfields. Violent attacks erupted against Chinese communities, specifically at Buckland River in July 1857. The Anti-Chinese League was formed by white miners in Beechworth to stop the influx of Chinese immigrants into the colony.

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ACTIVITY 2.8

Using historical sources as evidence

This anti-Chinese cartoon was created at the time of a new tax on Chinese miners walking overland to the goldfields. The Chinese migrants were already taxed on arrival in Victoria and had to pay an additional tax to live and work here, the only group that had to pay such a tax. The illustration portrays a stereotype of a Chinese miner with pick saying 'we want pay the tax'. The cartoon compares the miner to the famous English peasant revolt leader Wat Tyler.

Responding to the source

1. What is the historical context of this source?
2. What are the key elements of this image?
3. What message is the painting giving?
4. Using the source and your own knowledge, explain the experiences of Chinese miners on the Victorian goldfields during the gold rush of the nineteenth century.

▲ **Source 2.37** Unknown artist, *Melbourne Punch*, publisher. 'Wat Tyler, a la Chinoise', 1859, wood engraving on paper.

The Eureka Stockade

One of the most famous events in Australian colonial history is the Eureka Stockade. This took place on the Victorian goldfields during the gold rush of the 1850s and represents one of the first significant political events since the British invaded.

In order to work on the goldfields, each miner was required to carry a gold licence. The Victorian Government implemented the gold licence in order to reduce the number of people leaving Melbourne for the goldfields to try to find gold. In Victoria, the licence cost each miner roughly £3 per month (this would be roughly $550 AUD today). This was hated by the miners, most of whom did not even make £3 a month to begin with! The colonial police made regular inspections around the goldfields to enforce the laws and often treated the miners in a rough manner, even if they had their licence. The situation was the most severe at Ballarat, where inspections were carried out twice a week.

▼ **Source 2.38** The Eureka Stockade

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Tensions about the gold licence eventually erupted into an armed revolt. Here is how the events transpired:

The Eureka Stockade timeline of events

6 October 1854
A miner, Scobie, is killed by a man called Bentley, who owns the Eureka Hotel

Bentley is discharged by the magistrate, who was a business associate of Bentley's, enraging the other miners

17 October 1854
A group of miners riot, burning down the Eureka Hotel

Bentley is re-arrested, but so are the leaders of the miners

29 November 1854
Thousands of miners burn their gold licences to protest their treatment by the authorities. They call for adult male suffrage and for members of parliament to be paid (allowing people without other incomes to stand for parliament).

30 November 1854
A crowd meets at Bakery Hill and a special flag is flown, the Southern Cross. The protesting miners swear an oath to 'truly stand by each other and fight to defend our rights and liberties'.

1 December 1854
The miners build a **stockade**

3 December 1854
Troops attack the stockade. The troops possess much better weaponry and quickly defeat the miners. They destroy the stockade.

Looking at the events of the Eureka Stockade it would seem as if the miners had been completely defeated and their grievances against the authorities had not been addressed. However, the effects of the stockade were more profound than anyone anticipated. In the aftermath of the stockade, the following things happened:

- All the miners who were arrested were later found not guilty by Melbourne juries
- The leader of the stockade, Peter Lalor, went on to become a member of the Victorian Parliament
- The government abolished gold licence fees
- Two years after the stockade, Victoria granted full adult male suffrage (England did not do this until 1918!)
- The secret ballot was introduced
- MPs began to be paid
- MPs no longer had to own property to be eligible.

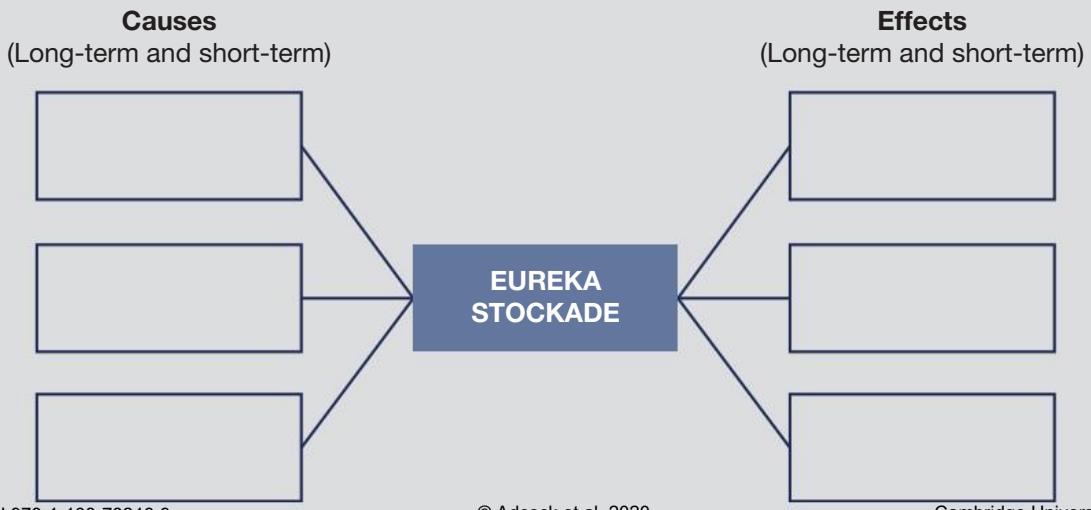
This list shows that the Eureka Stockade kick-started a wave of reform that made Victorian politics more democratic.

KEY TERM
stockade a rough wooden fort

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 2.1

Cause and effect

Consider the causes and effects of the Eureka Stockade. Construct a diagram like this one and fill in the causes, both long-term and short-term, and the effects, both long-term and short-term, of this significant historical event.



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Consequences of the gold rush

Beyond the Eureka Stockade, the gold rush had other important consequences in Victoria. The waves of immigration that had come for the gold rush had helped supercharge the Victorian economy. This helped to make the colony a desirable destination for other migrants after the gold rush had ended.

KEY TERM

self-government when an area is allowed to make its own laws

Other industries, such as the wool industry, quickly developed to support the increasing population brought about by the gold rush. Agriculture became a key economic driver of the colonies. New financial services developed, specifically banks, to help the new industries grow. Victoria's official population rose from 77 000 to approximately 540 000 by the end of the gold rush, and Australia's total official population passed one million. (There were many individuals who were not counted in censuses, so it is likely this figure was reached earlier than was reported.) Increased economic activity allowed the colonial governments to invest in key infrastructure, such as communications and railways, to help connect the different colonies across the continent.

At the same time as the gold rush was taking off, the colony was granted the right of **self-government**. This enabled the Victorian Parliament to become a world leader in democratic practices. Many of the reforms of the Victorian Parliament, including the secret ballot and payment of MPs, happened decades before the British Parliament made similar changes. The economic growth from the gold rush helped a middle class to emerge and marked Victoria as one of the most progressive regions of the world at this time.

Amazing but true …

The vast wealth from gold-rush taxes that flowed into the Victorian treasury allowed the government to invest in large-scale public buildings. Compare the Parliament of Victoria to the Parliament of New South Wales in Sources 2.39 and 2.40.

▼ **Source 2.39** New South Wales Parliament

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▲ **Source 2.40** Victorian Parliament

END-OF-SECTION REVIEW 2.3

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What was a major cause of reduction in population numbers among people of the Kulin nation?
2 When was gold discovered in Victoria?
3 Which groups of immigrants were the victims of violence and discrimination?
4 What was the name of the rebellion at the Ballarat goldfields?

Interpret

5 Why was contact between British settlers and First Australian communities so devastating to the First Australians?
6 What was the life of a British miner like on the goldfields?
7 What was the life of a Chinese miner like on the goldfields?

Argue

8 What caused the growth of colonial societies and what were the effects of this growth on the environment?

Extension

1 Research and explain how the Victorian colonial government used the wealth from the gold rush in different public works around Melbourne and Victoria.

Digital quiz
Please see the Interactive Textbook to access digital activities

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2.4 Significant events and ideas that shaped society

FOCUS QUESTION

How did significant ideas shape non-Indigenous Australian society?

Introduction

Australia was influenced by many different ideas, each of which contributed to giving Australia a unique political, economic and social system. These ideas mainly came from Europe but in many cases were taken much further than in Europe. Australia became a social laboratory where new ideas were tried and experimented with.

Self-government

One of the most significant developments in colonial history was the granting of self-government to the various colonies around the continent. This allowed them to enact laws on their own and experiment with ideas for the organisation of the colonies.

Self-government was given at different times to different places and did not necessarily mean democratic elections. To begin with, most governments were made up of wealthy landowners and it was not until later that people began to elect their own representatives into the colonial parliaments. Table 2.1 shows when the different houses of each colonial parliament were established and when the first elections were held in each colony.

▼ **Table 2.1** Colonial parliaments

Colony	Upper house established	Lower house established	First elections held
NSW	1823	1856	1843 (for two-thirds of the upper house)
TAS	1825	1856	1856
WA	1832	1890	1870 (for two-thirds of the upper house)
SA	1836	1857	1857
VIC	1851	1856	1856
QLD	1860	1860	1860

Ideas that influenced Australia

Democracy

The idea of democracy has a long history, going back as far as the ancient Greeks. Democracy had developed in Britain prior to the establishment of the Australian colonies, but it did not look the same as democracy does today. The right to vote was restricted to a small group of individuals, and women and young people could not vote at all. In Australia, the Eureka Stockade kick-started reforms that made the Australian colonies some of the most democratic places in the world.

Westminster system

One of the most notable influences on Australian society is the Westminster system of government. It is named after the location of the British

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Government, the Palace of Westminster. The roles of the government, parliament and judiciary were taken from the British system and implemented in Australia in a very similar manner. This continues to be the structure used for governing Australia to this day.

Liberalism

The ideas of liberalism, such as individual rights, capitalism, democracy and equality before the law, have been promoted since the earliest periods of British settlement in Australia. How these ideas were expressed differed from colony to colony, and from individual to individual, but they were generally opposed to the more **collectivist** ideologies of the labour movements in Australia.

FAMOUS FACE

CATHERINE HELEN SPENCE (1825–1910)

South Australian Catherine Helen Spence was the first woman in the modern world to stand at an election. She stood at the 1897 South Australian election. While she did not win, her efforts were crucial in pushing the political rights of women forward.

Women's voting rights

Australia was a world leader in extending the right to vote to women. Previously, only men were allowed to vote in elections. In many cases, only some men were allowed to vote, usually landowners. South Australia became one of the first places in the world to allow women to vote in elections in 1895.

KEY TERM

collectivist belief that the interests of the group are more important than the interests of individuals

FAMOUS FACE

VIDA GOLDSTEIN (1869–1949)

Vida Goldstein is one of the most famous Victorians of the colonial era. She was born in Portland in 1869 and attended Presbyterian Ladies' College, later becoming a teacher. Vida became involved in the campaign to extend the right to vote to women. In 1899, she became the general secretary of the United Council for Women's Suffrage, working tirelessly to extend the right to vote to women.

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Egalitarianism

One of the most significant aspects of Australian society compared to Britain was the lack of nobility or a clearly defined upper class. This led to a sense of **egalitarianism** in colonial societies as they developed. No one was seen as inherently superior as a result of their birth.

KEY TERMS

egalitarianism the belief that all people deserve equal rights and opportunities

exploitation to take unfair advantage of something or someone

The trade union movement

The trade union movement in Australia grew out of concerns in Britain about working conditions and **exploitation** of workers by employers. Organised labour, where groups of workers would coordinate to try to advance their interests, was banned in Britain. People who broke these laws were often sent as convicts to the Australian colonies. This allowed the ideas of trade unionism to spread and take hold in Australia. The more democratic and egalitarian nature of Australian society allowed trade unions to grow quickly throughout the mid-1800s. In the 1890s, the trade union movement launched its own political party, the Australian Labor Party (ALP), one of the first labour parties anywhere in the world.

1890s depression

During the 1890s, the world entered a period of economic decline. Factories closed, companies went bankrupt and unemployment spiked. Employers tried to break the power of the unions at this time by only hiring non-union workers. Workers who were members of the union would refer to non-union workers who took jobs as 'scabs', a term that is still used today to describe someone who doesn't support union action. A number of strikes happened during this time but lacked public support. This was one of the major factors that led the union movement to establish its own political party, as unions could not rely on just striking to advance their aims.

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 2.4

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. After self-government was granted, who held the most political power?
2. What is the name of the political system that most influenced Australia?
3. When did the trade union movement launch its own political party?
4. What occurred in the 1890s that influenced the Australian economy?

Interpret

5. Why was Australia seen as a 'social laboratory'?
6. Why did the trade union movement and the ALP develop in Australia?

Argue

7. Analyse how significant ideas shaped Australian society and culture.

Extension

1. Research and explain how women's rights were advanced in the nineteenth century in Victoria.

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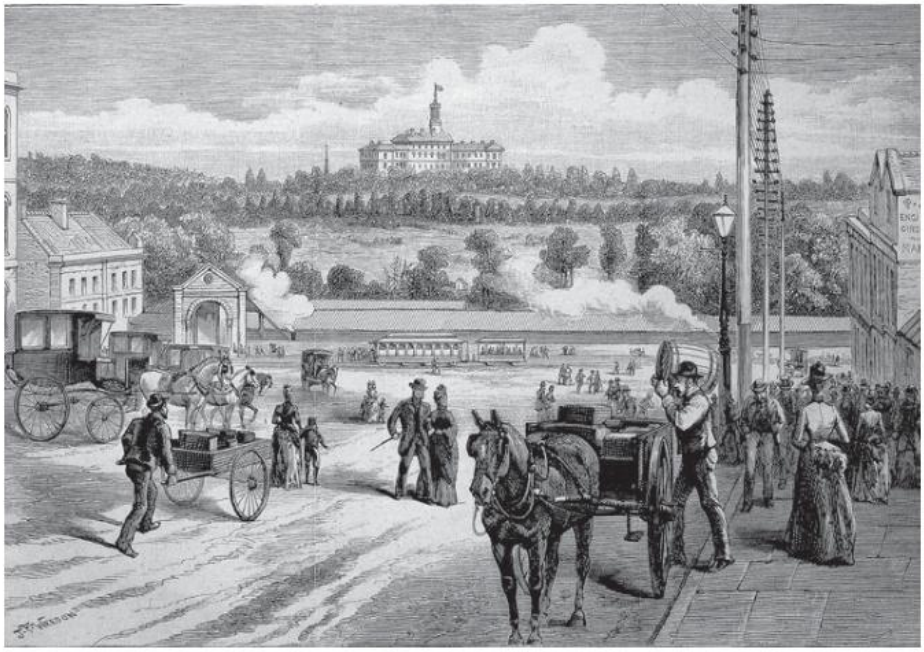
2.5 Continuity and change in life in Australia

FOCUS QUESTION

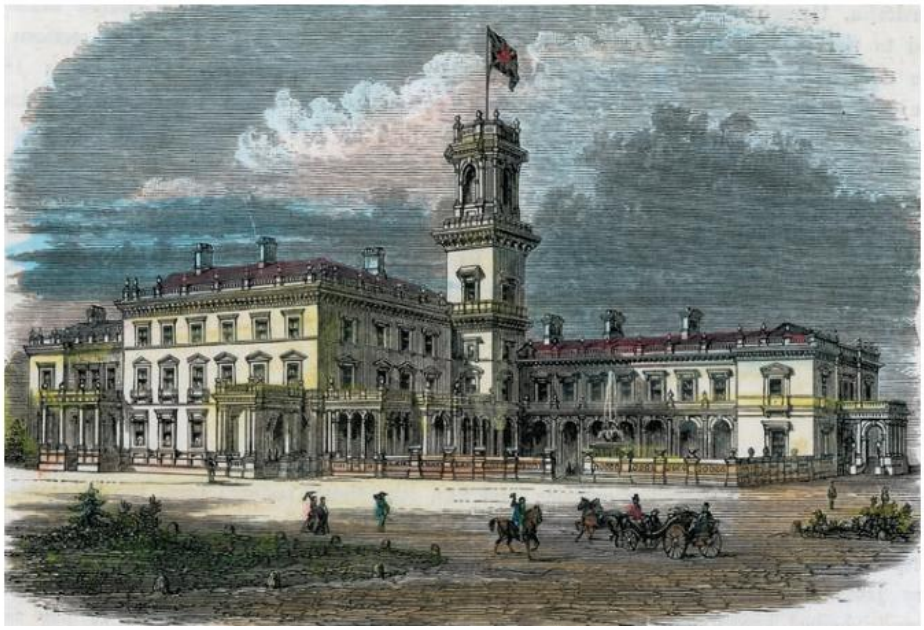
How did life change and how did it stay the same in colonial Australia?

Introduction

Life changed dramatically in Australia from the establishment of the first colonies through to Federation. Living conditions, working conditions, education, social life and political life all changed as Australia became more connected to the world and the economy expanded. The following areas highlight some of the most significant changes, but they do not cover every area and did not affect every group in society. First Australians were often excluded from settler society and did not benefit from any of the advances made. Often their lives were made worse as colonisers expanded their control across the continent.



◄ **Source 2.41** Street view of Melbourne, 1890s. Government House is visible in the background.



◄ **Source 2.42** Government House, Melbourne, Victoria, Australia, circa 1880. The office and official residence of the Governor of Victoria, situated next to the Royal Botanic Gardens. Designed in Victorian Italianate style by William Wardell, it was built between 1871 and 1876.

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Living conditions in Australia

Living conditions in colonial society changed drastically across the eighteenth and nineteenth centuries. The initial colonial settlements were harsh, but settlements grew quickly. Since the 1850s, **slums** had existed in Melbourne. Living conditions in these slums were difficult. Most houses had no bathrooms or sewerage, and many had leaky roofs and crumbling walls. For many people, these conditions did not improve until well into the twentieth century.

KEY TERMS

slum a run-down and overcrowded urban area populated by some of the poorest in society

exhibition large trade shows that showed off new technologies and innovations

Working conditions in Australia

In the nineteenth century, Australia became known as the 'working man's paradise' because of the significant opportunities and legal protections for the working classes throughout the different colonies. It was an egalitarian society that offered a comfortable life and work for those who wished it. The economic depression of the 1890s brought many of these ideals into contact with a harsh economic reality and high unemployment. Despite this, Australian society benefited from strong worker protections compared to the rest of the world.

One of the most significant aspects of the working man's paradise was the *Harvester Judgement* in a court case in 1907, a few years after Federation. The significance of the Harvester case rested on how the term 'fair and reasonable wage' was interpreted by the court. The court had been asked to rule what this term actually meant. In his decision, the judge, H.B. Higgins, declared that a fair and reasonable wage required a worker to be paid a 'living wage' that could support a wife and three children in 'frugal comfort'.

This decision influenced the idea of a minimum wage that no worker was to be paid less than, a significant aspect of Australian culture that continues even today. The case of the *Harvester Judgement* shows that the ideals of the working man's paradise continued on after the economic depression of the 1890s and influenced Australian society after Federation.

Education in Victoria

The establishment of an education system in Victoria began soon after the foundation of the city of Melbourne. Towards the end of 1836, a school for the education of First Australian children was established. The school was short-lived and was closed in 1839. First Australian communities were hostile towards the school, which focused on delivering religious education and separated First Australian children from their traditional communities. In 1837, the first general school was established in Melbourne on the corner of Little Collins Street and William Street. In 1872, the Victorian Government introduced free, compulsory and secular education for all Victorian children.

Marvellous Melbourne

In the 1880s, Melbourne was regarded as one of the greatest and most impressive cities in the world. British journalist George Augustus Sala visited Melbourne in 1885 and described the city as 'Marvellous Melbourne'. The economic boom that resulted from the gold rush had led to a massive property and building expansion.

During the 1880s, the Melbourne tram network began, telephones and electricity spread rapidly throughout the city, and the first skyscrapers began to appear in the central business district (CBD). Melbourne hosted multiple international **exhibitions** and drew people from all corners of the globe. Melbourne was becoming a global city.

Amazing but true …

Melbourne's Royal Exhibition Building in Carlton was the first Australian building to be granted a World Heritage Listing, in 2004. The building is listed for its importance as the last great survivor of the international exhibition movement of the late nineteenth century. It was built for the Great Exhibition of 1880 on the wealth of the local gold rush.

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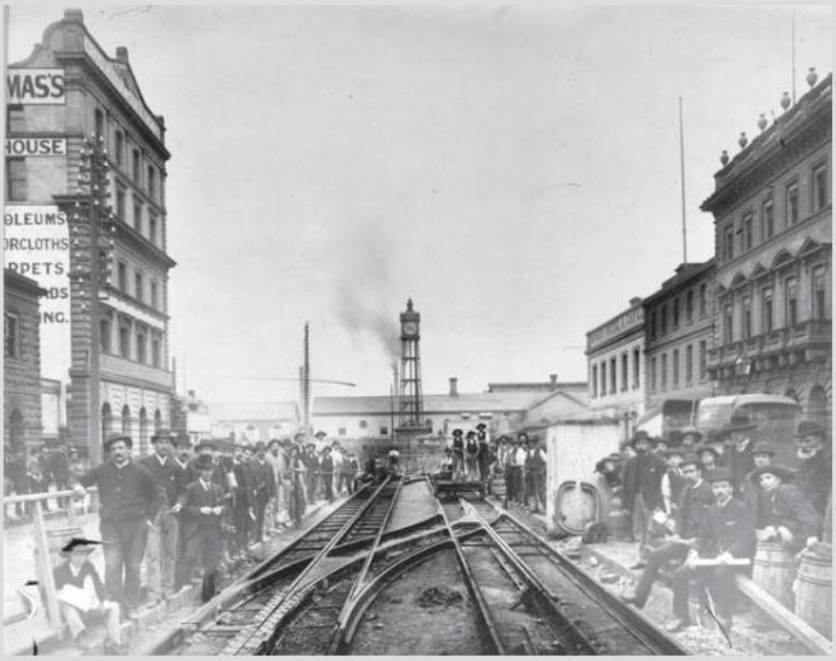
▲ **Source 2.43** Melbourne's Royal Exhibition Building in Carlton

Trams

The first tram in Melbourne was launched in 1885. Over the course of the next six years, 17 routes were established on 73 kilometres of double track. It was (and remains) the largest tram network anywhere in the world.

ACTIVITY 2.9

Using historical sources as evidence



◄ **Source 2.44** A view of Melbourne, 1880s

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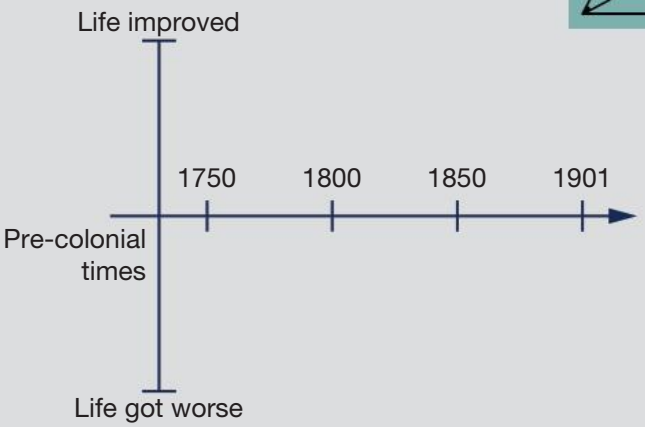
Responding to the source

1. What is the historical context of Source 2.44?
2. What are the key elements of the image?
3. What message is the photo giving?
4. Using the source and your own knowledge, explain how Melbourne developed as a city throughout the nineteenth century.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 2.2

Sequencing chronology

Using the information about how life changed in Australia between 1750 and 1901, construct a timeline like the one shown here that identifies the significant events outlined in Section 2.5. In your timeline, ensure you identify if this event made life better (and who it made life better for) or if it made life worse (and who it made life worse for). Some events will make life better for one group, but worse for another group; show this on your timeline as well.



Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 2.5

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. When was the first school established in Victoria?
2. What was the name of the famous court case that established the concept of a 'fair and reasonable wage'?
3. What term was used to describe Melbourne in the 1880s?
4. When was the first tram launched in Melbourne?

Interpret

5. Why was Australia known as a 'working man's paradise'?
6. What allowed Melbourne to invest in large-scale public buildings in the late nineteenth century?

Argue

7. Describe how life changed for different groups in Australia in the colonial era.

Extension

1. Research and describe the different international exhibitions that occurred in Melbourne during the late nineteenth century.

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2.6 Different perspectives of colonial Australia

FOCUS QUESTION

What are the perspectives of different groups in colonial Australia?

Introduction

The perspectives of different groups are crucial to gaining a well-rounded view of Australia's history. The perspectives of First Australians, Chinese immigrant goldminers and other groups allow us to see events in different ways and to develop skills of empathy with people whose experiences might be very different from our own.

First Australians

First Australian communities' perspectives on Australian history are complex. The British invasion and settlement devastated First Australian communities and disrupted their traditional links and relationship with the land. As colonial society spread, conflict between First Australians and colonial settlers erupted.

The Frontier Wars had devastating effects on communities who had lived and managed the Australian land for tens of thousands of years. In addition to the violence of the Frontier Wars, disease and alcohol also ravaged First Australian communities across the continent. The continued survival of these ancient cultures demonstrates their resilience in the face of the destructive invasion and settlement of Australia.

ACTIVITY 2.10

Using historical sources as evidence

Historian Bill Gammage records some of the perspectives of First Australians to British settlement. Gammage's research identifies comments from First Australians, such as:

> Damn your eyes, go to England, this is my land
>
> You go to England, that your country; this our country
>
> [That First Australians] complained of the white men bringing in animals into their country that scare away the kangaroo, and destroy the roots which at certain seasons of the year form part of their sustenance. This … was a very general complaint

▲ **Source 2.45** Bill Gammage, *The Biggest Estate on Earth*, 2012, p. 308

Responding to the source

1. What is the historical context of this source?
2. What is the key vocabulary that is used?
3. What are the claims that are being made?
4. Using this source and your own knowledge, explain the perspectives of First Australians to invasion and settlement.

Pastoralists

Pastoralists spread out across the continent to make a living off the land using traditional European farming techniques. Often these techniques and practices disrupted traditional land management techniques of First Australians and drove communities from lands they had lived on for tens of thousands of years. The pastoralists' perspective on the land was very different and, ultimately, proved devastating to First Australian communities.

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ACTIVITY 2.11

Using historical sources as evidence

This vast country was to them a common … their ownership, their right, was nothing more than that of the Emu or Kangaroo. They bestowed no labour upon the land and that – and that only – is what gives a right of property to it. Where, we ask, is the man endowed with even a modicum of reasoning powers, who will assent that this great continent was ever intended by the Creator to remain an unproductive wilderness?

▲ **Source 2.46** *Sydney Herald*, 7 November 1838

Responding to the source

1. Who created this source?
2. What is the key vocabulary used?
3. What are the claims that are being made?
4. Using this source and your own knowledge, explain the perspective of pastoralists to invasion and settlement.

Goldminers

Individuals who followed the lure of gold to Victoria represent a diverse group. They came from around Australia and elsewhere to try their luck at finding wealth, mostly without success. They often returned to their homes poor, with only a very small number of miners finding wealth and success on the goldfields. Life on the goldfields was rough, with violence and corruption common. This often united the miners against the authorities of the day.

▲ **Source 2.47** A gold nugget weighing over 150 grams found near Ballarat during the gold rush

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ACTIVITY 2.12

Using historical sources as evidence

▲ **Source 2.48** Samuel Thomas Gill, *Diggers on the Way to Bendigo*, 1853

Responding to the source

1. What is the historical context of this source?
2. What key imagery is used?
3. What message is being presented?
4. Using this source and your own knowledge, explain the perspective of goldminers on the development of colonial society.

Chinese immigrants

The Chinese populations on the goldfields represent one of the biggest non-European immigrant groups of the colonial era. They faced racism and discrimination as they attempted to find riches to send back to their families and benefactors in China. Despite this, communities of Chinese immigrants established themselves and managed to succeed on the goldfields and ultimately to join mainstream communities in the Ballarat and Bendigo areas.

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ACTIVITY 2.13

Using historical sources as evidence

◄ **Source 2.49** Samuel Thomas Gill, *Might Versus Right*, circa 1862–63

Responding to the source

1 What is the historical context of this source?
2 What key imagery is used?
3 What message is being presented?
4 Using this source and your own knowledge, explain the perspective of Chinese immigrants on the development of colonial society.

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 2.6

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 In addition to the Frontier Wars, what else devastated First Australian communities in the colonial era?
2 Pastoralists' views of land management were influenced by what culture?
3 Which groups comprised the biggest non-European immigrant community on the goldfields?
4 In what two Victorian towns did Chinese immigrants establish a significant presence?

Interpret

5 Why were pastoralist techniques for land management devastating for First Australian communities?
6 Why were miners attracted to the Victorian goldfields?

Argue

7 Describe how different groups saw the growth of colonial society in the nineteenth century.

Extension

1 Research and describe the history of the Chinese community of Ballarat.

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2.7 Australian society in global context by 1918

FOCUS QUESTION

How did Australia respond to global changes towards the end of the nineteenth century?

Introduction

As the end of the nineteenth century approached, the colonies in Australia began to see themselves and the rest of the world differently. Technological advances had made communication and transportation between Australia and the rest of the world much easier. There was a growing sense of Australian national identity developing across the continent. This aspiration of becoming a nation was also tempered by fears of the unique Australian society that had developed being taken over by foreign powers or 'swamped' by immigration from Asia. These influences all combined to help push the Australian colonies closer together and eventually to federate into a single unified country.

Growth of a new identity

Nationalist writing and cultural developments helped to create a new sense of what it was to be 'Australian'. Growing numbers of white colonists had been born in Australia. While many maintained a deep loyalty to Great Britain, they also began to see themselves as different. Self-government had been granted to the different colonies and this helped to develop this independent mindset. New nationalist writings began to be produced and circulated that helped develop a sense of 'Australian-ness' as the twentieth century approached.

Distinctive Australian art began to be produced, notably in the Heidelberg School art movement of the late nineteenth century. The Heidelberg School helped to show the uniqueness of the Australian landscape and Australian life, painting a very different view than that of England. Such cultural movements helped the new Australian national identity to form.

▲ **Source 2.51** Tom Roberts, *An Australian Native*, 1888

▼ **Source 2.50** Louis Buvelot, *Summer Afternoon, Templestowe*, 1866

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Federation

The colonies of Australia had governed themselves since the mid-1800s. These colonial parliaments were far more democratic than the parliament back in Britain, with many more individuals able to vote. As the end of the nineteenth century approached, many important individuals began to discuss the unification of the colonies into a national government. This was viewed as a **federation** where each colony would still exist, but as a state of the new nation.

KEY TERMS

federation a group of states with one central government that manages all common interests

conventions meetings between large groups of individuals on common topics

... all the colonies on the Australian continent, and Tasmania, voted to create a new nation

The Premier of New South Wales, Henry Parkes, was the main driver of Federation. He organised two important national **conventions** where the leaders of the colonies came together to discuss what the new nation would look like.

These discussions changed over time; in some of the earliest discussions, New Zealand was to be a member of this new federation and Western Australia was not. In the end, all the colonies on the Australian continent, and Tasmania, voted to create a new nation, the Commonwealth of Australia. The British Government agreed to the creation of this new nation.

On 1 January 1901, the new nation was proclaimed and Edmund Barton was appointed the first Prime Minister of the Commonwealth of Australia. Melbourne was selected as the capital of the new nation until another site, what would eventually become Canberra, was found.

What convinced the colonies to join together? There were a number of arguments put forward by both the pro-Federation and anti-Federation groups. Some of their key arguments are summarised in Table 2.2.

▼ **Table 2.2** Federation debates

Pro-Federation	Anti-Federation
There was a growing sense of Australian identity thanks to more Australian literature being produced and spread around the colonies	Some of the smaller colonies feared their interests would be overlooked by the bigger colonies like New South Wales and Victoria
There were already Australian sporting teams competing as a unified group. An Aboriginal cricket team toured England in 1868 and a white colonial cricket team defeated England in 1877.	Victoria and New South Wales both wanted the new capital to be in their colony
Federation would allow for a stronger and more unified defence force to protect Australia from external threats	The 1890s economic depression meant that most people were not interested in the debates, they just wanted a job
Federation would allow for a common immigration policy that would apply to the whole continent. Much of this debate was focused on keeping Asian and Pacific Islander workers out of Australia.	Different states wanted to manage the economy in different ways. Victoria wanted to protect its key industries; New South Wales wanted more free trade.
Trade would be much easier as a unified country. Trade between the colonies would be easier and trade with the outside world would be easier.	

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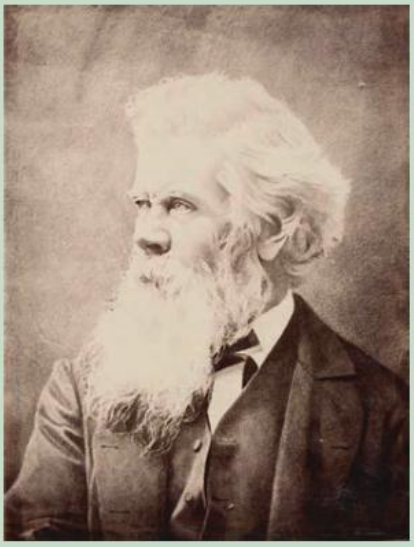
FAMOUS FACE

HENRY PARKES (1815–1896)



Henry Parkes was the Premier of New South Wales and is often referred to as the 'Father of Federation' for his work in organising the constitutional conventions that preceded it. He delivered the famous Tenterfield Oration in 1889 that helped to instigate the process. He died in 1896, five years before his dream of a federated Australia was realised. He was a larger-than-life figure who lived until the age of 81, married 3 times and had 19 children.

The White Australia Policy

One of the first pieces of legislation that the new Australian Parliament passed was the *Immigration Restriction Act 1901*. This act would form the basis of what would become known as the White Australia Policy. The Act gave immigration officials wide-ranging powers to prevent non-white immigrants from entering the country. The most famous element of this policy was the dictation test, which required potential immigrants to write out a 50-word statement dictated by an immigration official, in any European language. This was, in practice, impossible as any European language could be used. This policy was based on similar tests used in New South Wales, Western Australia and Tasmania.

ACTIVITY 2.14

Using historical sources as evidence

Consider the statements made by politicians and newspapers about the *Immigration Restriction Act 1901*.

A

There is no racial equality. There is that basic inequality. These races are, in comparison with white races, unequal and inferior.

▲ **Source 2.52** Edmund Barton, Australia's first prime minister

B

If Australia is to be a country fit for our children and their children to live in we must KEEP THE BREED PURE. The half-caste usually inherits the vices of both races and the virtues of neither. Do you want Australia to be a community of mongrels?

▲ **Source 2.53** *The Bulletin*, 1901

C

… dead in her coffin than kissing one of them [non-Europeans] or nursing a coffee-coloured brat that she was the mother to.

▲ **Source 2.54** William Lane, a founder of the Australian Labor Party, when stating he would rather see his daughter dead than in a relationship with a non-white person

Responding to the sources

1. Who were the authors of these quotes? Do some research on them.
   a. Where are they from?
   b. Why did they write this?
2. What is the historical context of these sources?
3. What is the key vocabulary used in these sources?
4. What claims are the authors making?
5. Using the sources and your own knowledge, explain the purpose of the *Immigration Restriction Act 1901*.

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FAMOUS FACE

ALFRED DEAKIN (1856–1919)

Alfred Deakin was born in Melbourne and studied at Melbourne Church of England Grammar School and the University of Melbourne. He was elected to the Victorian Parliament in 1879 and worked hard for Federation. Deakin was elected to the Commonwealth Parliament in 1901 and was appointed Attorney-General. He took over from Edmund Barton as Prime Minister and finalised the choice of Canberra as the site for the capital city of the new nation of Australia.

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 2.7

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. What was the term used to describe the unification of different colonies into a single government covering the whole continent?
2. Who was seen as the 'Father of Federation'?
3. Which city was the first capital city of Australia?
4. What policy restricted immigration after Federation?

Interpret

5. Why did the Australian colonies decide to federate into a single nation?
6. Why did the Australian Parliament pass the *Immigration Restriction Act 1901*?

Argue

7. Explain how Australia responded to global changes towards the end of the nineteenth century.

Extension

1. Research and describe the key debates at the constitutional conventions in the late nineteenth century.

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Conclusion: why does it matter today?

The history of Australia affects all who live in this country. It affects the decisions that are made on our behalf by the government, and it affects how we relate to those around us. Australia began as a land that was lived in and managed by the various First Australian nations for tens of thousands of years. The British invasion fundamentally changed the nature of the country. First Australian communities were dispossessed from their land, they were massacred by colonial settlers, and they were subject to diseases to which they had no natural resistance. These factors devastated First Australian communities, and this still has a significant impact on them, and the broader Australian society, to this day.

When we see prominent Australians talking about these issues, we need to be aware of the history behind them, and the deep hurt that this history has caused communities around the country. Only by understanding this complex history can we begin to empathise with these communities and search for solutions to complex problems.

We can also see other issues that the country struggles with today reflected in our national history. With the establishment of the British colonies came waves of immigration, much of it responding to economic incentives such as the gold rush or the workers' paradise that they had been promised. These immigrants began a long tradition of foreigners travelling to Australia to make it their home, hoping to build new lives and find prosperity here. The social and economic growth that resulted from these waves of immigration has helped to make Australia the successful and multicultural society it is today. This is notwithstanding the attempts made by Australian governments over many decades to restrict immigration to white migrants. Debates about migration and diversity in Australia are influenced by the history of these issues that began with the arrival of the First Fleet in the lands of the Eora people in what is now Sydney.

When we look at the history of Australia, we see that we still struggle with so many of the same issues today, including First Australian

▼ **Source 2.55** Aboriginal and Australian flags being waved in a crowd

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dispossession, multiculturalism, economic development and our relationship to the Australian environment. We also see stories of progress in our history as well. Groups of miners standing up against injustice, unions fighting for fair pay and working conditions, and the implementation of democracy for all are examples of Australia being a global leader in many different fields.

The history that has been written is not all good and it is not all bad. There is so much we can learn from it that helps us understand Australia today and can help us make Australia better tomorrow.

End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Follow the flow of main ideas

What ideas have you learned about Australian colonial history? In this activity, copy the diagram below and fill it in by explaining in a few points what each topic means for understanding colonial Australia. (An example has been provided for you.) You can also fill this in within the Interactive Textbook.

British invasion of Australia	
Key features of Australian society post-invasion	
Causes and effects of European contact and settlement	
Significant events and ideas that shaped society	
Community and change in life in Australia	
Different perspectives	
Australian society in a global context by 1918	• The Australian colonies began to see themselves as part of a global community. • Federation allowed the colonies to tackle common problems. • The *Immigration Restriction Act* limited immigration by non-European peoples.

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3 Making thinking visible

I used to think that colonial Australia was …

Now I think that …

In this visible thinking routine, you are asked to track the difference between what you knew about colonial Australia before starting this chapter, and what new understandings you have acquired at the completion of this chapter.

Using these stem sentences, write a paragraph explaining what you previously knew about colonial Australia, and another paragraph explaining what you now understand, additionally, about colonial Australia.

1A I used to think that the British invasion of Australia was important because …
1B Now I understand that the British invasion of Australia was important because …

2A I used to think that colonial Australian society was …
2B Now I understand that colonial Australian society was …

3A I used to think that colonial Australia was influenced by …
3B Now I understand that colonial Australia was influenced by …

4A I used to think that colonial Australia was comprised of different groups, including …
4B Now I understand that colonial Australia was comprised of different groups, including …

4 Using historical terms meaningfully

It is important that you, as a historian, can confidently and correctly use all the special words and key terms related to your subject. Write a paragraph in response to the question below, using all the key terms in such a way as to show you understand what they mean.

Question: How were First Australian communities affected by the British invasion of 1788?

Use these words correctly:

- dispossession
- Frontier Wars
- land management
- massacre
- resilience
- colonial.

5 Extended-response question

Research the history of bushranging in colonial Australia. Write a short biography of Ned Kelly. Include a timeline of his life, reference to primary sources and an annotated map of where he operated. Then use your research to answer the following question:

Ned Kelly was an armed criminal who killed people. Why then has he managed to become such a romanticised figure in Australian history?

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▼ **Source 2.56** An artist's depiction of Australian bushranger Ned Kelly facing off against the police in his famous armour

6 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about Australian History

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CHAPTER 3

China (1750–1918)

This chapter is available in the digital versions of this textbook.

▲ **Source 3.1** Empress Dowager Cixi by Dutch painter Hubert Vos, 1905. In traditional Chinese, the sign reads: 'Great Qing Empire Cixi Empress'.

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Unit 2

The modern world and Australia

Overview

In 1914, as part of the British Empire, Australia responded immediately to World War I by supporting the Allied war effort. It was assumed that this was the 'war to end all wars', and that it would be over in months; neither assumption was correct. Australia involved itself in a modern war – based on the heavy industries developed by the Industrial Revolution – that changed the nature of fighting, and profoundly affected the countries that participated. This was a second important stage in the formation of the modern world we know today.

In this unit, we will evaluate which combination of causes created this massive global conflict. We will investigate the actual nature of the new warfare, and describe the new weapons used to create a vast machinery of killing. We will develop the skill of empathy to understand the experiences and feelings of the thousands of men brutally slaughtered in the trenches, and of the nurses serving in battlefront hospitals. We will reconstruct the often-forgotten contribution of women at home, whose work in growing food and making ammunition was crucial to the war effort.

You will decide how the war affected Australia in the long term. Was the war an experience in which Australians 'grew up' to nationhood? Or had they already done that in the 1890s and at Federation in 1901? What is the Anzac myth? Were all the Australian soldiers sturdy lads from country Australia, brought up on mateship? Is the commemoration of war in danger of becoming the glorification of war?

Video
Unit Overview

Learning goals

After completing this unit, you should be able to answer these questions:

- What were the changing features of the movements of people from 1750 to 1918?
- How did new ideas and technological developments contribute to change in this period?
- What was the origin, development, significance and long-term impact of imperialism in this period?
- What was the significance of World War I?

Historical concepts and skills: *cause and effect, and historical significance*

In this unit, there will be a special focus on the concept of **cause and effect**. This means you will be developing your ability to explain why things happened in the past and what the result of these events were. There are many different types of causes and effects. They could be political, economic or social. There is also usually more than one cause or effect for an event, so don't fall into the trap of thinking an event may have only one cause or one effect.

This unit will also focus on **historical significance**. Determining historical significance is crucial, as in History there is so much that happened in the past and you need to be able to identify what is important and what is not. Look for opportunities to develop both of these key skills throughout this unit.

► **Australian troops in World War I**, circa 1916. Machine-gunners march on a dirt road back from the front-line trenches towards their billets (lodgings), France. They pass other troops carrying pickaxes.

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CHAPTER 4

Aboriginal or Torres Strait Islander peoples should be aware that this chapter contains images and names of people who have passed away.

'The war that changed us': World War I (1914–18) and the development of modern warfare

Setting the scene: an eyewitness account of the humanity and the horror of the trenches

Nearly every Australian has some mental image of the horror of the trenches of World War I – if only from popular war films – and yet even these vivid impressions fall far short of the terrible reality. It is only when we look into original written records of the war by those who were actually there that we really understand its true savagery. In this chapter, we will try to get a clearer picture of what the actual experience of war was like in 1914–18. To do so, we will study written descriptions of people's experiences. We shall also pay attention to some remarkable visual records made by artists and photographers who went to the front, determined to create accurate images of the conflict. Finally, we will investigate how this totally new form of war forced historians to develop completely new forms of history in order to be able to write meaningfully about it.

One of the most moving descriptions was written by a Canadian soldier, Charles Yale Harrison, in his book *Generals Die in Bed* (1928). His great quality is that he tells us of the most terrible things, but writes in a simple, clear, factual style. Nonetheless, he was very honest in describing his emotions during this terrifying experience.

Harrison recalled one ghastly trench raid, in which he had to kill a young German soldier, face to face, with his bayonet:

> The enemy artillery has sacrificed the front line and is hammering the terrain between their lines and ours. Green rockets sail into the black sky. It is the German call for help. The whole front wakes up. Guns bark, yelp, snarl, roar on all sides of us. I run down the trench looking for prisoners. Each man is for himself. I am alone. I turn the corner of a bay. My bayonet points forward – on guard. I proceed cautiously.
>
> Something moves in the corner of the bay. It is a German. I recognise the pot-shaped helmet. In that second he twists and reaches for his revolver. I lunge forward, aiming at his stomach. It is a lightning, instinctive movement. The thrust jerks my body. Something heavy collides with the point of my weapon. I become insane. I want to strike again and again. But I cannot. My bayonet does not come clear. I pull, tug, jerk. It does not come out. I have caught him between his ribs. The bones grip my blade. I cannot withdraw. Of a sudden I hear him shriek. It sounds far-off as though heard in the moment of waking from a dream. I have a man at the end of my bayonet, I say to myself. His shrieks become louder and louder. We are facing each other – four feet of space separates us. His eyes are distended; they seem all whites, and look as though they will leap out of their sockets. There is froth in the corners of his mouth which opens and shuts like that of a fish out of water. His hands grasp the barrel of my rifle and he joins me in the effort to withdraw. I do not know what to do. He looks at me piteously. I put my foot up against his body and try to kick him off. He shrieks into my face. He will not come off. I kick him again and again. No use. His howling unnerves me. I feel I will go insane if I stay in this hole much longer …
>
> It is too much for me. Suddenly I drop the butt of my rifle. He collapses into the corner of the bay. His hands still grip the barrel. I start to run down the bay. A few steps and I turn the corner. I am in the next bay. I am glad I cannot see him.

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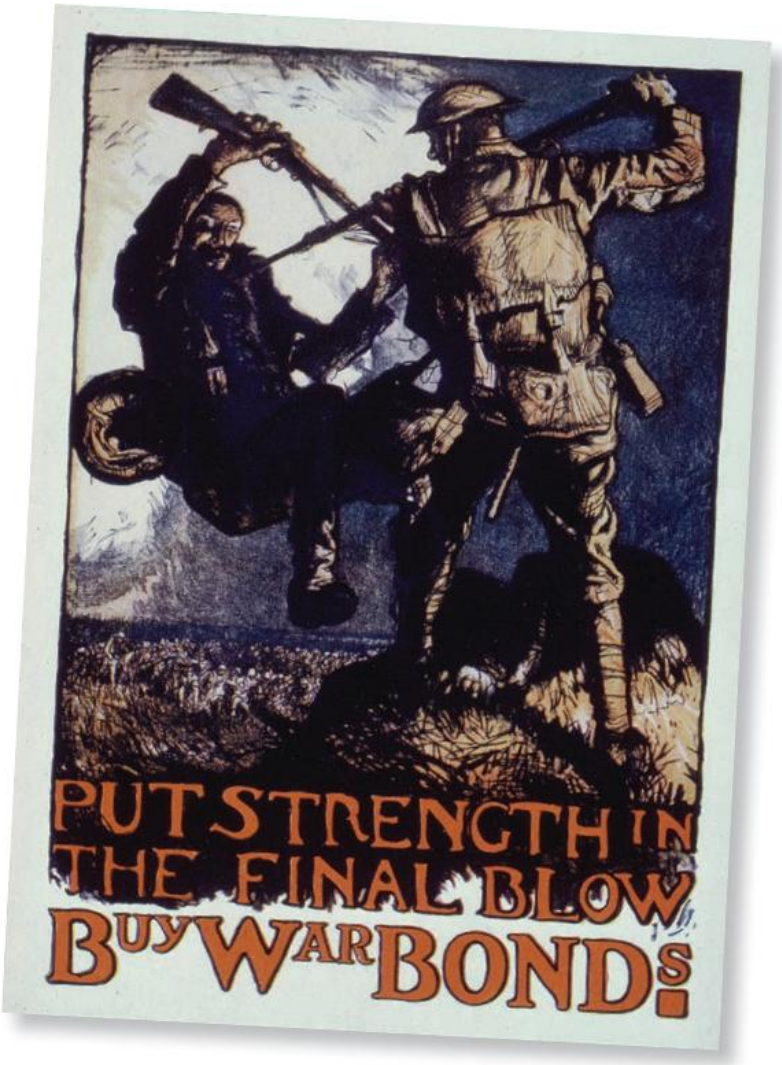
I am bewildered. Out of the roar of the bombardment I think I hear voices. In a flash I remember that I am unarmed. My rifle – it stands between me and death – and it is in the body of him who lies there trying to pull it out. I am terrified. If they come here and find me they will stab me just as I stabbed him – and maybe in the ribs, too. I run back a few paces but I cannot bring myself to turn the corner of the bay in which he lies. I hear his calls for help. The other voices sound nearer.

I am back in the bay. He is propped up against [the trench wall]. The rifle is in such a position that he cannot move. His neck is limp and he rolls his head over his chest until he sees me. Behind our lines the guns light the sky with monster dull red flashes. In this flickering light this German and I enact our tragedy. I move to seize the butt of my rifle. Once more we are face to face. I pull again. My tugging and pulling works the blade in his insides. Again those horrible shrieks! … Suddenly I remember what I must do. I turn around and pull my breech-lock back. The click sounds sharp and clear. He stops his screaming. He looks at me, silently now. He knows what I am going to do … I see his boyish face. I pull my trigger. There is a loud report [explosion]. The blade at the end of my rifle snaps in two. He falls into the corner of the bay and rolls over. He lies still. I am free.

◄ **Source 4.1**
Charles Yale Harrison, *Generals Die in Bed*, 1928



▲ **Source 4.2** This poster, designed late in the war by British artist Frank Brangwyn, is one of the most graphic images of the violence of the conflict. It shows a British soldier killing a German soldier with his bayonet. Curiously, the image was too effective: the British Government refused to use the poster. The German emperor allegedly put a price on the artist's head to have him killed. The purpose of the poster was to persuade people to buy government war bonds to support the war effort. Later, the British Government realised that the image was in fact very powerful, and it actually drew in many more recruits for the British army.

MAKING THINKING VISIBLE 4.1

Think, pair, share

Reflect on the story in Source 4.1.

What do you think?

1. Think about the story.
2. Try to explain your thinking with pictures or words in your notebook or on your digital device.
3. Share your thoughts with a partner. What does this description tell you about World War I that you did not already know?
4. What would you predict would be the long-term effects of such an experience upon this young man?

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Chapter overview

Introduction

The year 2018 marked the 100-year anniversary of the armistice that ended World War I. Despite being more than a century old, this conflict still haunts our imaginations, mainly because of the sufferings of the tragic generation that was born to fight and die in their thousands in the trenches.

And yet this memory does not fade with time – as most memories naturally do – but grows ever sharper and more intense. In 2018, film-maker Peter Jackson released his documentary *They Shall Not Grow Old*, based on original black-and-white film footage from the Imperial War Museum. He restored and colourised the original film footage using modern techniques. The documentary brings us very close to the humanity – and the horror – of the trenches. Like all commemorations of this war, it invites us simply to imagine ourselves caught up in this murderous conflict, and to better understand what a generation of young men and women went through.

Wars continue to threaten nations, giving us a renewed urgency to study and to understand conflict, in the hope of being able to prevent it.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What were the causes of World War I?
- How could a single assassination of a statesman escalate into a conflict between all the major powers of Europe?
- Why did men and women volunteer to go to war?
- Why was World War I quite different from the 'traditional' wars of previous centuries?
- What were the special conditions on the battlefields of World War I?
- In what ways did new weapons change the nature of fighting in this war?
- What were some of the significant places where Australian men and women served during World War I?
- How did Australian women contribute to Australia's war effort?
- What was the impact of World War I on Australia? Was it 'the war that changed us'?
- Why do we commemorate wars? What is the most appropriate way of remembering those who have served?
- What is 'the Anzac myth'?

Historical skills

After completing this chapter, you should be able to:

- Explain what chronology and sequencing mean
- Understand what cause and effect means in the study of History
- Interpret primary sources in both print and visual form.

Other important historical skills include:

- Understanding and evaluating different historians' points of view
- Developing historical empathy with people in the past
- Evaluating the reliability of primary sources
- The correct use and definition of special terms specific to the topic under study
- The use of factual evidence (dates, statistics, examples) to substantiate an argument.

► **Image on next page:** Australian troops wearing gas masks at the Second Battle of Ypres, 1915

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Timeline of key events

What came before this topic?

- **18th century:** The Industrial Revolution in England, and later Europe, creates modern factories and modern technologies that will later produce the deadly weapons used in World War I.
- **18th century:** The Age of Empires: European powers continue to build up colonies and to form empires. Australia is a part of the British Empire.
- **19th century:** The first truly modern weapons begin to be used in warfare – for example, the machine gun in the American Civil War.
- **1870:** Prince Otto von Bismarck unites a number of smaller states into the new country of Germany.
- **1880s:** The 'scramble for empire': European powers compete to seize colonies in places such as Africa. This competition introduces new tensions among the great powers.
- **1898:** German Emperor Wilhelm II embarks on a new policy of German 'World Politics', and starts building up his navy in competition with Britain.
- **1901:** Australia is federated.
- **1911:** The Agadir Crisis: The French and the Germans almost go to war over their claims in Morocco.

Proclamation of the German Empire in **1871**. Otto Von Bismarck (in white) is proclaimed Emperor.

1914

28 June
Assassination of Austrian Archduke Franz Ferdinand triggers a chain reaction of responses by European powers

August
Germany invades Belgium, then enters France

5–10 September The French throw back advancing German forces in the Battle of the Marne. Both sides dig in using trenches.

October–November
First Battle of Ypres

1915

January
Germans use gas for the first time

February–September
Major German campaign of submarine attacks on merchant shipping

April–May
Second Battle of Ypres

April
The Allies commence hostilities at Gallipoli

May
Italy declares war on Austria-Hungary

Two French soldiers search the muddy battlefields in the first Battle of Ypres, October 1914

British recruiting poster from 1915. This poster depicts a group of infantry departing by train. The image captures the excitement some people felt at the outbreak of war.

Timeline questions

1 What can you tell from the information in the timeline about the difficulty of achieving victory during World War I?

2 Of all the battles listed here, which one do you think proved to be the most decisive in winning the war?

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What came after this topic?

- **11 November 1918:** Armistice ends fighting between Germany and the Allies.
- **January 1919:** The Allied powers meet at Versailles, France, to discuss peace treaties to formally end the war. Germany and its allies are excluded.
- **June 1919:** The Treaty of Versailles is signed. When published, it provokes shock and rage in Germany.
- **August 1919:** The Weimar Republic is established, and immediately faces massive political, social and economic problems.
- **January 1920:** The League of Nations (precursor of the United Nations) is founded. Germany is excluded from membership.
- **February 1920:** Hitler publishes The Twenty-Five Point Program of the Nazi Party.
- **May 1921:** Germany is forced to accept massive reparations (payments for damage) to the Allies.
- **1933:** Hitler is appointed Chancellor of Germany.
- **September 1939:** Outbreak of World War II. The 'war to end all wars' has not done so.

The Treaty of Versailles was signed on **28 June 1919**, with victorious nations forcing Germany to carry the blame for World War I

Eight-inch British howitzers fire an artillery barrage during the Battle of the Somme in **August 1916**

Men of the 8th Battalion, East Yorkshire Regiment going up to the line near Frezenberg during the Third Battle of Ypres, **5 October 1917**

1916

January Allied forces withdraw from Gallipoli

February (to December) Battle of Verdun

May German and British fleets clash in the Battle of Jutland

July–November Battle of the Somme

1917

February Germans start policy of unrestricted submarine warfare

6 April United States enters the war

July–November Third Battle of Ypres

1918

March Russia pulls out of the war, allowing more German troops to attack the Western Front

The Ludendorff Offensive: German stormtroopers break through Allied lines of defence

Spring Germany makes a major offensive to break through Allied defences and to capture Paris

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4.1 The descent into the fires of war: why Europe went to war in 1914

FOCUS QUESTIONS

- What were the causes of World War I?
- How could a single assassination of a statesman escalate into a conflict between all the major powers of Europe?

The European powers on the eve of war

▲ **Source 4.3** The two European rival armed camps pre-1914

Gavrilo Princip and the assassination at Sarajevo

KEY TERM

nationalist a person who wants their country to be politically independent

Gavrilo Princip was a Bosnian with Serbian nationality. He was a **nationalist** who hated the way his country had been forced into the vast Austro-Hungarian Empire. He belonged to a revolutionary group called Young Bosnia. He wanted to fight for a free, independent Bosnia, ruled by Bosnians, not by arrogant foreigners. He joined a group called the Black Hand, and recruited young men with similar nationalist feelings. The aim of such groups was to carry out a violent act of political

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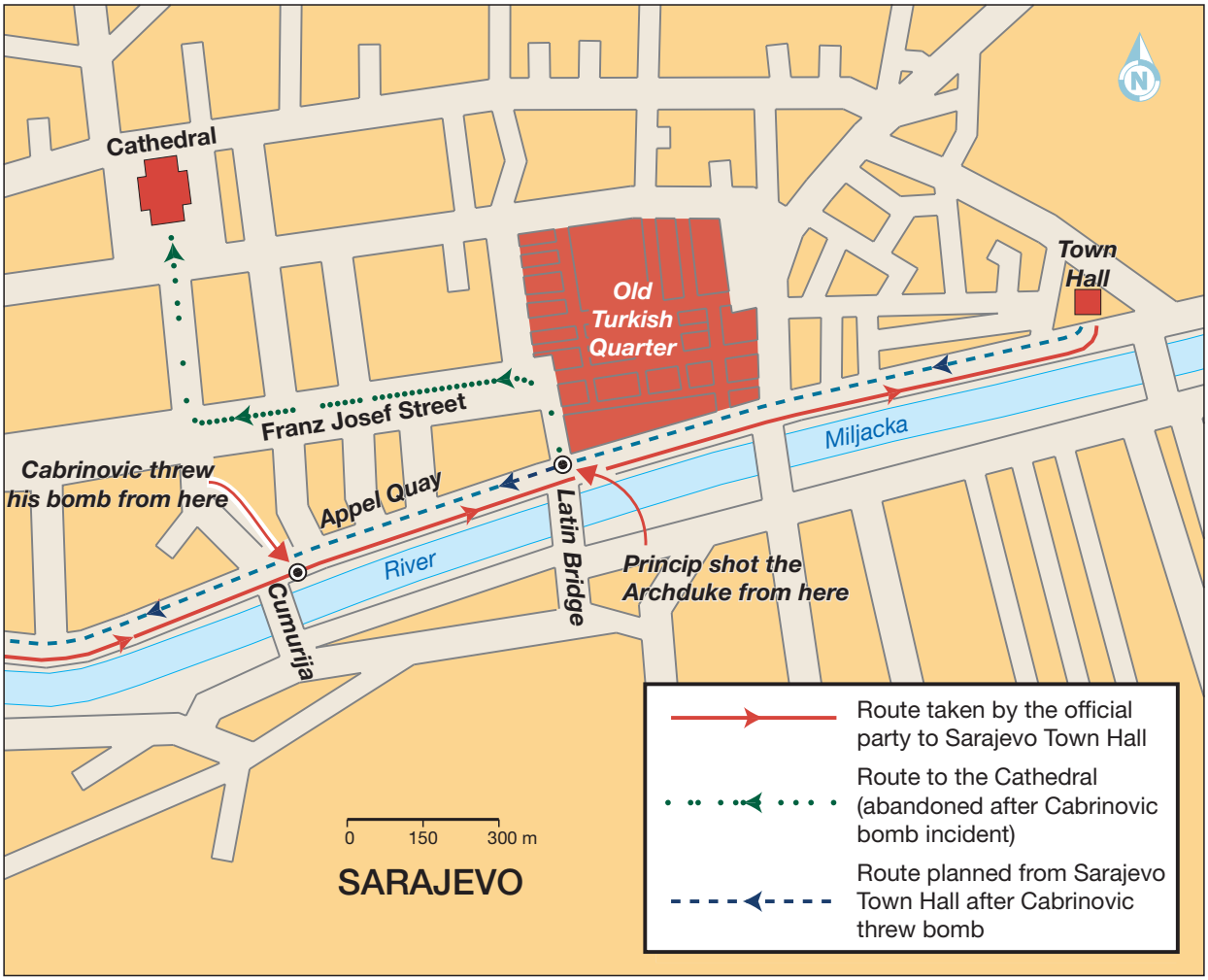
protest – such as a bombing or a shooting – against the Austrian authorities.

His opportunity came when the Austrian Archduke Franz Ferdinand, the heir to the throne, announced that he would make an official visit to the Bosnian town of Sarajevo, along with his wife Sophie Chotek, Duchess of Hohenberg. He was to drive through the town in an open car, and the route was published in advance. Princip hastily bought pistols, a hand grenade, as well as some cyanide pills for suicide if needed. He carefully posted his men along the main road, Appel Quay, each one hiding a weapon in his coat.

The royal couple arrived at Sarajevo at 10 a.m. on 28 June 1914, and were driven in a car with the hood down, so that the people could see them properly. Princip and his friends waited nervously. But from there, everything went horribly wrong. One young man, Cabrinovic,

▲ **Source 4.4** Bosnian Serb Gavrilo Princip in 1914



▲ **Source 4.5** The route followed by the royal procession

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▲ **Source 4.6** Franz Ferdinand, Archduke of Austria, and his wife Sophie riding in an open carriage at Sarajevo shortly before their assassination

was to roll a hand grenade under the car, but he was so inexperienced that he forgot that the grenade had a 10-second delay, and that the official car would drive quickly over it and miss the blast; officials in a following car were injured instead. The cars now speeded up, the police closed in, and the conspirators could not act.

The attack now descended into farce. One conspirator hastily swallowed a cyanide pill, but it was too old to work, and just made him vomit. He then threw himself off the bridge into the river, but it was summer, and the river only had a few centimetres of water in it. He was arrested. Meanwhile, Princip, stunned and confused, wandered the streets wondering what to do next. He had no backup plan. The attack appeared to have failed.[1]

Then, in one of the most tragic coincidences in history, Princip turned a corner and unexpectedly walked straight into the Archduke's official car. Ferdinand had already recovered from the shock, and had ordered his driver to take him to the hospital to visit the people who had been wounded by the grenade blast. The driver took a wrong turn, and drove the car down the very street in which the dazed Princip was wandering, still holding his pistol. Princip simply raised his weapon, shooting Ferdinand and his wife, Duchess Sophie Chotek of Austria. Since she was pregnant, Princip had in fact taken three lives. He was duly arrested. The members of his group who were of adult age were tried and condemned to death. Princip, being under 20, was sent to prison, where he became ill with tuberculosis and died in 1918.

Cause and effect: the domino effect to disaster

The assassination at Sarajevo is so commonly described as the catalyst (cause or trigger) for World War I that it is tempting to accept this as the cause without questioning it. The problem is that political assassinations were quite common at that time, and other attempts had been made without triggering a war. The assassination of two people is tragic, but it does not explain how the major powers of Europe suddenly started the most destructive war ever.

1 It is commonly said that Princip stopped to have a sandwich at Schiller's Delicatessen, but Mike Dash of the Smithsonian has shown that this is an attractive myth, made up recently; the primary sources (from the time) mention no such thing. Read more at 'World War I: 100 Years Later' on the Smithsonian website.

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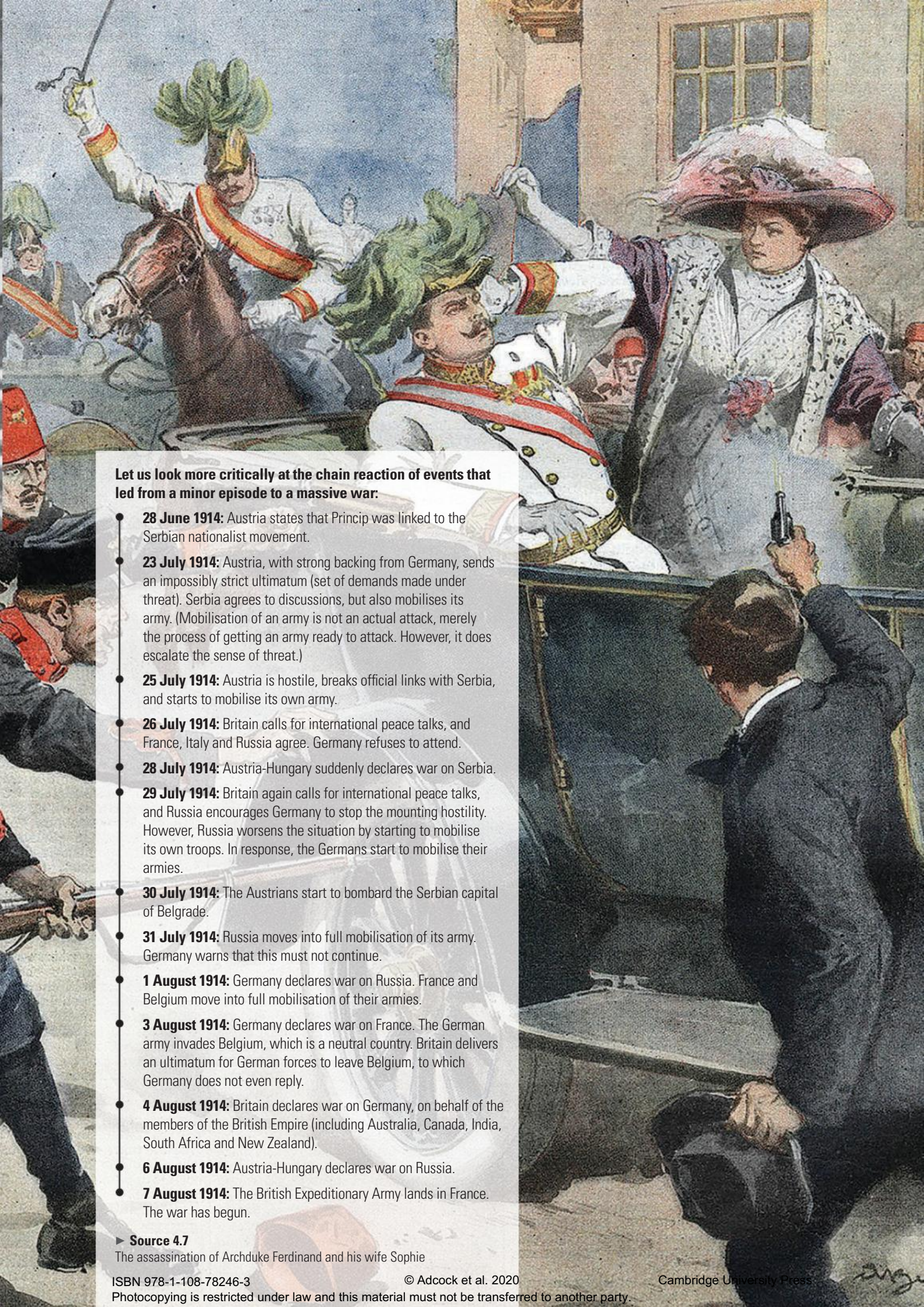

Let us look more critically at the chain reaction of events that led from a minor episode to a massive war:

- **28 June 1914:** Austria states that Princip was linked to the Serbian nationalist movement.
- **23 July 1914:** Austria, with strong backing from Germany, sends an impossibly strict ultimatum (set of demands made under threat). Serbia agrees to discussions, but also mobilises its army. (Mobilisation of an army is not an actual attack, merely the process of getting an army ready to attack. However, it does escalate the sense of threat.)
- **25 July 1914:** Austria is hostile, breaks official links with Serbia, and starts to mobilise its own army.
- **26 July 1914:** Britain calls for international peace talks, and France, Italy and Russia agree. Germany refuses to attend.
- **28 July 1914:** Austria-Hungary suddenly declares war on Serbia.
- **29 July 1914:** Britain again calls for international peace talks, and Russia encourages Germany to stop the mounting hostility. However, Russia worsens the situation by starting to mobilise its own troops. In response, the Germans start to mobilise their armies.
- **30 July 1914:** The Austrians start to bombard the Serbian capital of Belgrade.
- **31 July 1914:** Russia moves into full mobilisation of its army. Germany warns that this must not continue.
- **1 August 1914:** Germany declares war on Russia. France and Belgium move into full mobilisation of their armies.
- **3 August 1914:** Germany declares war on France. The German army invades Belgium, which is a neutral country. Britain delivers an ultimatum for German forces to leave Belgium, to which Germany does not even reply.
- **4 August 1914:** Britain declares war on Germany, on behalf of the members of the British Empire (including Australia, Canada, India, South Africa and New Zealand).
- **6 August 1914:** Austria-Hungary declares war on Russia.
- **7 August 1914:** The British Expeditionary Army lands in France. The war has begun.

► **Source 4.7**
The assassination of Archduke Ferdinand and his wife Sophie

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▲ **Source 4.8** Main reasons why the five major European powers went to war in 1914

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.1

Cause and effect

A key skill in the study of History is the ability to identify chains of cause and effect to examine how and why things happened in the past. Narratives and timelines are good tools for identifying significant causes. You can use timelines to map and organise events, people, ideas, movements and turning points to identify links between causes and effects and to distinguish between long-term (trends) and short-term (triggers) causes of events. Refer back to the timeline on the previous page, as well as Source 4.8, to help you with the following activity, which focuses on the short-term causes of World War I.

Group activity: the courtroom of history

As a historian, you must review what happened, and decide for yourself which country or which ruler was most responsible for the events that led to war. The historian is very much like the lawyer, who must strongly state their case, then convince the judge and jury by collecting firm evidence to prove their point beyond reasonable doubt. And like the lawyer, the historian must respond to cross-questioning and maintain their argument.

Your class should divide these into six groups, each of which must make a case for the guilt of one of the players in this drama.

Your presentation must contain a clear contention (statement) about the guilt of your chosen country/countries, and must be strongly backed up by evidence such as dates, sequence of events, primary sources and historians' opinions.

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Upon the conclusion of your presentation, your group will need to take questions and criticisms from the other research groups.

Prosecution case 1: Serbia was to blame because it did not clearly pass on a warning about the assassination plan to the Austrians, and because some officials backed nationalist movements.

Prosecution case 2: Austria-Hungary was to blame because it imposed an impossibly strict set of conditions on Serbia, virtually entrapping it into war.

Prosecution case 3: Germany was to blame because its Kaiser and military leaders encouraged Austria to strike quickly at Bosnia, in the hope of encouraging a European war.

Prosecution case 4: Russia was to blame because it rushed in to mobilise its troops even before Germany had done so.

Prosecution case 5: Britain was to blame because it did not do enough to bring the nations to the debating table.

Prosecution case 6: All the major European nations were to blame, because they were all making alliances, building up their armed forces and competing for colonies.

Additional content
Do you want to learn more about the debate between historians about the responsibility for the war? See *The debate over responsibility for the war* in the electronic resources section.

Video
An Indigenous hero of WWI

END-OF-SECTION REVIEW 4.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Digital quiz
Please see the Interactive Textbook to access digital activities

Recall

1 What were the grievances that motivated Gavrilo Princip?
2 What were the aims of the Young Bosnia Group?
3 Why did Princip choose Archduke Franz Ferdinand and his wife for assassination?
4 Why was Princip not executed for his act, as his helpers were?

Interpret

5 What were the strengths and the dangers of the European system of alliances?
6 What were the reasons for European powers to take over weaker nations as colonies?

Argue

7 Explain why both the alliance system and the competition for colonies could generate dangerous political and military tensions in Europe.

Extension

1 Investigate what historian Fritz Fischer said about Germany's war guilt, and explain the evidence he produced to prove Germany's ultimate responsibility for the conflict.

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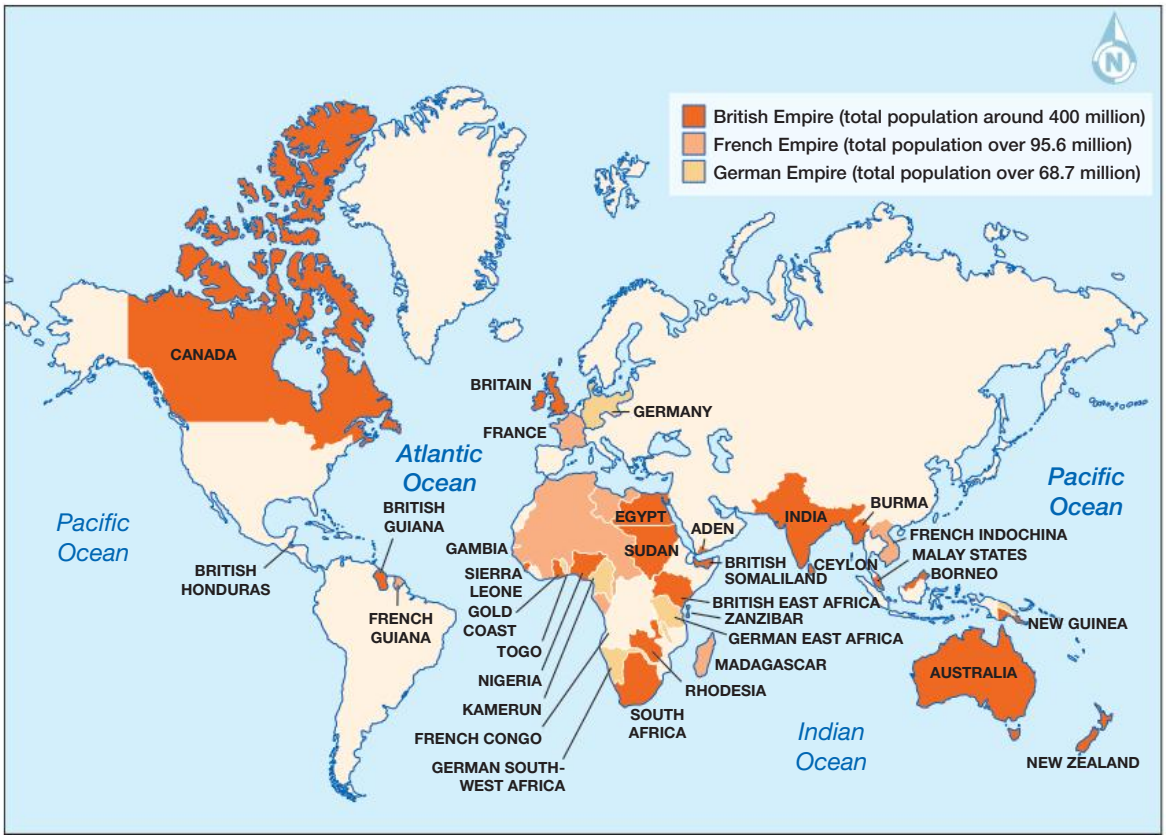
4.2 'Patriots all': the reasons why men and women enlisted to go to war

FOCUS QUESTION

Why did men and women volunteer to go to war?

Introduction

So closely was Australia linked to Britain in 1914 that it did not make its own declaration of war. It was simply assumed to be at war as a part of the British Empire. Once the war started, there was at first no need to conscript (call up) people to join the army as there were plenty of volunteers.



▲ **Source 4.9** World empires of Britain, France and Germany in 1914. By the end of 1914, the only overseas territory of the German Empire that remained uncaptured by the Allies was German East Africa.

Defending the British Empire

Most Australians felt strongly that they were a part of the British Empire, and were proud of it. Indeed, at that time – and as recently as the 1950s – Australians still referred to a trip to England as 'going home'.

'Defending civilisation'

Another reason might be called the moral obligation, the feeling that it was important to fight German militarism and aggression. Many Australians firmly believed that Germany's military aims had to be resisted. Captain R. Mulvey, for example, wrote:

> In this struggle which will determine whether spiritual principles or a military despotism will control this world of ours, I feel [it would be] better to die in fighting for such a cause than to live in lifelong [shame] for having failed to respond to the Call.

▲ **Source 4.10** Captain R. Mulvey, quoted in Bill Gammage, *The Broken Years*, 2010, p. 15

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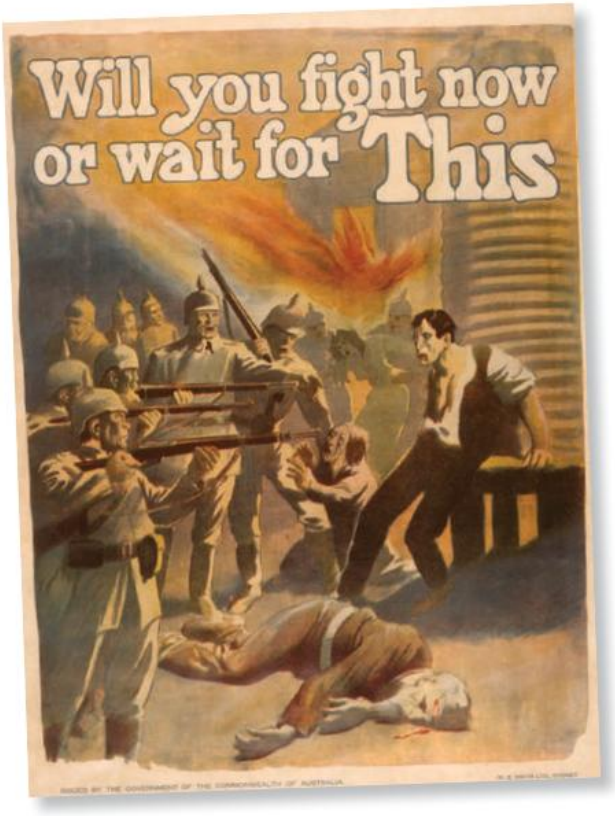
Defending Australia

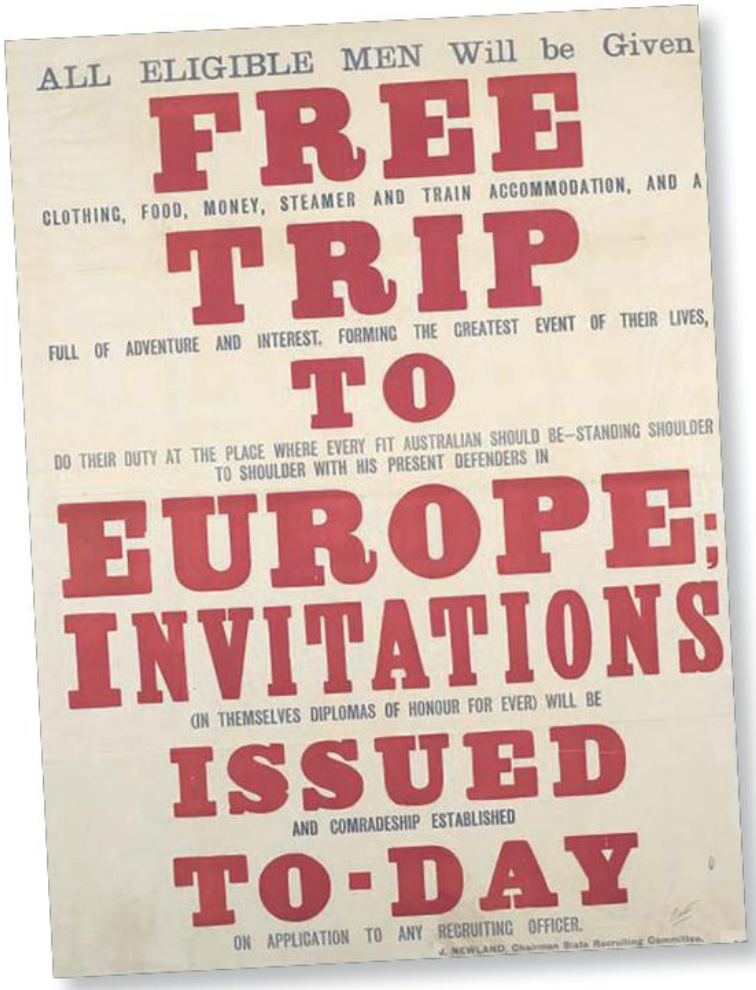
Many Australians felt that they must also resist Germany's aims because they thought that one day they might have to defend their own country. Government **propaganda** helped to increase this fear by creating posters showing how Australian farms might one day be under attack from brutal German soldiers, who would rape women and slaughter their husbands and children.



KEY TERM

propaganda the use of persuasive information by a government to publicise its military success and/or to demonise an enemy country

◄ **Source 4.11** This poster was designed by Australian artist Norman Lindsay for the Australian Government in 1918. Its late date reminds us that, by then, the government was desperate to recruit thousands more men and yet had twice been defeated in its attempt to introduce conscription. At one point in that same year, the Germans had successfully made a final push and seemed very close to victory. Fear of German domination and invasion was at that point very credible.



▲ **Source 4.12** 'Free trip to Europe' poster

A golden opportunity for travel abroad?

Some young men volunteered because the war offered them their only chance of a trip overseas. In the early 1900s, international travel was still massively expensive, a luxury only for the wealthiest classes. A working-class family would find it expensive even to travel within Australia, least of all to Britain. Troops who enlisted in 1914 hoped to travel free to what they called 'the Old Country', and were disappointed when their ship took them first to Egypt.

This Australian recruiting poster cleverly uses large font to appear to offer a free trip to Europe. Only in the small print does it make it clear that you have to join the army. It was for this reason, perhaps, that there were actually fights among the men lining up at the Victoria Barracks in St Kilda Road, Melbourne. Because people thought the war would be over by Christmas, some men were pushing in to get to the front of the line, fearful of missing the opportunity to see the world for free.

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▲ **Source 4.13** There is no doubt that, for most men, going overseas was a great adventure. Here, Australian soldiers ride camels near the pyramids in Egypt.

Pure patriotism: the boy-soldier Jim Martin

Many other soldiers, however, joined out of a patriotic desire to defend their own country and to help defend the British Empire, to which Australia belonged. One of the most remarkable examples was the 'boy-soldier' Private Jim Martin. Born in Hawthorn in 1901, he had just left school and started to work on a farm in 1915. When enlistment began, he was aged 14 years and 3 months. He reported to the recruiting office, and passed himself off as a strapping 18-year-old. Keen to 'have his share of the Turks' (to start fighting them), he reported for duty, and was soon on a ship bound for Gallipoli. His first experience of war was the torpedo attack that sank his troopship. He survived in the water for four hours before being rescued. He soon found himself at Gallipoli. Jim wrote to his family:

> We are very close to the Turk where we are. But you mustn't worry about me. I'm doing just splendid over here.

▲ **Source 4.14** Private Jim Martin, quoted in Department of Veterans' Affairs, *Gallipoli and the Anzacs: A Resource for Secondary Schools*, 2010, p. 72

Private Jim Martin then survived the savage fighting at Gallipoli in September 1915. Tragically, he was one of thousands who died unnecessarily of disease due to the unhealthy conditions at Gallipoli. Indeed, as many men died of disease as those who died by Turkish bullets. By 25 October 1915, Jim was seriously ill with typhoid fever, and was evacuated to a hospital ship, where he died of heart failure the same evening. He is believed to be the youngest Australian to have died on active service for Australia.

The Dinkums

A later reason for volunteering arose when, after the first few years of the war, people in Australia realised that the war was going badly, and that it

▲ **Source 4.15** Fritz Erler, 'Boys, come over here, you're wanted' poster, circa 1917

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was urgent to send more help. Military historian Peter Pederson writes:

> Recruitment soared in Australia. News of the [Gallipoli] Landing, the constant lengthy casualty lists and anger at the sinking of the liner 'Lusitania' by a German submarine in May 1915 all stimulated it. Those who responded called themselves the 'Dinkums' because they joined out of conviction rather than out of a love of adventure like the 'Tourists'.

▲ **Source 4.16** Peter Pederson, *The Anzacs: Gallipoli to the Western Front*, 2007, p. 109

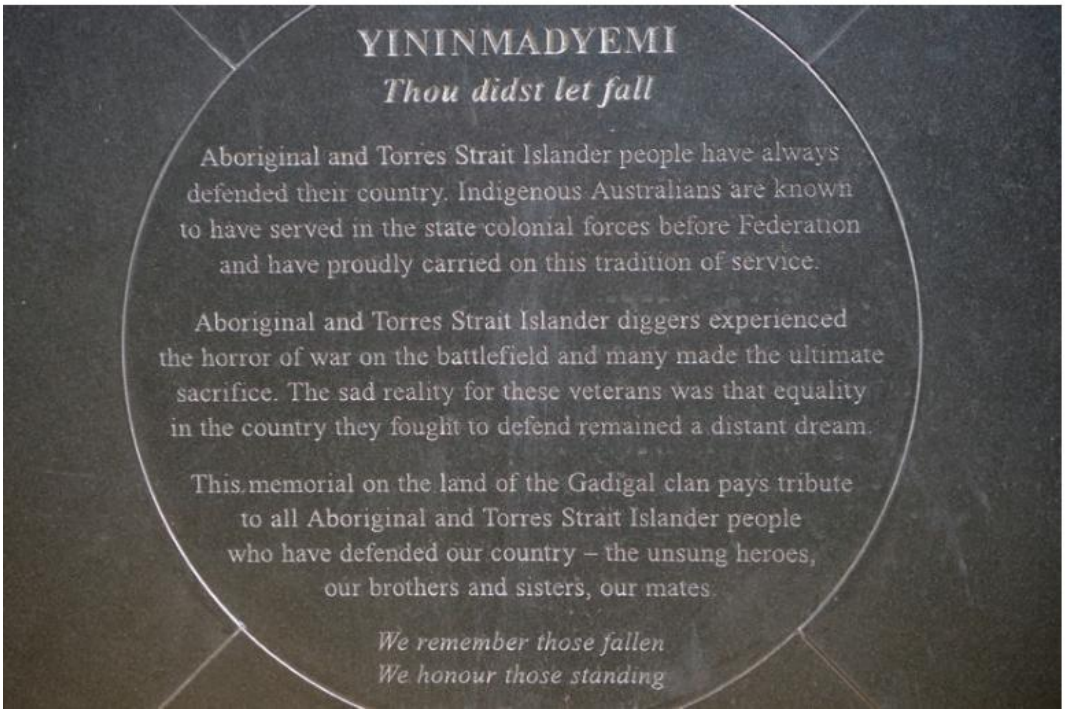
Unsung Indigenous heroes: why did Aboriginal Australians volunteer for the war?

In 1914, Aboriginal Australians were not even allowed to volunteer to join the army. Later, as the casualties mounted, and volunteering decreased, some Indigenous people were allowed to enlist under special conditions introduced in October 1917. We will never know how many Indigenous Australians actually served, because records were not kept precisely. There were about 93 000 Indigenous Australians in 1901, and it is estimated that about 1000 served in the war, but the figure may well be much higher. Likewise, there is little evidence of what motivated them to join. The historians of the Australian War Memorial state that:

> It is not known what motivated Indigenous Australians to join the Australian Imperial Force (AIF), but loyalty and patriotism doubtless played a part. There was also the incentive of receiving a wage. Indigenous soldiers were paid the same rate as non-Indigenous soldiers. In general, Indigenous soldiers served under the same conditions of service as other members of the AIF, with many experiencing in the army equal treatment for the first time in their lives. There may have also been the hope that having served would deliver greater equality after the war. In reality, however, upon their return to civilian life they were treated with the same prejudice and discrimination as before.

▲ **Source 4.17** The Australian War Memorial, *Aboriginal Service During the First World War*, 2019

Their contribution has now been better recognised by the memorial sculpture in Hyde Park, Sydney *YININMADYEMI Thou didst let fall* by Aboriginal artist Tony Albert.



▲ **Source 4.18** *YININMADYEMI Thou didst let fall* by Aboriginal artist Tony Albert. Monument to Indigenous Australians, Hyde Park, Sydney.

Additional content
Access the digital versions of this textbook to read more about this sculpture.

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Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 4.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Why did Australia not declare war on Germany in 1914?
2 Why did some people feel a moral need to fight Germany?
3 Why were some young men so eager to volunteer that they got into fights at recruiting stations?
4 Who were the Dinkums, and what did they aim to do?

Interpret

5 What were five of the main themes (subjects) shown in recruiting posters of World War I shown in this section?
6 Look again at these patriotic posters. If you had lived in 1914, would you have been persuaded to enlist by these pictures? If so, which theme might have been the most powerful influence on your decision to serve?

Argue

7 Explain why it is so important for Australia, as a nation, to properly acknowledge those groups – such as Indigenous Australians – whose war service has been forgotten or undervalued. Describe how oral history (spoken accounts) can help fill in the silences in our history.[2]

Extension

1 Investigate the extent to which Australia has now properly and fully acknowledged the service of Indigenous Australians in the armed forces during World War I. In your response, provide a survey of the number and location of commemorative monuments, and list a range of recent publications on the subject.[3]
2 J. Korff writes:

> There is an Aboriginal war memorial plaque in Canberra, ACT, set up not by the Australian government but by private citizens. It is not in the spotlight and not easy to find. You can find the Aboriginal war memorial plaque in the vicinity of the Australian War Memorial, a ten-minute walk away.

▲ **Source 4.19** J. Korff, *Aboriginal War Memorials*, 2018

Investigate the nature of the existing memorial plaque, and evaluate whether it is adequate to acknowledge the service of Indigenous Australians in war. Write a proposal outlining a ceremony, publication or monument that you think could better acknowledge Indigenous service to our nation.[4]

2 For more information, visit 'Military Service and Aboriginal Voices' on the Barani website.
3 You can start your research at 'Indigenous defence service' on the Australian War Memorial website.
4 For more information, visit 'Australian war memorials' on the Creative Spirits website.

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4.3 The technologies of death: the nature of fighting in World War I

FOCUS QUESTIONS

- Why was World War I quite different from the 'traditional' wars of previous centuries?
- What were the special conditions on the battlefields of World War I?
- In what ways did new weapons change the nature of fighting in this war?

Why was World War I so destructive?

War is always, by its nature, violent and destructive. World War I was especially tragic because of the large numbers of people involved, and because of the invention of new and terrible weapons. Some of these weapons, such as artillery and machine guns, already existed, but were now developed to be even more murderous. Human beings' ability to kill each other was multiplied a thousandfold. Then, under the pressure of a desperate war that dragged on without victory, new and terrible weapons – such as poisonous gas and flame throwers – were invented. These weapons created even more cruel and horrific forms of death on the battlefield.

The image: a traditional war, over in a few months

The generation that entered World War I could have had no idea of the terrible nature of modern warfare. They assumed that war would be like the famous nineteenth-century battles, as shown in popular military paintings. Every student in every schoolroom saw heroic images of dashing cavalry charges made by powerful men in splendid, colourful uniforms, riding superb horses. In Australia and elsewhere, people thought that the war would begin, battles would be fought on battlefields, and then the conflict would be over in a few months.

▼ **Source 4.20**
When people in 1914 thought of war, they thought of heroic charges and glorious victories, as depicted by Lady Jane Butler in her battle paintings. Families admired these works in public art galleries, and schoolchildren gazed at black-and-white reproductions of them on classroom walls.

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▲ **Source 4.21**
Even the generals, accustomed to the earlier fast-moving warfare on battlefields, struggled to adjust to modern warfare. French generals resisted suggestions to buy modern weapons, such as machine guns, insisting that the fighting spirit of their troops was enough. This poster from 1916, showing a brave French soldier surging forward with only rifle and bayonet, was seriously out of touch with the realities of static trench warfare. Fighting spirit was helpless against machine guns and cannon.

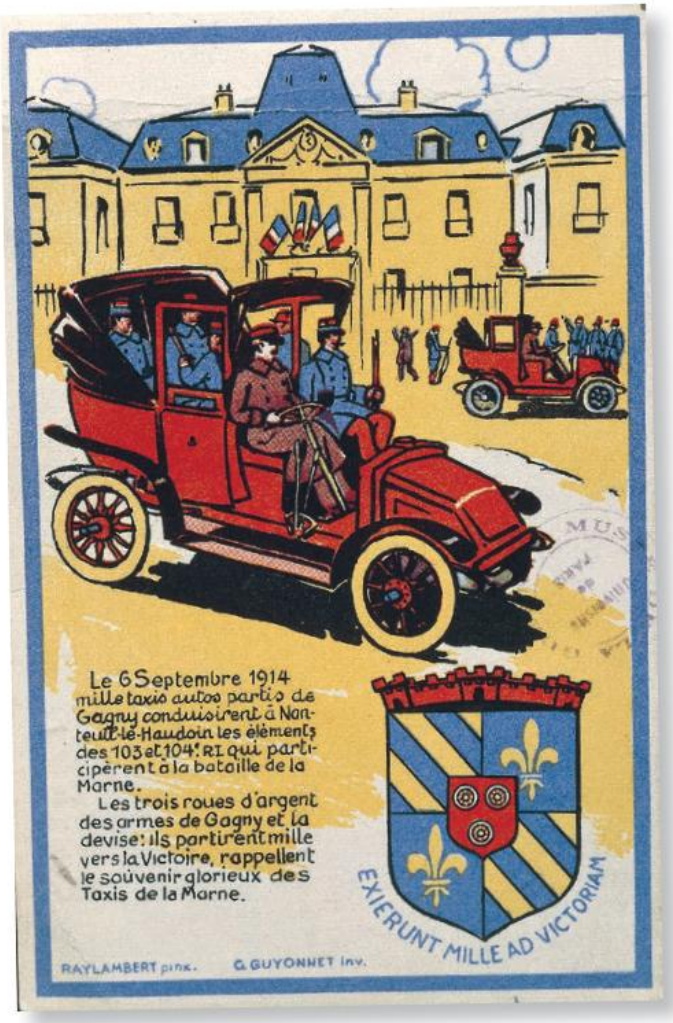
A fast start

Initially, the war was one of fast movement. Germany used the Schlieffen-Moltke Plan, a detailed campaign to invade France and quickly defeat it before Russia could organise itself to enter the conflict. The plan succeeded. Germany's army invaded neutral Belgium, overcame its brave resistance, then invaded France, rapidly approaching Paris.

But the French army met the threat, and defeated the Germans at the Battle of the Marne (6–12 September 1914). German losses were so massive that the government never dared publish casualty figures. The German army retreated in chaos and dug defensive trenches. The later Battle of the Aisne marked the beginning of trench warfare.

Amazing but true …

War had broken out so quickly that the French army did not have enough military trucks to move all their men north to meet the Germans. Since this was urgent, the government ordered every taxi in Paris to report for duty, to drive the soldiers to meet the enemy. Some taxi drivers even switched on their meters and tried to charge the soldiers a fare upon arrival!



▲ **Source 4.22** Taxis take French soldiers to the front

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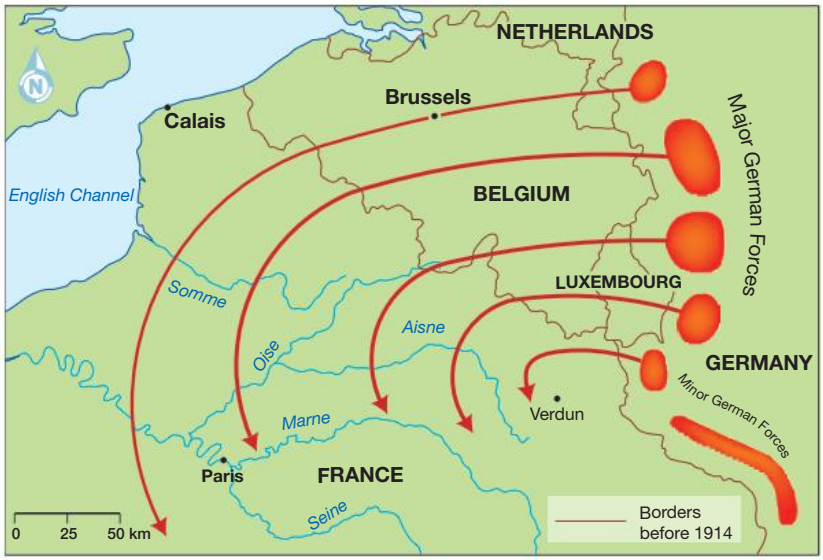
Germany's Schlieffen-Moltke Plan

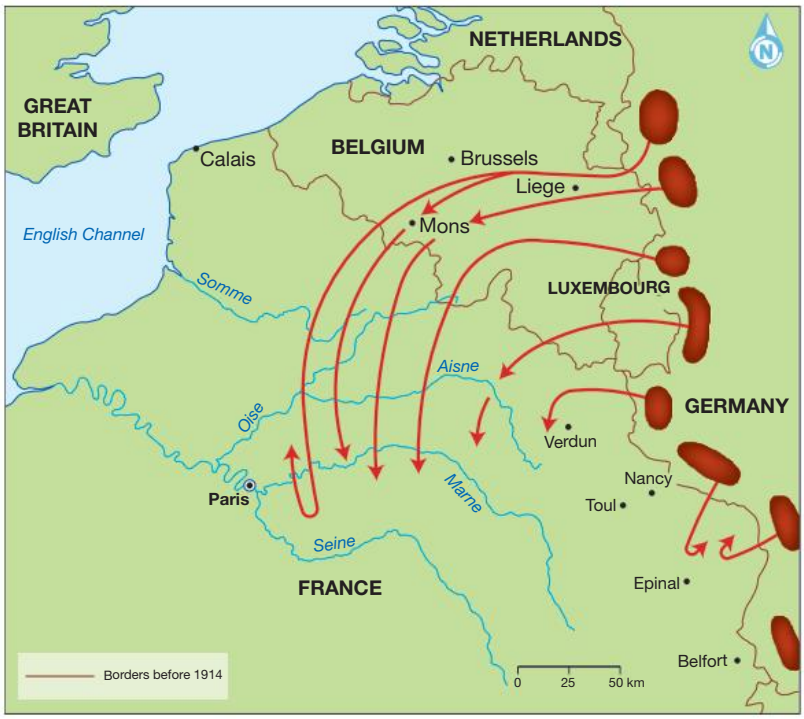
As early as 1905, Count Alfred von Schlieffen had drawn up a plan in case Germany went to war with both France and Russia. To avoid dividing his army to fight on two fronts, von Schlieffen aimed to attack France first and defeat it quickly. He would then focus on defeating Russia, as Russia would take longer to mobilise its army. To avoid heavy French defences on its border with Germany, the German army would need to invade France by passing through neutral countries.



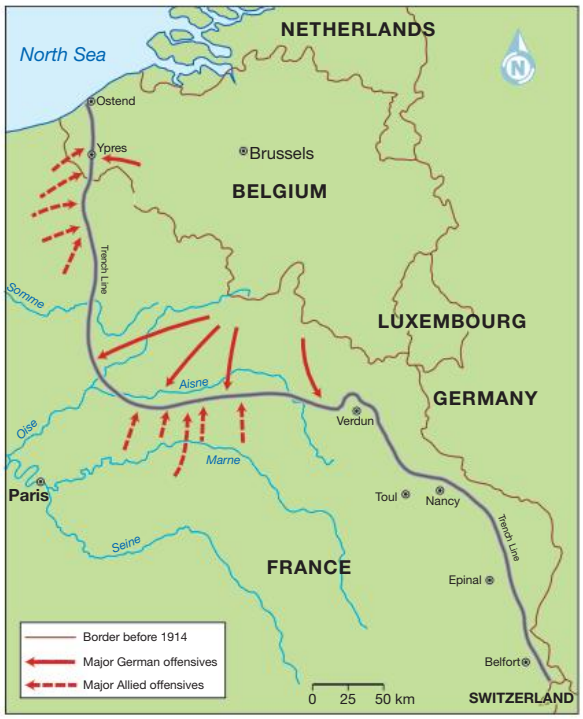
▲ **Source 4.23** Germany's Schlieffen-Moltke Plan

The reality: stalemate and trench warfare

By late 1914, the 'war of movement' was replaced by a 'war of entrenchment', when opposing armies dug defensive positions called trenches, and settled down to a long fight. The nature of war had changed forever. With some exceptions, the dashing cavalry played no role in these conditions.



▲ **Source 4.24** Germany's Schlieffen-Moltke Plan in action, 1914



▲ **Source 4.25** The development of the stalemate, 1914

ACTIVITY 4.1

Using historical sources as evidence

1. Looking at Source 4.23, which two neutral countries would be most heavily affected by Germany's invasion?
2. Using Sources 4.23 and 4.24, why were fewer German forces sent across the border with France?

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THE LANDSCAPE OF DEATH: TRENCH WARFARE IN WORLD WAR I

The development of trench warfare forced all the powers into a deadly process of trying to defeat the enemy by killing as many soldiers as possible, using as many existing and new weapons as possible; this was called a War of Attrition. The landscape of death, shown here by a modern artist, was often referred to as 'Hell on Earth'.

The rapid development of artillery – especially the increasing range of shells and the size of their explosions – meant that artillery barrages could continue for days, pulverising the enemy's trenches and the troops within them.

Women played important roles on the Western Front. This included being nurses at medical posts or as drivers of lorries. They were often dangerously close to the firing line.

▲ **Source 4.26** An artist's representation of trench warfare in World War I

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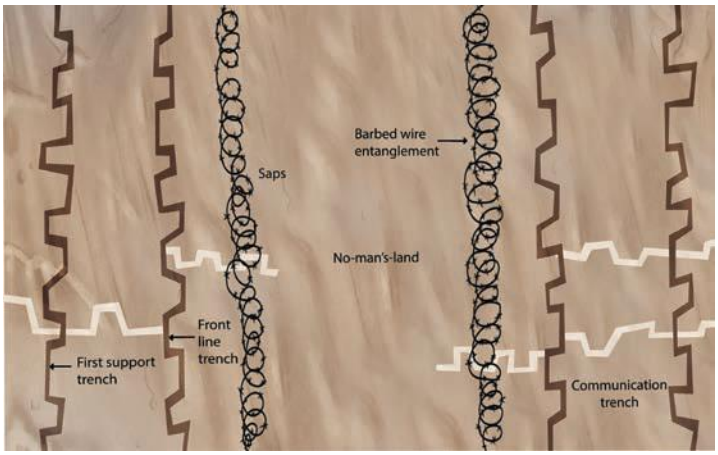

▲ **Source 4.27** An aerial view of a trench system showing two opposing sides. The trenches stretched some 750 kilometres from the Channel coast in Belgium and ran all the way to the French border.

▲ **Source 4.28** A cross-section diagram of a trench

Technologies of making trenches

All armies developed sophisticated techniques for building trenches. The first was sapping, which was digging into the ground to create a passageway. The sides of the trench would be held up with beams of woods. These trenches were usually around three metres deep.

KEY TERM

no man's land the contested strip of land between enemy trenches on the battlefields of World War I

The second technique was tunnelling, to allow troops to go under **no man's land**, either to rescue the wounded or to surprise attack the enemy.

The third technique was sandbagging: in some places, the ground was not good for digging, and so soldiers built up a wall of sandbags filled with heavy clay. These trenches were better because they were not likely to flood during the winter.

Because attacks could be both sudden and intense, there needed to be multiple layers of trenches. The first was the front-line trench, from which soldiers fired at the enemy. Next was the support trench, then behind that a reserve trench, for if the troops were suddenly driven back by a massive attack. The fourth type of trench was a communication trench, which provided protected passage between the front and rear trenches, which allowed men, weapons and food supplies to be moved up the men at the front.

Soldiers often found the digging of trenches to be the hardest labour of all. The trenches had to be big – about two metres wide and three metres deep – which required the removal of enormous amounts of earth. The construction of just 250 metres of trenches would have made the soldier in Source 4.29 and 450 other men work hard for six hours. When we consider that about 2490 kilometres of trenches were built in World War I, we can understand the massive, and exhaustive, task they faced.

▼ **Source 4.29** A modern artist's representation of a typical British soldier, commonly referred to as a 'Tommy'

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MAKING THINKING VISIBLE 4.2

See, think, wonder

Closely analyse the trench warfare images on the previous few pages.

What do you see?

1 What does Source 4.28 tell you about the way trenches were constructed?

2 What does Source 4.26 show you about the main dangers of going out into no man's land (the space between enemy trenches)?

3 How does this image help you understand the role of the aeroplane in this type of trench fighting?

4 How did soldiers overcome the problem of fighting an enemy they could not even see because of the trench system?

▲ **Source 4.30** The observation balloon provided valuable early warning about enemy troop movements, but was vulnerable to being shot down by enemy planes. The balloonists were given a parachute, and were told to jump out before their balloon was hit.

What do you think?

5 What might have been some of the main dangers involved in digging tunnels under no man's land?

6 Which military vehicle was invented (not pictured) that finally made it possible for soldiers to go out into no man's land with some degree of protection?

7 Why do you think this muddy landscape became even more dangerous for soldiers during the winter?

8 What were some of the dangers soldiers faced if they were wounded while out in no man's land?

What do you wonder?

9 Given the improvement of existing weapons and the invention of deadly new ones, why did the war drag on for so many years?

10 What might have been some of the physical and psychological effects on soldiers who were involved in this savage fighting?

11 How might men and women have coped with the constant fear of injury and death?

12 By 1916 more than 40 per cent of casualties in the war were believed to be suffering from shell shock. Referring to Source 4.31, think about to what extent were army commanders able to understand and to deal with the true nature of shell shock? How did this affect the way they handled shell-shocked soldiers?

► **Source 4.31** The damaging impact of repeated explosions upon the human brain was a condition called shell shock. Shell shock was coined in by the British doctor Charles Myer to describe this mental trauma experienced by soldiers from trench warfare, with its constant battle and casualties. There were physical symptoms, like insomnia, damage to the central nervous system (which caused symptoms like tremors), as well as damaging hearing and sight. But it was also a psychological condition of trauma that was not understood at the time; soldiers that were shell shocked were often dismissed as cowards.

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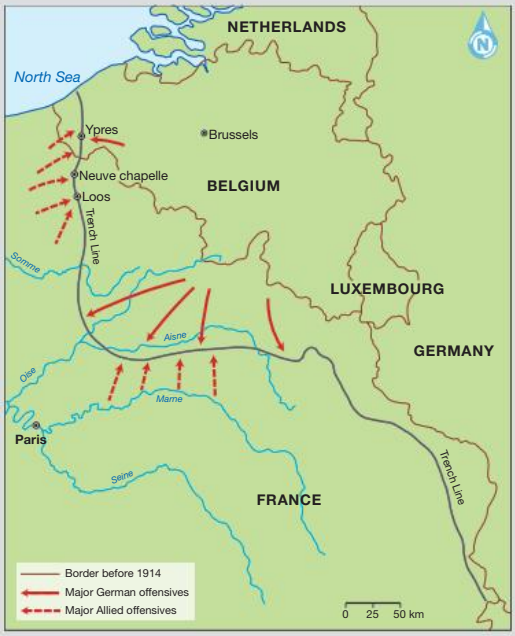
DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.2

Analysing maps

While the common soldier hiding in the trenches could have no overview of the whole battle unfolding around him, the historian must be able to measure and analyse how a battle unfolded. For this purpose, maps provide crucial graphic information of the unfolding stages of a battle or a campaign.

The changing Western Front

Source A



▲ **Source 4.32** The Western Front in 1915

Source B

▲ **Source 4.33** The Western Front in 1916

Source C

▲ **Source 4.34** The Western Front in 1917

Source D

▲ **Source 4.35** The Western Front in 1918

1 Using Source 4.32, in which area was the Allied offensive quite successful in holding back the German advance?
2 Using Source 4.32, in which area was the Allied offensive less successful in holding back the German advance?
3 Using Source 4.33, in which area did the Allies make the most significant advances into German territory?

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Some new concepts in modern warfare

Static warfare

World War I involved static warfare, in which the opposing forces settled into defensive positions, unable to make significant advances. In some battles, thousands of men died, without capturing even 1 metre of enemy territory.

Some key battles of 1916–17

As the war settled down into **stalemate**, the armies involved threw their troops into desperate attacks to try to achieve a decisive victory. The Battle of Verdun (21 February–18 December 1916) for example, was a massive German attack on the French fortress town of Verdun. The French army lost 550 000 men as casualties (that is, killed, wounded or missing). French troops were also traumatised by a mass mutiny in which many troops were tried and executed for refusing to fight any more. The German army had around 430 000 casualties.

In the Battle of the Somme (1 July–18 November 1916), the British and the French combined to try a mass attack on German lines. Over the next five months, the battle caused nearly one million casualties in total, on both sides. This was the British army's greatest tragedy in history: 57 000 casualties on just the first day of the attack, with 19 240 killed.[5]

The Third Battle of Ypres (31 July–10 November 1917) was a British attack on the German defences in Flanders. General Haig's plan to capture strongpoints such as the Messines Ridge and the village of Passchendaele made good sense strategically. However, heavy winter rain turned the land into a death trap of mud, and the attack broke down into exhausting, pointless fighting in impossible conditions. It was a battle that soldiers on both sides remembered with absolute horror.

KEY TERM

stalemate a situation in which armies have attacked each other but failed to achieve a definite victory for either side, and have settled down into defensive positions such as trenches

5 Interested to learn more about key battles in World War I? Visit the Imperial War Museums website and search for '10 Significant Battles of the First World War'.

▼ **Source 4.36**
A Canadian soldier at the village of Passchendaele, Third Battle of Ypres, 1917

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KEY TERMS

war of attrition after the development of stalemate, enemy armies stop trying to win a decisive victory and just attempt to wear down their opponents by killing as many men as possible, hoping that the casualty rate and the psychological effect might cause an enemy's war effort to collapse

total war a war that is no longer limited to the traditional battlefield but extends to attacks on civilians in cities and involves civilians in the making of ammunition

A war of attrition

World War I became a **war of attrition**, a conflict in which neither side could win a definite victory to end the war. This forced both opponents to try to wear down their enemy by killing as many soldiers as possible.

The idea of total war

World War I became a **total war**, a conflict that went beyond the battlefield to target civilian populations in cities. (This was not completely new: during the American Civil War, armies had attacked enemy cities.) With new, more powerful weapons, however, the enemy made devastating attacks on undefended civilians. German battleships fired shells onto English coastal cities. The German invention of the Zeppelin (a powered hot-air balloon) flew over inland English towns and bombed them.

This new idea of total war also suggested that governments should have more control over their own people than in peacetime, by censorship (controlling information) and by economic control of factories and production.

The expanding conflict: multiple fronts

World War I expanded from one major site (the Western Front in Belgium and northern France) to several theatres (locations) of war.

Italy sided with the Allies in May 1915, and its armies attacked the Austro-Hungarian Empire to the north, forming the Italian Front. In the Battle of Vittorio Veneto (October–November 1918), the Italians defeated Austria's forces.

Russia, then named the Russian Empire, also sided with the Allies, and attacked Germany, forming the Eastern Front. This war proved disastrous for the Russians. Although the vast Russian army fought very bravely, it suffered

▼ **Source 4.37** A watercolour painting by German artist Willy Stöwer in 1916 that depicts Zeppelins bombing London

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from poor leadership and from lack of supplies. Its losses were catastrophic. In due course, this experience virtually destroyed all of Russia's existing professional army, forcing it to fight with an untrained army of new recruits.

The Allies attacked Germany's ally, Turkey (then known as the Ottoman Empire), creating the Dardanelles Front, of which Gallipoli was just one part. The aim was to capture the city of Constantinople (today known as Istanbul) to allow the Allies to transport supplies to their partner Russia. The British, French and Australians suffered heavy casualties in this poorly planned campaign. The Turkish forces suffered even greater losses in a struggle that modern Turkish people see as the birth of their own modern nation.

The conflict spilled over to the Middle Eastern front. In the Sinai and Palestine Campaign, Britain's expeditionary force challenged the combined Turkish and German forces and their defensive line from Gaza to Beersheba. This line had been formed to defend the oil resources of the Middle East – which the Royal Navy relied on – from capture. Australian forces, including the Light Horse (foot soldiers who rode into battle on horses), served in this theatre of war.

The War in the Balkans was also a savage conflict. In August 1914, Austria-Hungary invaded Serbia, but the fighting settled down into trench warfare. The British and the French attempted to help the Serbians, while Bulgaria joined the Axis side (October 1915). Romania joined the Allied side in August 1916. The ancient political, ethnic and religious rivalries of this troubled region became a part of the broader world war. The loss of life in this murderous conflict was, proportionally to the numbers involved, even higher than the Western Front.

Beyond these basic facts, it is almost impossible for the modern reader to imagine the conditions of this new, brutal warfare. We understand trenches and mud and barbed wire, but we cannot feel what soldiers experienced under the massive bombardment of heavy artillery, which often rained down hundreds of high-explosive shells in an hour. The explosive forces involved were so great that soldiers felt as if they were trapped in some mighty killing machine, or perhaps caught in something elemental like an earthquake or volcanic eruption. Trenches and forests were simply wiped off the face of the Earth, men were shredded, while others became insane or ran away in sheer terror.

Voices from the trenches: Frederic Manning

Frederic Manning, an Australian soldier on the Western Front, noted that the men who volunteered to serve went to war expecting a conflict of the old sort. Nobody had any idea of the deadly dangers that they would face in this new type of war:

> No one knew anything about it; it was like one of the blind forces of nature; no one could control it, no one could comprehend it, and no one could predict its course from hour to hour.

▲ **Source 4.38** Mark McAndrew et al., *The Great War and its Aftermath, 1914–1921*, 2001, p. 170

Look out for more primary source quotes from soldiers who experienced trench warfare throughout this chapter.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.3

Evaluating and comparing visual primary sources

In this chapter, we will evaluate the historical skill of interpreting visual sources to gain some sense of the experience of World War I.

The conditions on the battlefields of World War I were so terrible that we may think that no single person could ever record how bad they were. But many of the troops who signed up were artists and writers, and they naturally used their skills to record what it was like to be under fire at the front.

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A French point of view

▲ **Source 4.39** This image is an oil painting, done in 1916 by Georges Leroux, a French soldier who actually saw conditions at the Western Front. Look carefully at every detail in this image.

1. **See:** Which features of the battlefields has Georges Leroux actually chosen to show in his painting? What aspects has he *not* shown?
2. **Think:** The title of this painting is *L'Enfer* (Hell), whereas this scene is actually here on Earth. Is this reference perhaps a little exaggerated as a description of World War I?
3. **Wonder:** How accurate is this visual source as a record of the experience of trench warfare?
4. **Evaluate:** Investigate how much experience the artist Georges Leroux actually had of the Western Front by looking up 'L'Enfer' on the Imperial War Museum's website. From what you discover, evaluate the reliability of his painting as a source.

▲ **Source 4.40** A self-portrait by French artist Georges Leroux

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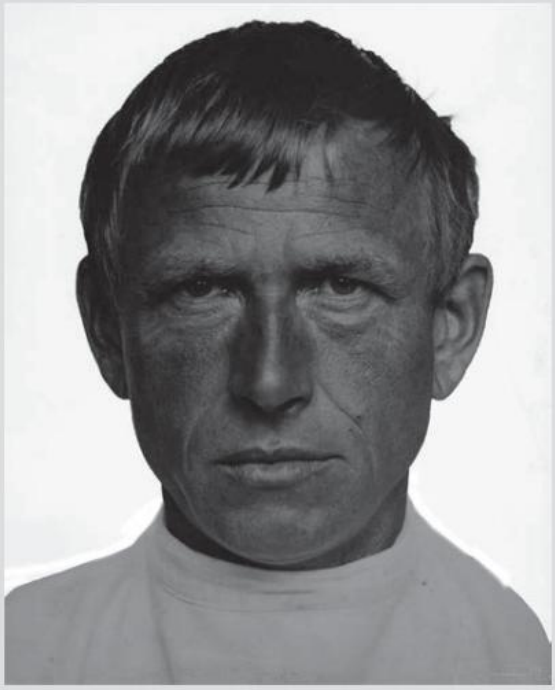
A German point of view

▲ **Source 4.41** Otto Dix, *War,* or *The Dresden War Triptych*, 1929–32

5 **Compare and contrast:** This large painting, done in a three-part shape usually reserved for religious images, shows the same battlefield from the other side of the trenches. In what ways is this image similar or different to the French point of view of Leroux?

6 **Evaluate:** Investigate how much experience the artist Otto Dix actually had of the Western Front by checking his war service online. From what you discover, evaluate the reliability of his painting as a source.



◄ **Source 4.42** German artist Otto Dix, pictured in 1933

Video
Art in WWI

Additional content
Access the digital versions of this textbook to read the following additional content: World War I in Art: A Visual Artist: Otto Dix.

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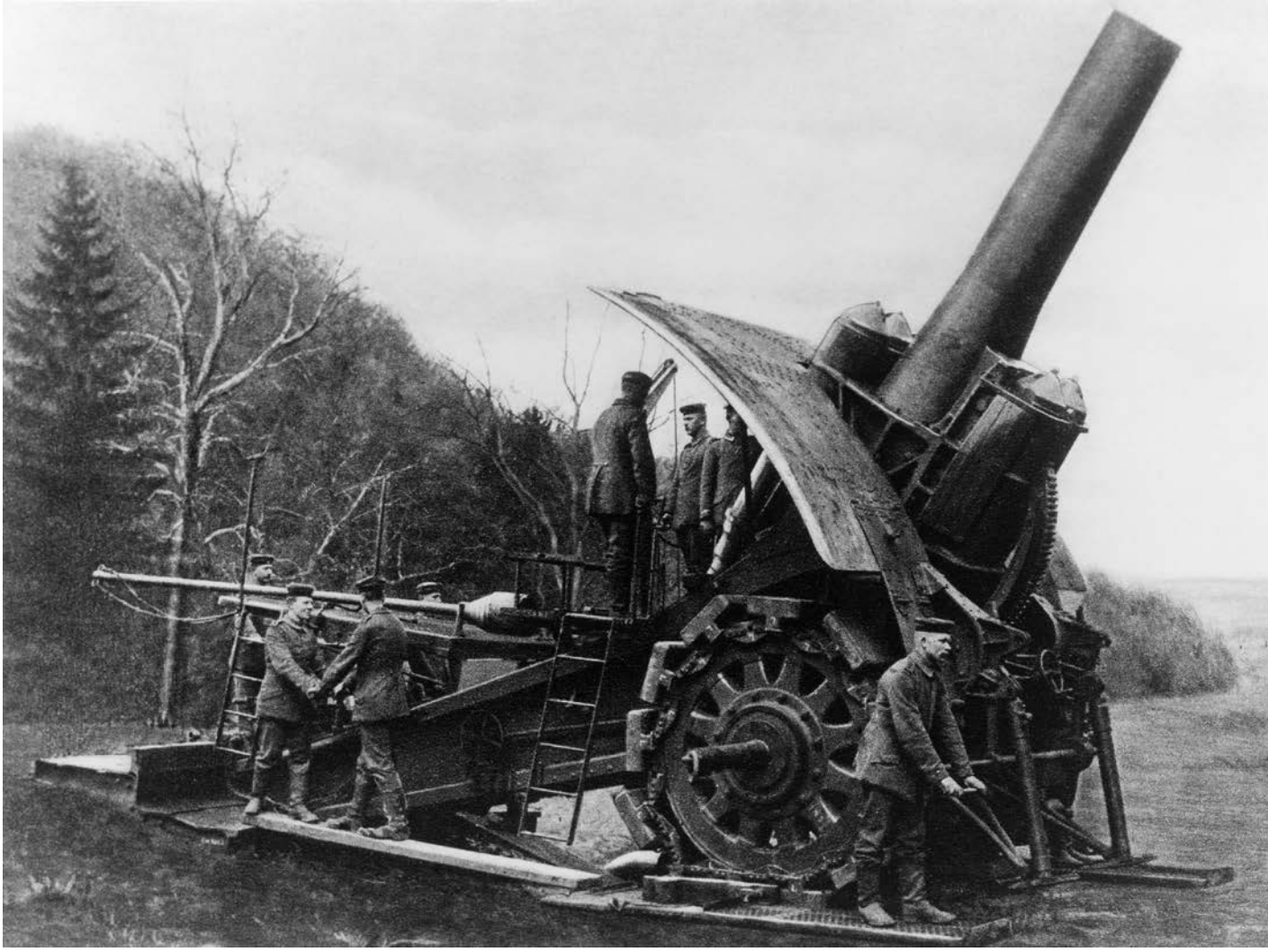
The technologies of death

World War I was very destructive because it was fought with new and terrible weapons developed during the century before the war, when industry produced much more powerful versions of traditional weapons, such as rifles and cannon. Human invention and its technologies always move forwards, but in times of war the urgent need to win the conflict pushes technological change at a much faster rate. Existing military weapons were developed to their most deadly form.

Heavy artillery

Heavy artillery had existed for centuries, but in 1914–18 it was developed to maximum destructive power. It was used to overcome the problems of static trench warfare. Some 75 per cent of deaths and injuries in World War I were caused by cannon shells. It had devastating effects. When a high-powered shell hit a man directly, he was blown to pieces, meaning that his body was never returned to his family.



▲ **Source 4.43** This photograph shows a typical German howitzer cannon, nicknamed Big Bertha. These massive guns could fire a large high-explosive shell 43 centimetres wide to a maximum range of 9000 metres.

Voices from the trenches: Bert Facey

Bert Facey, an Australian soldier at Gallipoli, described the terrible moment when his brother Roy was hit by a shell. Before Facey could bury him, he had to reassemble the body:

> I helped to bury Roy … Roy was in pieces when we found him. We put him together as best we could – I can remember carrying a leg – it was terrible.

▲ **Source 4.44** A.B. Facey, *A Fortunate Life*, 1981, p. 339

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When the shell did not hit a soldier directly, could throw up so much dirt that he could be buried alive, and so never found. In the case of the Trench of the Bayonets episode (12 June 1916), two entire battalions of the French 137th Infantry Regiment were buried alive by a heavy German bombardment, and only the line of tips of their bayonets marked where they had died. Some were not found until after the war, still standing to attention in their trenches, where they had been awaiting the signal to attack.

Voices from the trenches: William Downing

Australian soldier William Downing described the artillery bombardments on the Western Front as being so heavy that they shook the earth, numbed the brain and caused men to become temporarily like frightened animals, clinging together in blind terror. When the bombardment stopped, the first task was to find those who were buried alive:

> Men dragged their bodies from under the tossing waves of earth. That most awful sound, the muffled voice of a man buried under three feet of dirt, was [often] heard like a ventriloquist, far away – 'Dig me out, dig me out!' They were almost invariably dead by the time they were [dug out].

▲ **Source 4.45** W.H. Downing, *To the Last Ridge*, 1998, p. 82

▼ **Source 4.46** Exploding shells also sent out showers of shrapnel (flying pieces of sharp metal) that could cut off half a man's face. German artist Otto Dix witnessed this first-hand and depicted it in his image *Wounded Veteran*, released in 1922.

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The victims who were sent back to Allied hospitals were called 'The Men With No Faces', and by the French as 'The Men with Smashed Faces'. The French government, in desperation, employed sculptors to make artificial faces for these victims.

Shell shock

These high-explosive shells had another, even more deadly, effect: their repeated explosions put so much pressure on the human brain that a soldier's nervous system collapsed completely. The symptoms varied: one soldier might collapse and quiver uncontrollably, another might become insane. Tragically, some soldiers, not knowing what they were doing, walked away from the trenches. One French soldier, for example, suddenly stood up with a glazed look in his eyes, and walked away from his trench. An officer challenged him with a pistol, and the soldier calmly explained that he was going to visit his mother, over the next hill. His hometown was actually hundreds of miles away. Since officers did not yet understand shell shock as an illness, such men were often accused of cowardice and desertion, and were executed by firing squad. Later, the Germans designed shells containing gas, so that they first exploded then, when soldiers had stood up again, gave out deadly gas.

▼ **Source 4.47** This French image, *La Grogne (Discontent)*, graphically captures the mental suffering of men subjected to repeated bombardment by high-explosive shells. These had two effects, both deadly. Some men suffered shell shock, and walked away from the trenches, not even knowing what they were doing. Others, such as these French soldiers, could stand no more and banded together in mutiny (refusing to fight or obey orders). In both cases, the soldiers were accused of deserting their post, were tried by a military court and executed by a firing squad of their own comrades. The artist, Leon Ruffe, was deeply moved by the French mutinies of 1916 and by the executions that followed.

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ACTIVITY 4.2

Using historical sources as evidence

▼ **Table 4.1** Death sentences and executions

Nation	Number of death sentences	Number executed	% of death sentences executed
Italy	4028	750	19%
Great Britain	3118	361	12%
France	2500	650	26%
Austria-Hungary	1175	1148	98%
Canada	222	25	11%
Belgium	200	12	6%
Germany	150	48	32%
United States	145	35	24%
Australia	121	0	0%
New Zealand	28	5	18%
South Africa	11	1	9%
Russia	unknown	unknown	unknown
Japan	unknown	unknown	unknown

Source: Steven R. Welch, 'Military Justice', International Encyclopedia of the First World War website, 2014

Responding to the source

1 Which country had the highest number of death sentences?
2 Which country had the highest number of actual executions?
3 Why did Australia have no executions at all?

The machine gun

The machine gun was invented in 1861 by Dr Gatling and was formally adopted by the US Army in 1866; by 1914, these weapons had been developed so that they could deliver a devastating rain of bullets. By the end of the war, they had been developed to the point they could spit out 1000 bullets per minute, which effectively meant that they could determine the outcome of a battle.

▼ **Source 4.48** German machine-gunners during a gas attack in World War I

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KEY TERM

sniper a highly trained rifleman equipped with an accurate, long-range rifle, able to shoot enemy troops from a distance and from a hidden firing place

Snipers

One of the most feared – and hated – soldiers of the war was the **sniper**, a highly-trained soldier with a powerful rifle with telescopic sights. He patiently observed enemy lines and shot any soldier whose head appeared above the trench. Snipers had been used in war before, but now both sides re-invented them. The Germans realised how devastating a sniper could be in killing many enemy troops. The wounds from his high-powered bullets usually killed a man, and the psychological impact was enormous. The French and the British quickly adopted this weapon, and recruited soldiers who, in peacetime, were big game hunters or estate managers, able to shoot with deadly accuracy.

► **Source 4.49** Initially, snipers hid in trees or in farm buildings. When these were all destroyed, armies built fake trees made of metal and wood, inside which the sniper had a safe place to shoot from. Fake trees were made in sections by blacksmiths at the front, then carried out under the cover of the night and bolted together, so that they looked like all the other damaged trees on the battlefield. It was almost impossible, from a distance, to identify a fake tree. Soldiers spent long hours looking through their trench periscopes to locate the sniper but rarely succeeded.

ACTIVITY 4.3

Using historical sources as evidence

Voices from the Trenches: Robert Graves

In his book *Goodbye to All That*, British soldier Robert Graves wrote:

> The Germans had the advantage of having many times more telescopic sights than we did, and bullet-proof steel loop-holes. Also a system by which snipers were kept for months in the same sector until they knew all the loopholes and shallow places in our trenches, and the tracks that our ration parties used above-ground by night, and where our traverses occurred and so on, better than most of us did ourselves. British snipers changed their trenches, with their battalions, every week or two, and never had time to study the German trench-geography. But at least we counted on getting rid of the unprofessional sniper. Later we secured an elephant-gun that could send a bullet through enemy loopholes and if we failed to locate the loop-hole of a persistent sniper, we tried to dislodge him with a volley of rifle-grenades, or even by ringing up the artillery.

▲ **Source 4.50** Robert Graves, quoted in J. Simkin, *Snipers in the First World War*, 1997

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Responding to the source

1. Describe this source. Who created it, and when was it created?
2. Explain the significance of the German superiority in terms of sights and loop-holes.
3. Why did the German system of keeping snipers in one place help them to do their job more effectively than the British?
4. How did the British learn to deal with German snipers who avoided their bullets?

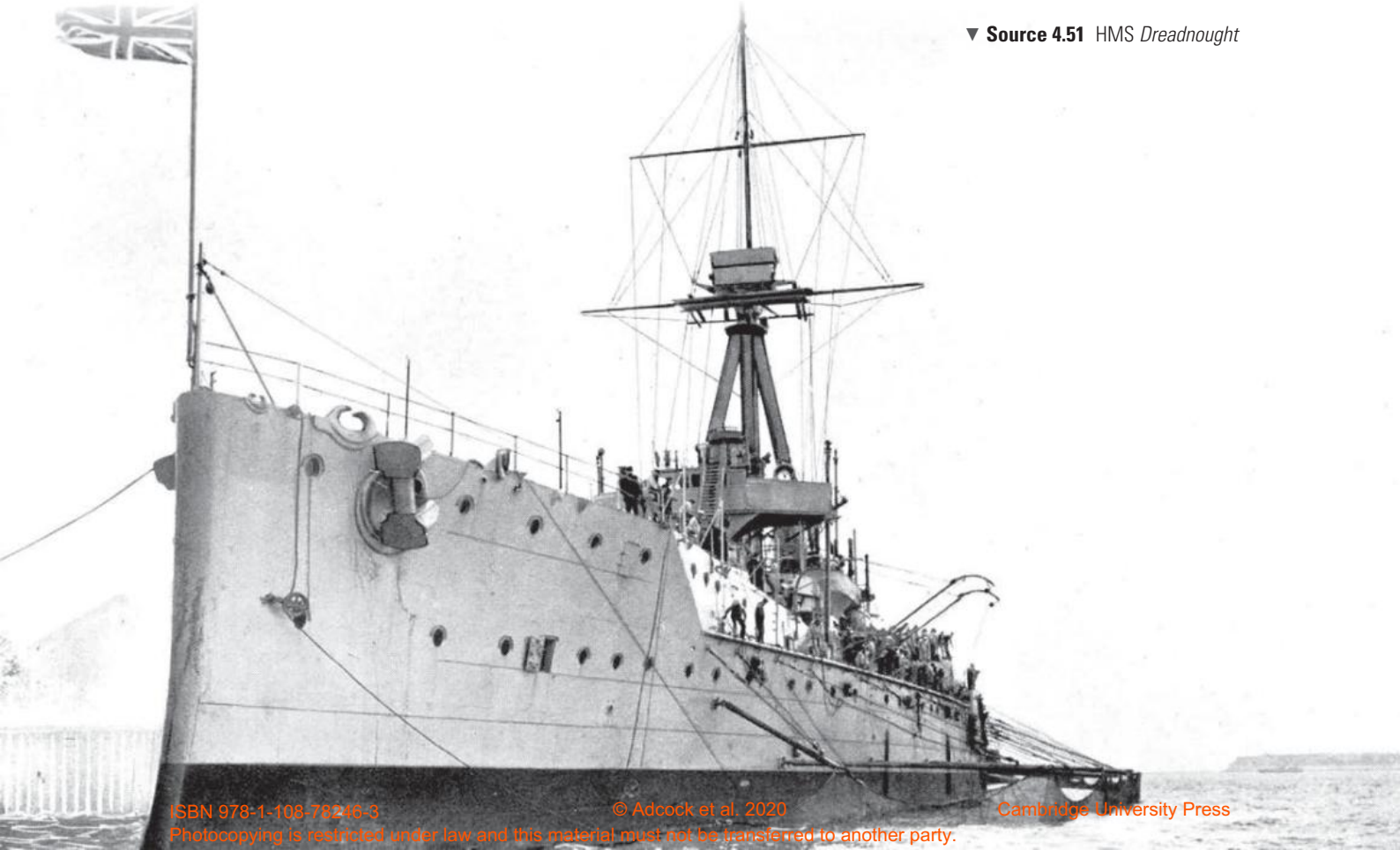
The war at sea

The war on land was matched by an equally deadly naval war. This was almost inevitable: Britain traditionally possessed the all-powerful Royal Navy. By contrast, Germany, under Kaiser Wilhelm II, had hastily built up its own navy to the point that it was a threat to the supremacy of the British navy. The Kaiser made no secret of his new policy of *Weltpolitik* (a policy of world domination), and openly admitted that his High Seas Fleet was not designed for national defence, but to challenge the navies of Britain, France and Russia. Admiral Alfred von Tirpitz did not expect to defeat the Royal Navy, but he hoped that the German build-up might make Britain more willing to make concessions in diplomatic negotiations.

This arms race had lasted though the 1890s and up until 1914. Germany responded with the Naval Bill (1908), but rapidly found that it struggled to pay the enormous costs of the program; by 1912, Germany had reduced the building of battleships, and concentrated on its submarine fleet. In 1912, the British Minister of War, Richard Burdon Haldane, even tried – unsuccessfully – to negotiate a treaty of weapons limitation with Germany.

Dreadnought: the ultimate battleship (1906)

In Britain, the government announced a massive program of ship-building, which enjoyed strong public support. In 1906, Britain unveiled the ultimate battleship: the HMS *Dreadnought*. It was estimated that it had the firepower of two or



▼ **Source 4.51** HMS *Dreadnought*

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three normal battleships. It carried five gun turrets with twin barrels, shooting massive shells of 12 inches diameter, with a range of 14 miles. Its mighty engine gave 23 000 horsepower, allowing the ship to travel at 39 kilometres per hour. Its fuel was a revolutionary mix of coal sprayed with oil to give a more intense fire, and it could travel for 12 000 kilometres before needing to refuel. Germany responded by building four of the new Konig Class battleships. Nobody doubted that these ships meant that a great naval battle would one day occur.

Table 4.2 provides comparative figures of each country's spending on their navy.

▼ **Table 4.2** Pre-war spending on navies.

Country	Dreadnought battleships and battle cruisers (completed in bold, laid down or budgeted in parentheses)	Shipbuilding expenditures in 1913 (millions of pounds sterling, current prices)	Percentage increase in shipbuilding expenditures (1902–04 to 1911–13)
Germany	**22** (4)	11.4	131%
Austria-Hungary	**3** (5)	4.4	270%
Italy	**4** (6)	4.3 (1912)	246%
Britain	**34** (3)	17.1	38%
France	**4** (12)	7.0	41%
Russia	**0** (4)	11.1	105%
Turkey	**2**	5.5	1100%

Source: Eric Brose, 'Arms Race Prior to 1914, Armament Policy', International Encyclopedia of the First World War website, 2014

The Battle of Jutland (1916)

In 1914, the Royal Navy controlled the North Sea. In 1916, the German admiral Reinhardt von Scheer ordered his navy to attack. When the German High Seas Fleet thundered into action against the Royal Navy's Grand Fleet, the terrible firepower of these floating fortresses became clear. The British did not lose any of their dreadnought battleships, but other vessels, such as HMS *Indefatigable*, were sunk, taking all but two of its crew with it. The outcome of the battle was unclear: Britain lost more ships than Germany did, but ultimately Germany pulled its fleet out of the battle, leaving the Royal Navy still in control the North Sea.

U-boat: the menace below the surface

The submarine had existed before 1914, but was developed to its full potential during World War I.

Naval blockade of food supplies

Britain first used the technique of naval blockade – that is, using its warships to stop cargo ships bringing supplies of food and raw materials to Germany. This technique was illegal under international law, but was highly effective, quickly causing German cities to starve.

The Battle of the Atlantic

In response, Germany used its fleet of U-boats (submarines) to attack cargo ships crossing the Atlantic, stopping crucial supplies of oil, rubber, metal and food from the United States and Canada to Britain. The German navy placed fleets of U-boats in the middle of the Atlantic Ocean, where no enemy planes could reach them. They waited until a convoy (group of ships sailing together) approached, came to the surface and picked off ships one by one. In some cases, they did not even use torpedoes, just their deck guns.

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Unrestricted submarine warfare

This submarine warfare was highly effective, but by 1917 Germany was concerned that the war was dragging on, and that it might not be able to continue the fight. Kaiser Wilhelm II then approved unrestricted submarine warfare, meaning that submarines would sink any ship sailing into British waters without warning. He hoped that if he could stop supplies completely, Britain would be starved into surrender, leaving France to fight on alone.

This decision had an unexpected, and finally fatal, consequence for Germany. On 7 May 1915, Captain Kruger of U-boat *U-20* made a momentous decision: he chanced upon the great passenger liner, *Lusitania*, and fired one torpedo at it. Until now, nobody had thought of firing on an unarmed passenger ship carrying civilians. To his amazement, his torpedo hit, and was followed by a second, much larger explosion, far bigger than any torpedo could produce. He watched through his periscope as the second explosion ripped a massive hole in the ship, which sank in less than 20 minutes.

To this day, there is controversy about what caused the second explosion. Some believe that the Allies were smuggling ammunition inside the passenger ship, and that this exploded and tore the hull open. Some 1200 passengers died, including many wealthy and important Americans. When news of the atrocity hit the newspaper headlines, American public opinion was outraged, but not enough to convince people that the United States should enter the European war.

▼ **Source 4.52** The German submarine *U-21* rescuing passengers from a sinking British cruise ship in 1915. This painting was created by German artist Willy Stöwer at the time.

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ACTIVITY 4.4

Check your understanding

1. Traditionally, war at sea was fought between each nation's great battleships. How and why did Germany's emphasis change to underwater warfare?
2. What was the main aim of Germany's attacks on supply ships?
3. Why did the new policy of unlimited submarine warfare prove to be disastrous for Germany?

New military weapons massively increase killing power

The armoured tank

The tank was the invention of a British designer, Lieutenant-Colonel Swinton, who simply observed the moving metal tracks of bulldozers, and applied the technique to an armoured vehicle that could advance across no man's land in the face of machine-gun fire. He believed that this mighty weapon might solve the problem of trench warfare and mass slaughters.

His project almost failed. The old-fashioned British army could not see the point of a metal attack vehicle, and rejected it. It was only a certain Winston Churchill – later prime minister of Britain during World War II – who saw its potential, and insisted that the War Office adopt the weapon. He spent £10 million developing it. The British introduced the tank to the battlefield in 1916, followed by the French.

▼ **Source 4.53** This photograph shows the moment in 1913 when the cavalry – soldiers with a long and honourable past – set eyes on the soldiers of the future, the daring young men who piloted the first combat aircraft. This modern war tipped the balance heavily in favour of the new weapons of the future.

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Amazing but true …

The first name for a tank, when it was being invented, was to be a 'landship'. Because this would sound like some new weapon, it would attract the attention of German spies watching British factories and ports. When the tanks were being boxed for shipment to the front, they were instead labelled simply water-tanks, and the story was put out that they were just tankers designed to carry water to troops in desert areas. The German spies assumed these were just water tanks, and did not even report the shipment. When these machines first rumbled across no man's land in the Battle of the Somme (September 1916), the Germans had never heard of or seen a machine that could advance against heavy machine-gun fire, and ran away in terror.

▲ **Source 4.54** Frank Brangwyn, *A Tank in Action*, 1924, National Museum of Wales, Cardiff

1 This painting by Frank Brangwyn provides one of the best impressions of the impact of armoured tanks when they first appeared. He shows how a tank could rear up out of the landscape like some metallic monster, providing cover for the advancing British troops, and also terrifying their enemies.

2 This scene is very accurate. As the war dragged on, the Allies relied heavily on the use of tanks to smash through German lines. Tanks led the way, crushing barbed wire defences, sheltering the lines of infantry advancing behind them from machine-gun fire.

3 In this scene, the tank has arrived at the enemy trenches, and the soldiers are breaking out to attack.

4 Brangwyn had been asked to paint this work to hang in the House of Lords, as a tribute to British soldiers who had served in the war. Sadly, he did his work too well: the authorities decided that the painting was too horrific in its realism, and refused to pay for it. Bitterly disappointed after two years of work on it, Brangwyn donated the painting free of charge to the nation, as a memory to Welsh soldiers who served in the trenches.

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In its earliest form, the tank was ineffective, because it often broke down or bogged down in the muddy conditions of the trenches; some even sank into the mud altogether. Their engines were relatively weak – they only had the power of a bus motor – and could not drive such a heavy vehicle through thick mud. Of the 49 tanks in the first attack in the Battle of the Somme, only 18 reached the German trenches. But those that got through did massive damage. In one instance, just one tank helped capture 2 kilometres of German trenches; the British infantry advancing behind it was sheltered from bullets, and lost only five men in the attack.

The psychological impact was massive: enemy soldiers ran away from the threat of an armoured monster advancing towards them, apparently unstoppable by any weapon. In places, whole stretches of trenches were abandoned as the German soldiers fled in terror, calling out 'The Devil is coming!'

The triumph of the tanks at the Battle of Cambrai (November 1917)

Later, the Allies put more emphasis on massed attacks by multiple tanks covering infantry advances. This technology was rapidly developed to create more reliable and powerful vehicles. The British army ordered another 1000 tanks, costing half a million dollars in today's money. By now, six British companies were building tanks, turning out 250 vehicles per month. In all, the British built 2500 tanks, the Germans just 20.

The British could now stage an overwhelming mass attack of the type Churchill had wanted. He was proved right. At the Battle of Cambrai (November 1917), the British took advantage of the open, grassy landscape to send a wave of 476 tanks against the Germans, backed by 1000 cannons and 60 000 members of the infantry. The tanks simply rolled over a 10-metre field of barbed wire. This firestorm smashed a gaping hole in German defences, and was the first break on the heavily defended Hindenburg Line. The British army advanced 10 kilometres into German territory. Some 8000 German troops were captured. This was the greatest Allied victory of the war, and caused public joy in Britain.

KEY TERM

stormtrooper a highly trained and aggressive soldier, equipped to sneak across no man's land and to launch lightning raids on enemy trenches, inflicting as many casualties as possible

The German army fails to adopt the tank

Curiously, the German commanders underestimated how important the tank was. This was partly because, at the Third Battle of Ypres, they observed most tanks getting bogged in the mud, and concluded they were ineffective. As late as 1917, they believed that they could destroy tanks by heavy artillery fire. This was a serious mistake: if Britain could produce hundreds of tanks for a mass attack, this tactic would not work.

While the Germans put more emphasis on the use of **stormtroopers** (see later in this section), the Allied use of concentrated tank attacks, covered by artillery and supported by infantry, was the tactic mainly responsible for their final victory in 1918.

The Germans did set up a new department to study the tank, and Joseph Vollmer was commissioned to produce a design for a German tank as well as for anti-tank weapons. The first trial of the tank was held in April 1917, and was ready for service the following month. Between September and October 1917, the German army produced 100 A7V *Sturmpanzerwagens*.[6]

6 To find out more about tanks used in World War I, visit the Online Tank Museum.

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Experiences inside a tank

The soldiers who volunteered to train to use a secret weapon had little idea what they would be doing. Their training took some three months but, unfortunately, they learned to drive tanks in the English countryside, not the churned-up seas of mud of the Western Front. Once they went into battle, the tanks proved to be hell on wheels.

They were very cramped inside. They were full of sharp metal edges and, worse still, red-hot exhaust pipes. When the tank lurched and plunged, the men were often thrown onto the hot plates and severely burned. When high-powered bullets hit the outside of the tank, they caused a shower of sharp metal fragments from the inside wall of the tank; men had to wear visors to save their eyesight. And, of course, if a shell made a direct hit on the tank, there was no way out.

▼ **Source 4.55** A British Mark IV tank rears up on its tracks

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Voices from the trenches: Lieutenant Gordon Hassell

Lieutenant Gordon Hassell a British tank driver on the Western Front, wrote:

> Terribly noisy, oily, hot, airless and bumpy! Without any sort of cushion, as we had no springs and thirty tons' weight, any slight bump and crash was magnified and many a burn was caused by a jerk throwing the crew about. Instinctively one caught at a handhold, and got a burn on the hot engine. The crew had very little knowledge of where they were going, only by peeping through slits and weapon apertures could they see anything. In action if the tank was hit slivers of steel began to fly – bullets hitting the armoured plates caused melting and the splash, as in steel factories, was dangerous to the eyes. For protection we used to wear a small face mask.

▲ **Source 4.56** Lieutenant Gordon Hassell, quoted in Peter Laurence et al., *The Great War, 1914–1919*, 2018, p. 98

ACTIVITY 4.5

Check your understanding

1. Why was the armoured tank such an effective alternative to the massed infantry attacks in which so many men had died in the early years of the war?
2. What were the technical limitations of the early tanks? Why did these mislead the Germans to underestimating their military possibilities?
3. It is said that once the British had learned to use tanks properly, this invention significantly assisted the Allied victory in 1918. Why was this so?

Poisonous gas

The use of poisonous gas was one of the most devastating new weapons of this war. While the *idea* of using deadly gas on the battlefield dates right back to Leonardo da Vinci in the sixteenth century, it was in the early twentieth century that the idea became possible. In 1907, the European nations signed the Hague Convention banning the use of gas as being barbaric. On 22 April 1915, however, Germany broke that agreement and introduced gas, with devastating effect.

▼ **Source 4.57** This large painting by John Singer Sargent shows the common scene of a line of men who have been blinded by gas. They have covered their eyes and walk forward with their hands on the shoulders of another man and are led to the hospital by a first aider.

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For the first time in history, troops in the Second Battle of Ypres (21 April–25 May) were puzzled to see a yellow-green cloud drifting silently towards them, and to then see thousands of men drop in agony from the so-called mustard gas. The Germans launched 5700 canisters of chlorine gas towards the French troops, and watched in amazement as some 6000 out of 10 000 soldiers collapsed as if assassinated by an invisible killer. For a time, the Germans believed that they had found a simple, modern solution to the stalemate of the war, for they had cut a 7-kilometre-long opening in the Allied lines, through which they could attack. This burning chemical of phosgene was then quickly adopted by all forces by late 1915.

What were the main types of gas and their effects?

Chlorine gas, used on the infamous day of 22 April 1915, produces a greenish-yellow cloud that smells of bleach and immediately irritates the eyes, nose, lungs and throat of those exposed to it. At high enough doses it kills by asphyxiation.

Phosgene, which smells like mouldy hay, is also an irritant but six times more deadly than chlorine gas. Phosgene is also a much stealthier weapon: it's colourless, and soldiers did not at first know they had received a fatal dose. After a day or two, victims' lungs would fill with fluid, and they would slowly suffocate in an agonising death. Although the Germans were the first to use phosgene on the battlefield, it became the primary chemical weapon of the Allies. Phosgene was responsible for 85 per cent of chemical-weapons fatalities during World War I.

Mustard gas, a potent blistering agent, was dubbed King of the Battle Gases. Like phosgene, its effects are not immediate. It has a potent smell; some say it reeks of garlic, gasoline, rubber or dead horses. Hours after exposure, a victim's eyes become bloodshot, begin to water, and become increasingly painful, with some victims suffering temporary blindness. Worse, skin begins to blister, particularly in moist areas, such as the armpits and genitals. As the blisters pop, they often become infected. Mustard gas could also contaminate land where it had been deployed. Exposure sensitised victims; further exposure, even at lower doses, produced symptoms. Mustard gas caused the highest number of casualties from chemical weapons – upward of 120 000 by some estimates – but it caused few direct deaths because the open air of the battlefield kept concentrations below the lethal threshold.[7]

◄ **Source 4.58**
Aerial photograph of a battlefield in Flanders, Belgium, under poison gas attack (for one of the first times) in April 1915

7 Want to know more about the gases and chemical warfare used in history? Visit the Science History Institute website and search for 'A Brief History of Chemical War'.

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ACTIVITY 4.6

Check your understanding

1. Why do you think that the Hague Convention banned the use of gas as being immoral, when so many other deadly weapons were allowed?
2. What considerations might have led the Germans to decide to use gas in battle, despite the ban?
3. If you were an Allied commander, would you have followed the Germans and adopted the use of gas? Give reasons for your decision for or against.

Gas masks

When gas was first introduced, the only protection was for soldiers to soak their handkerchiefs in their own urine and to hold them to the nose to counteract the gas; later, the Hypo gas masks were invented, then replaced by the more effective Small-Box Respirator. Now, soldiers kept masks by their side: there were only seconds to get the mask on once a gas attack began. From then on, gas was used simply to force soldiers to put on their masks – just before an infantry attack – because these seriously reduced their vision of the battlefield and their ability to aim their weapons at an advancing enemy.

By the end of the war, gas had caused more than 1 250 000 casualties.

▲ **Source 4.59** Two German soldiers and a mule wearing gas masks

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ACTIVITY 4.7

Check your understanding

1. Examine the gas masks shown in Source 4.59. Estimate to what degree, in percentage terms, they might have reduced a soldier's visibility and reduced his ability to fight.
2. How might these early gas masks have been improved to allow better visibility? Consider how modern safety equipment is designed.
3. Why do you think the armies were so slow to develop an effective gas mask?

Flamethrowers: the use of liquid fire

While fire had been used in war for centuries, the modern flamethrower turned it into a murderous weapon. The first model was invented in Germany by Richard Fiedler in 1901, who submitted his *Flammenwerfer* to the German army. Another version was invented by the Hungarian Gábor Szakáts and was adopted during World War I.

ACTIVITY 4.8

Check your understanding

1. Was the flamethrower more important as a killing weapon or as a psychological weapon of terror? Give reasons for your answer.
2. If you were a lawyer in the trial of Gábor Szakáts, would you be prepared to defend him on the charges of being a war criminal, or would you prosecute him? Whatever your position, give reasons for your decision.
3. Why might the flamethrower be a dangerous weapon for the soldiers who used it?

▼ **Source 4.60** Flamethrowers being tested by German troops

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The aeroplane: the war in the air

The technology that developed most dramatically in World War I was the aeroplane. In 1907, inventor Louis Blériot's early monoplanes were simple, but by 1909 he successfully made the first flight across the English Channel to London. In 1914, military leaders naturally regarded the plane as primitive technology, unsuited to modern warfare.

However, as stalemate set in and the war of attrition began, the problem of visibility became serious: standing in a deep trench, a soldier could only see the sky above, but nothing of the enemy. One frustrated French general stated: 'We cannot hit an enemy we cannot see!'

▼ **Source 4.61** If your plane was hit, the petrol tank would explode. Pilots only had the choice of burning up in the aeroplane or jumping to their deaths, as this German pilot did in 1915.

At first, hot-air balloons were used to observe enemy movements, but these could be shot down. Both sides turned to aeroplanes, with the result that their design, performance and speed all improved rapidly in response to the demands of modern warfare. Early basic planes, such as the British Vickers FB5 and the German Fokker E1, were quickly replaced by more powerful versions, such as the British Sopwith Camel and the German Fokker D7 Triplane (the plane flown by the famous Red Baron).

The birth of the fighter plane

Inevitably, the use of planes for aerial reconnaissance (observation from the air) led to their use to *prevent* this information gathering, which resulted in fights. Pilots initially carried a gun to defend their plane; later, a new invention allowed a Lewis machine gun to fire from the nose of the plane, without destroying its propeller.

The air above the trenches buzzed with 'dogfights', where dozens of planes swooped and circled in some of the deadliest fighting in the war. Pilots became superheroes, idolised by ordinary troops, enjoying celebrity status. Nonetheless, their role was enormously dangerous, because the fast manoeuvring demanded split-second timing. One second's hesitation meant death in a stream of bullets, and a plunge to Earth in a burning plane. The average lifespan of a pilot was seven weeks, or 40–60 hours of flying time, if he was lucky.

The invention of the modern fighter plane also created new tactics. Unlike land warfare, there were no existing rule books for aerial warfare, and the new generation of pilots had to develop tactics quickly, or die. The great genius in aerial warfare was the German pilot Oswald Boelcke (1891–1916), who invented the principles of fighter warfare.

He insisted that pilots must fly up to a great height, from which they descended at high speed upon their enemy. He taught new pilots that they must be invisible to their enemy. One technique was coming at the enemy with the sun behind them. In response, pilots learned to carry a piece of smoked glass, to allow them to look at the sun and see the

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▲ **Source 4.62** Oswald Boelcke, flying ace, in 1916

attacker. They also wore fine silk scarves to allow them to look around more quickly.

Boelcke also insisted that pilots should not fire wildly from a distance: ammunition, in light planes, was too precious. He taught pilots to follow an enemy plane carefully, and to ensure that they had it fully in their sights before they pulled the trigger. Finally, Boelcke and other pilots developed daring new tactics, such as the loop-the-loop, which involved flying in a great vertical circle and swooping down again on the enemy plane.

The birth of the bomber

Commanders realised that the aeroplane, if made more powerful, could be used to drop bombs on the trenches or on enemy cities. The bomber was born. On 13 June 1917, the Germans sent a fleet of 20 bombers to England, where they dropped 72 bombs. The English civilians had never experienced such attacks, and came out into the street to wave to the planes, thinking they were British. Some 162 people were killed in this one raid, and more followed.

▲ **Source 4.63** Early bombing techniques were very simple. The pilots had to carry live bombs on their laps or between their legs, then lean out to literally drop them on the target below.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.4

Interpreting a primary source

As we know, a **primary source** is any record made at the time of a historical event, or slightly afterwards, by people who were present to witness what happened and to write their impressions of it. The writings of children can be an especially valuable historical source, because they often reveal the emotional impact of events on impressionable young minds. In many cases, these also become evidence of the psychological trauma caused by warfare, since children are less hesitant than adults to cover up what they feel.

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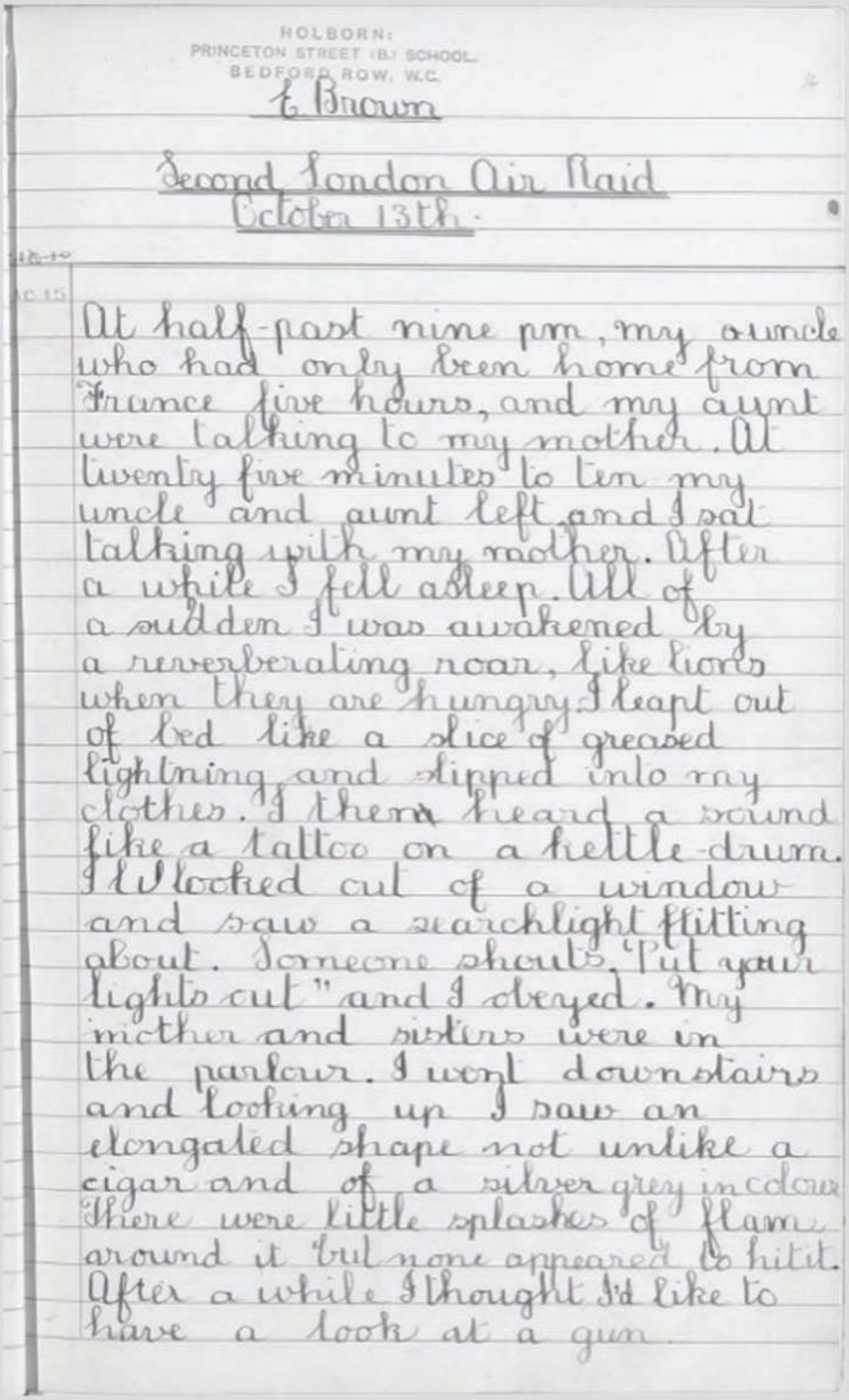
Read the following document carefully.



HOLBORN:
PRINCETON STREET (B.) SCHOOL,
BEDFORD ROW, W.C.

E. Brown

Second London Air Raid
October 13th.

At half-past nine pm, my uncle who had only been home from France five hours, and my aunt were talking to my mother. At twenty five minutes to ten my uncle and aunt left and I sat talking with my mother. After a while I fell asleep. All of a sudden I was awakened by a reverberating roar, like lions when they are hungry. I leapt out of bed like a slice of greased lightning and slipped into my clothes. I then heard a sound like a tattoo on a kettle-drum. I looked out of a window and saw a searchlight flitting about. Someone shouts, "Put your lights out" and I obeyed. My mother and sisters were in the parlour. I went downstairs and looking up I saw an elongated shape not unlike a cigar and of a silver grey in colour There were little splashes of flame around it but none appeared to hit it. After a while I thought I'd like to have a look at a gun.

◄ **Source 4.64**
'Impressions of the airship raids over London on 8 September and 13 October 1915, as recorded the next day by boys of Princeton Street, Elementary School, Holborn.' Manuscript page, British Library.

Responding to the source

1. Describe this source. Who created it, and when was it created?
2. According to this document, what did this student actually see?
3. What could have been the main reason for these German attacks on innocent, non-fighting civilians?
4. How reliable do you think this document might be as a record of what happened in this event?

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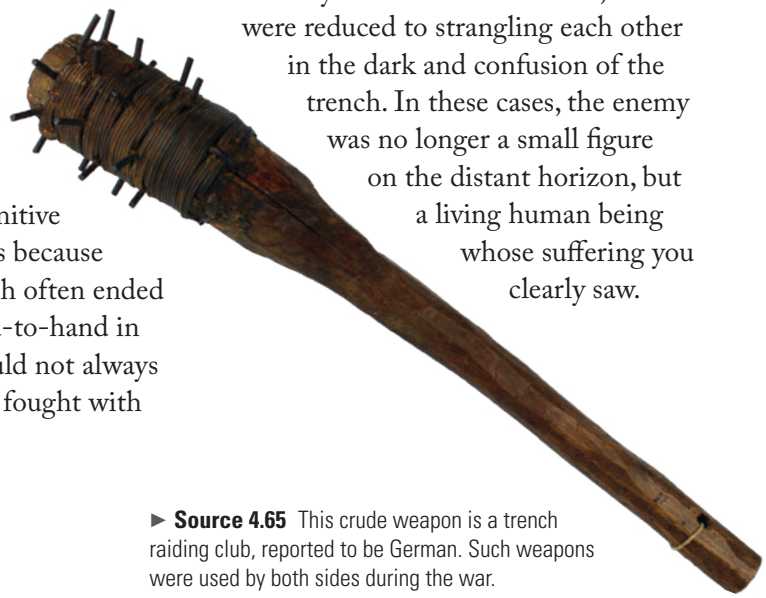
The brutality of hand-to-hand fighting

While World War I is described as the first truly modern war, it was also one in which people went back to the most primitive methods of fighting. This is because attacks on the enemy trench often ended with soldiers fighting hand-to-hand in narrow spaces. Soldiers could not always use their rifle to shoot, but fought with their bayonet, or with a rough wooden club they had made. Sometimes, men were reduced to strangling each other in the dark and confusion of the trench. In these cases, the enemy was no longer a small figure on the distant horizon, but a living human being whose suffering you clearly saw.



► **Source 4.65** This crude weapon is a trench raiding club, reported to be German. Such weapons were used by both sides during the war.

Voices from the Trenches: Bert Facey

Bert Facey, an Australian soldier on the Western Front, recalled:

> It is a terrible thing, a bayonet charge. I was in several in the first few days, and about eleven altogether. You would have to be in a charge to know how bad it is. You are expecting all the time to get hit and then there is the hand-to-hand fighting. The awful look on a man's face after he has been bayoneted will, I am sure, haunt me for the rest of my life; I will never forget that dreadful look. I killed men too with rifle-fire – I was on a machine-gun at one time and must have killed hundreds – but that was nothing like the bayonet.

▲ **Source 4.66** A.B. Facey, *A Fortunate Life*, 1981, p. 326

The shock troops of World War I: the German stormtroopers

We are familiar with the ordinary soldier struggling with the dangers of the trenches. These experiences were very similar for all countries involved. As the war settled into stalemate, the German army decided that it must develop a deadly new sort of soldier, the *sturmtruppen* or stormtroopers.

In 1915, the Germans realised that the standard tactic of lines of men charging across no man's land in a bayonet charge was ineffective, and they looked for an alternative. The Allies had already learned this lesson, but had tried to solve the problem by developing tank warfare, relying on armoured vehicles that could advance into machine-gun fire without being harmed. Germany could not match the industrial production of the Allies, so it did not try. Instead, it turned to the radical new ideas of one General Hutier, who suggested what we now call a shock-and-awe tactic, an attack so savage that the enemy is simply paralysed. This involved using intelligence (military information) to identify weak points in the enemy's defences.

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Amazing but true …

Helmet The new metal Stahlhelm helmet was first issued to the stormtroopers, replacing the old-fashioned spiked helmet. The new helmet was designed to have extra pieces of armour welded onto it for protection.

Weapons The least important weapon was slung over the stormtrooper's back. This was his Karabiner 98a rifle or, later, the MP18 light machine gun. The stormtroopers were not expected to shoot from a distance, as ordinary soldiers were, but to make close contact with the enemy and to fight savagely almost hand-to-hand.

Secondary weapons The stormtroopers had an ordinary cloth bag slung over their shoulders. This included their most important weapon: a number of 'potato masher' stick hand grenades. When they attacked, they rained dozens of grenades upon the enemy, killing many and stunning the remainder.

Pistols Some stormtroopers were armed with a rapid-firing Luger pistol and were given the task of jumping into the enemy trench and firing rapidly to kill any enemy troops not already dead

Extra padding The stormtroopers also made additions to the regulation German army uniform by sewing thick patches of leather on the elbows and knees of their outfit. This allowed them to move quickly and painlessly across the rough ground of no man's land.

Boots The stormtroopers avoided the regulation heavy army jackboots, and instead wore ordinary light boots with strap-up puttees, allowing them to move more freely and more quietly as they crept across no man's land

▲ **Source 4.67**
An artist's representation of a stormtrooper

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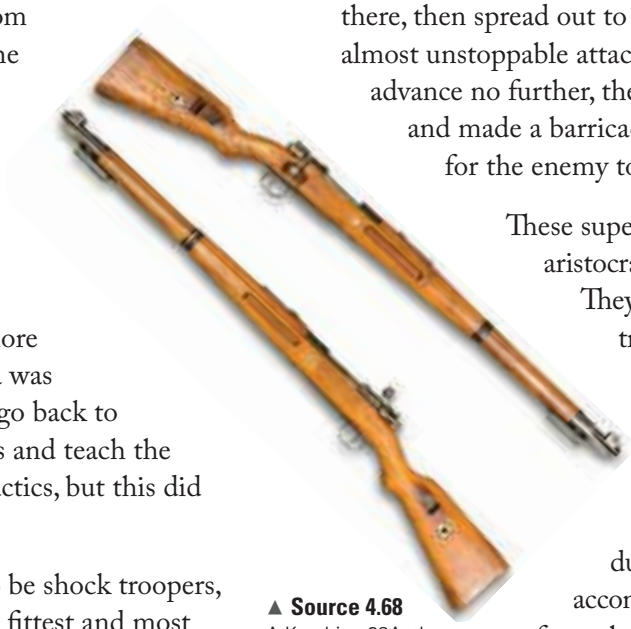
The German artillery (cannon) would begin a heavy creeping bombardment in which the shells moved steadily forward across no man's land towards the enemy.

They also fired gas shells to force the enemy to put on their gas masks, making it more difficult for them to see. As the shells moved forward across no man's land, special assault troops crept forward just behind the explosions, and would not be seen by the enemy until they suddenly emerged from the ground and stormed the trenches.

The first Storm Detachment was formed in 1915, but was ineffective; by 1916, a new Storm Battalion was formed, and proved more deadly. Originally, the idea was that stormtroopers would go back to the regular army battalions and teach the ordinary troops the new tactics, but this did not prove workable.



▲ **Source 4.68**
A Karabina 98A, the original main weapon of the *sturmtruppen*

These men were trained to be shock troopers, chosen from the youngest, fittest and most intelligent men of the German army. Their training emphasised speed, aggression and determination. Unlike ordinary soldiers, who trained safely with blank ammunition, their training had been done with live ammunition. They were already hardened to the possibility of death, since many trainees died before they even left for the front.

These shock troops crept across no man's land almost noiselessly, wearing only ordinary light boots and cloth leggings called puttees. They sewed thick leather patches onto the knees and elbows of their uniforms, so that they could hug the rough ground and move quickly. They carried a Karabiner 98A (rifle) slung across their back. This was less important than a bag of stick hand grenades, which were thrown as they approached the enemy trenches, and an automatic Luger pistol, which was more useful when it came to deadly fighting at close quarters within the trenches.

In some cases, a team of three stormtroopers would cooperate: one would throw grenade after grenade, another would quickly hand grenades to his mate, while a third would keep up suppressing fire (covering fire) with a machine gun to make the enemy stay low in their trenches. In the confusion, the enemy would not even see the rain of grenades flying through the air until they started exploding in the trenches, and by then it was too late.

Once they attacked the trenches, the stormtroopers overwhelmed the ordinary troops there, then spread out to left and right in an almost unstoppable attack. When they could advance no further, they pulled down sandbags and made a barricade, making it impossible for the enemy to recapture the trench.

These super-soldiers became the aristocracy of the German forces. They were considered highly trained specialists, and enjoyed the same hero worship as sporting stars in peacetime. They were never given ordinary trench duties, but enjoyed special accommodation well back from the front lines, and much better food. They were even driven from their base to the front lines in comfortable buses. The ordinary German soldiers, stuck in their trenches, perhaps resented the stormtrooper's privileges, but also admired them in much the same way as they idolised the air aces such as Baron von Richthoffen (also known as the Red Baron).

When the stormtroopers rose suddenly out of no man's land, they presented a blood-chilling sight: their new Stahlhelm helmets were often painted with a Death's Head (skull) and two hand grenades, and their faces were dehumanised by their gas masks. Even troops who had been in the trenches for years, and who had seen fierce fighting, were terrified and paralysed by the savagery of these attacks.

Success and failure of the stormtroopers

By early 1918, the war had continued for years. The United States, with its massive manpower and industrial resources, entered the conflict. Germany judged it urgent to launch an overwhelming attack

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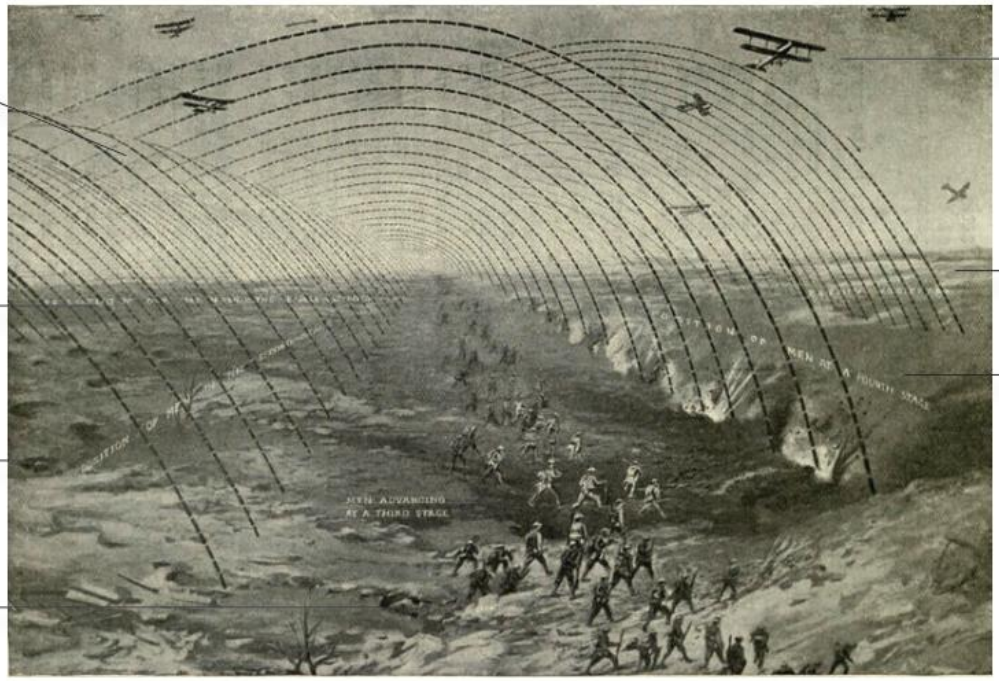
to either break the Allies' resistance, or at least force the Allies to negotiate. This 'Kaiser's War' included four major attacks conducted between March and July 1918.

At first, this strategy succeeded, and the stormtroopers forged forward, broke through the Allied lines and captured large amounts of territory. But then the weakness of a rapid advance worked against them. They advanced too far, were cut off by Allied forces, and suffered heavy casualties. But General Hutier's clever strategy came very close to winning the war for Germany. It was one of the most clever strategic responses to the hopeless conditions of trench warfare.[8]



▲ **Source 4.69** A diagram from circa 1915 showing British soldiers advancing into no man's land under the cover of a creeping barrage

ACTIVITY 4.9

Check your understanding

1. What were the key features of the new stormtrooper style of attack?
2. How did stormtroopers adjust the traditional army uniform to trench conditions?
3. Why did the stormtrooper tactic not finally succeed?

8 A young officer, Erwin Rommel, remembered the power of these shock-and-awe tactics decades later, when he would help develop the later idea of *blitzkrieg* (lightning war) for Hitler in World War II.

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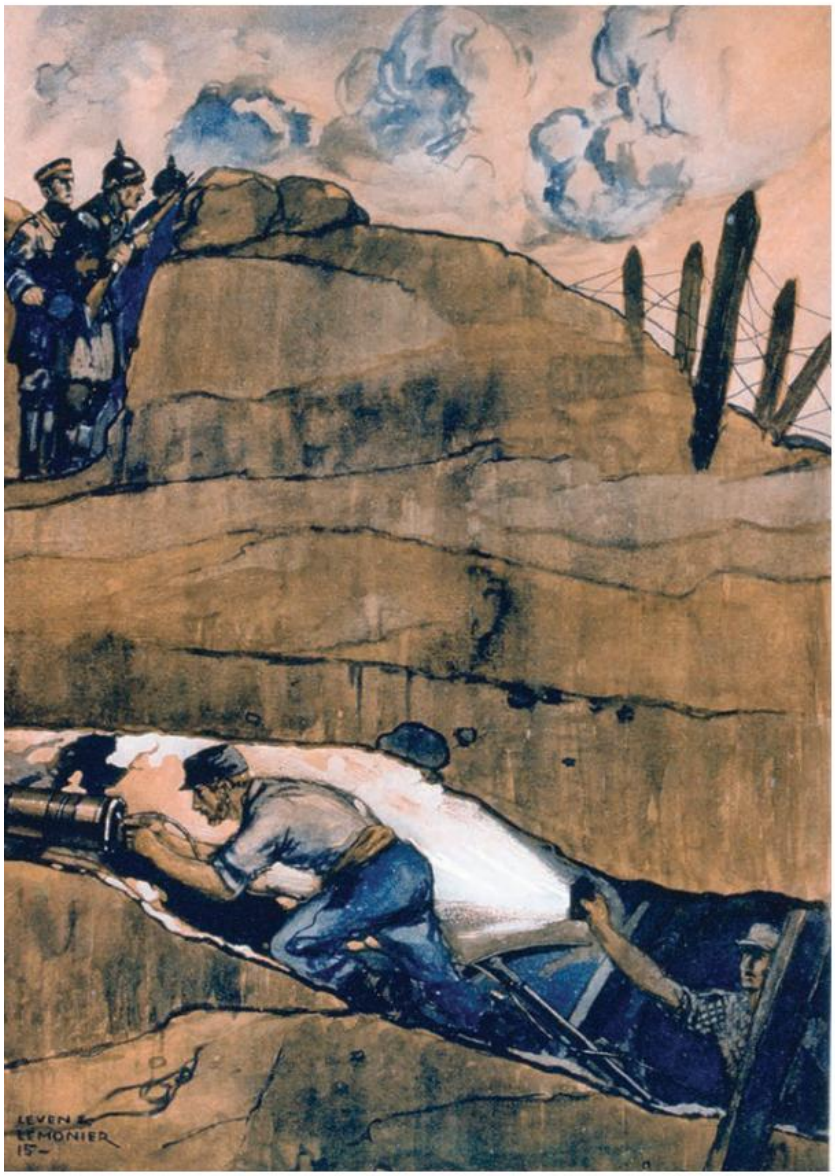
New tactics: underground warfare

The stalemate of trench warfare made it urgent to find new ways of defeating the enemy quickly. The most savage of these was underground warfare. Soldiers in one trench dug a tunnel forward under no man's land until they reached a point below the enemy's trenches. They filled the tunnel with large amounts of explosives, retreated and detonated a massive explosion, killing many enemy troops and destroying their trenches. Historian Stephen Bull reminds us that in May 1916, the Germans dug a tunnel under the Allied lines, packed it with 50 000 kilograms of explosives, creating a deadly explosion that left a crater 80 metres deep.[9]

It was crucial to listen for sounds of digging. Soldiers started their own tunnel, and dug towards where the enemy was burrowing, staying slightly above or below them. When they reached the enemy tunnel in progress, they broke into it and killed the enemy miners. This resulted in nightmarish and murderous battles in the dark tunnels, with men using pistols or bayonets to kill each other. It took tough men to undertake this dangerous work, and the underground fighting was often judged worse than that in the trenches above.

Additional content
Access the digital versions of this textbook to read the following additional content: World War I in art.



◄ **Source 4.70**
The tunnels were typically dug about 25 metres below no man's land. Skilled miners known as sappers were able to navigate underground so that the tunnel went straight to the enemy's trench. They were so skilful that they could often bring the tunnel right underneath the enemy's position, so close that they could hear the Germans talking in the trenches above them. Pictured are French sappers beneath a German trench.

9 To learn more about underground trench warfare, read Stephen Bull, *World War I Trench Warfare (1914–1916)*, 2002.

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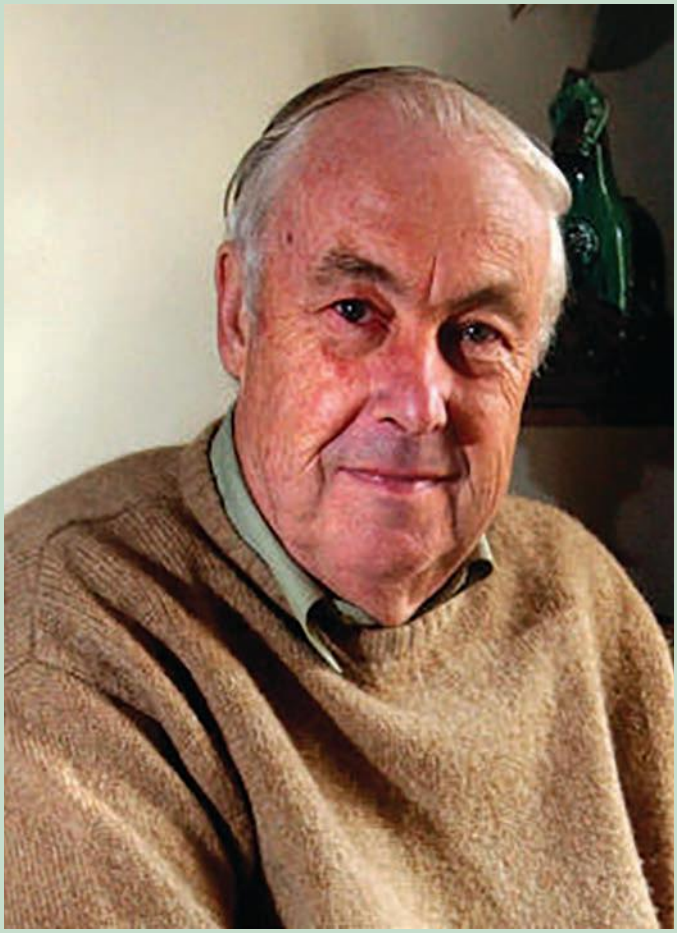
KEY HISTORIAN

BILL GAMMAGE



Historian Bill Gammage transformed our understanding of the experience of war and the way we write about it. Traditionally, military history had been the 'official' story of armies, battalions, great commanders and important battles. A typical book title might be *A History of the First AIF* – that is, a history of the organisation, not the people. It was very much history 'from above'.

It took the genius and humanity of a historian such as Gammage to take a completely new direction, and to look at the experiences of ordinary men and women in war. Gammage aimed to write a 'history from below' – a sympathetic history of what the common soldier experienced and felt. It is revealing that the title of his book did not even mention either Anzac or the AIF, but included the phrase 'Australian Soldiers in the Great War'. This quietly points to the fact that this history is about the ordinary troops, not the army as a whole.

In the important historical skill of **empathy** (the ability to understand how people in the past may have felt), Gammage is the acknowledged master. He is widely praised, but sometimes criticised, for writing an 'emotional history of the war'. He traced how the emotions of ordinary people changed when they were subjected to the violence, horror and slaughter of the war.

To do this, Gammage plunged deeply into the archives of the Australian War Memorial in Canberra. He studied 1000 soldiers' personal accounts – diaries and letters home – to understand their thoughts and feelings as the war progressed. He also wrote to 272 surviving veterans. His conclusions did not please everybody. He traced the change of attitude among people, from the early enthusiasm for the war – and especially for defending the British Empire – to growing disillusionment among the troops, both in the trenches and when they arrived home. He published his pioneering work, *The Broken Years: Australian Soldiers in the Great War*, in 1974. It rapidly became, and remains today, 'the book that every Australian should read'.

Gammage wrote:

> This is not a military history of the first AIF. It is a study based on the diaries and letters of roughly 1000 Australians who fought as frontline AIF soldiers in the Great War, and it attempts to show with what assumptions and expectations they volunteered to fight, in what ways their outlook was amended [changed] by their war service, and what new attitudes they evolved and brought back to their country after the war. Perhaps also, what happened to these soldiers throws light on how Australia passed from the 19th to the 20th century, on how the days of Empire gave way to the tradition of Anzac, and how men came to be the way they are in Australia.

▲ **Source 4.71** Bill Gammage, *The Broken Years: Australian Soldiers in the Great War*, 2010, p. xiv

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Gammage has his critics. Commentator Gerard Henderson criticised him for focusing too much on the horror and human waste of the war, forgetting the importance of fighting in World War I and of the cause it represented.[10] Henderson argues that Gammage shows sympathy and respect for the soldiers themselves, but condemns the war itself, forgetting that it was fought in a just cause.

Historian Peter Cochrane, by contrast, argues that Gammage wrote an admirable book, inspiring a new style of history frankly examining the 'horrors of war'. Other eminent historians, such as Joy Damousi, Stephen Garton and Peter Stanley, have followed Gammage and probed deeply into the emotional and psychological impacts of war trauma.[11]

Gammage's humane and compassionate vision, combined with his deep research, has advanced the writing of our national history. He provided a new model for writing about ordinary people, which we can see being used again in the superb book and film documentary about the experiences of nurses, *The War That Changed Us*.

END-OF-SECTION REVIEW 4.3

Review questions

Answer these questions on paper or in the Interactive Textbook.

Digital quiz
Please see the Interactive Textbook to access digital activities

Recall

1. What was the Schlieffen-Moltke Plan?
2. In which battle did static trench warfare begin?
3. What is a 'war of attrition'?
4. What is meant by 'total war'?

Interpret

5. How did historian Bill Gammage transform traditional military history to create a more 'human' story of the experience of the trenches?

Argue

6. 'Human technology is always developing, but the pressures and demands of war tend to speed up this process significantly.' Explain why this is so, providing examples from the technologies of death in World War I, and with reference to Source 4.72 on the next page.

10 To read Gerard Henderson's criticisms in full, read 'The Anzac legend after Gallipoli' in *Quadrant*, Volume 26, Issue 7 (July, 1982).
11 You can read Peter Cochrane's article 'The past is not sacred: the 'history wars' over Anzac' on *The Conversation* website.

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► **Source 4.72** Graph of relative losses of life per day across 10 major wars leading up to and including World War I

Extension

1 Investigate the new technologies invented during World War I, and explain which one was arguably the most important in bringing the war to an end.

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4.4 Significant places where Australians fought and their experiences

FOCUS QUESTION

What were some of the significant places where Australian men and women served during World War I?

Australia's proud record of service

Australia's armed forces have good reason to be proud of their contribution to World War I. Historian Robert Fleming reminds us that Australia was a small country in terms of population – merely seven million people in 1917, compared with Germany's 68 million and Britain's 46 million. Yet Australia sent 331 781 troops overseas, and suffered 210 000 casualties, of whom 61 519 died.[12]

Australian troops distinguished themselves by fighting very bravely, both in some hopeless and tragic military situations (Battle of Gallipoli, Battle of Fromelles) and also in some actions that proved crucial to the outcome of the war (Battle of Pozières, Battle of Villers-Bretonneux). It is significant that, of our total forces, only 4000 troops were ever captured by the enemy, suggesting that our soldiers had the determination to keep fighting at all costs.

Did Australia fire the first shots in World War I?

It is symbolic of Australia's willingness to serve that it fired some of the first shots – some believe the very first shot – of World War I. The Commander of Fort Nepean (Port Phillip Bay, Victoria), having received notification of the declaration of war with Germany on 5 August 1914, noticed the German ship the SS *Pfalz* hurrying to raise its anchor and steam out of Port Melbourne back to Germany. He quickly sent a radio message instructing the captain to stop and, when that failed, ordered his artillery to send a shot in front of the ship as the usual warning that he was prepared to sink it.

An Australian pilot, a Captain Montgomery, was guiding the ship towards the Heads at the time, and had to wrestle with the German captain to persuade him that, if he did not stop, the next shot would hit the ship. The captain reluctantly turned his ship around and surrendered his crew at Portsea. His act probably saved him and his crew from the horrors of war, for they served out their time safely in a prison camp in Australia. This important act was commemorated at Portsea on 5 August 2014, when it was confidently described as the very first shot fired on behalf of the entire British Empire in World War I.[13]

Significant places: German New Guinea (August–September 1914)

Australia's first actual military campaign is less well known to our public, but it proved that Australian forces could complete a task successfully. The campaign in German New Guinea was close to home. The German Vice-Admiral Spee's fleet of battleships was threatening Allied shipping in the South Pacific Ocean. The British gave the Australian forces the task of destroying the radio stations and supply bases that the Germans had set up to support Spee's fleet.

Australia captures the first enemy territory in World War I

The Australian Naval and Military Expeditionary Force landed at Rabaul on 11 September 1914, then captured the German radio station at Bita Paka. Australian forces had successfully captured the first enemy territory of World War I, and shown that they could play a military role in the Pacific Region.

12 To learn more about Australia in World War I, read Robert Fleming, *The Australian Army in World War I*, 2012.
13 To learn more about the first shot fired, visit the ABC News website and search for 'Bombardier John Purdue'.

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▲ **Source 4.73** The gun at Fort Nepean that fired the warning shot in front of the SS *Pfalz* on 5 August 1914

AUSTRALIA'S FIRST GUN

GERMAN STEAMER FIRED AT WHILE LEAVING MELBOURNE

SHOTS SENT ACROSS BOW

VESSEL AT ONCE RETURNS

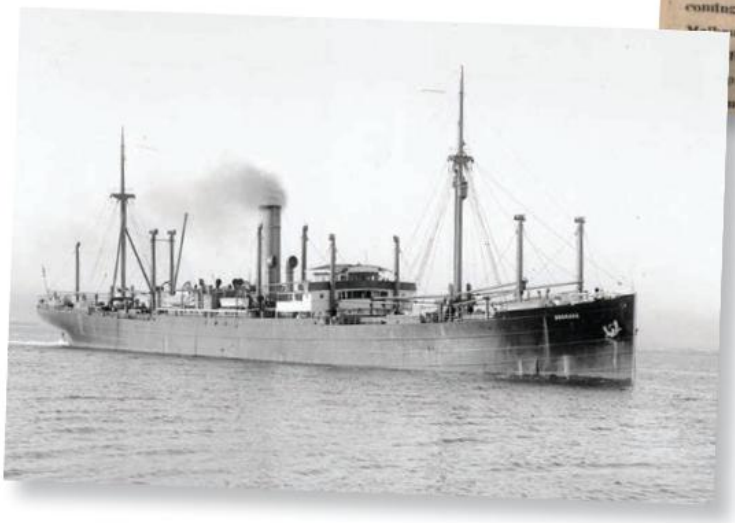
Watchers at the Forts at the Heads this morning saw a German steamer, afterwards found to be the N.D.L. liner Pfalz, coming at full speed from Melbourne. Passing through Rip she was ordered [illegible], having no clearance, but [illegible] on her way, and was

ments on board for Sydney and Brisbane.

It is stated that the clearance was granted yesterday, but that th vessel left before the document arrived.

The Pfalz, which arrived in Melbourne on July 30, is a cargo steamer of 6557 tons, and is in charge of Cap-

▲ **Source 4.74** A newspaper report of the incident



◄ **Source 4.75**
The SS *Pfalz* was renamed the HMT *Boorara* (shown here) and was used as a troopship by the Royal Australian Navy

Significant places: the Middle East

What does Anzac mean?

In October 1914, 20 000 troops of the Australian Imperial Forces joined up with 10 000 New Zealand troops at Albany in Western Australia. Together, they formed a new force known as the Australian and New Zealand Army Corps, commanded by the British officer Lt General William Birdwood. The acronym Anzac was first used in Cairo, Egypt, in early 1915. The soldiers were soon being referred to as 'Anzacs'.

Amazing but true …

The now famous name of Anzac was invented almost by chance. Everybody was still referring to it as the Australian and New Zealand Army Corps, despite it being quite a mouthful. It was actually a young officer in the Army Stores who got tired of writing the long name on every order form he filled out for supplies, and who begged to be allowed just to write the initials. General Birdwood rather liked the sound of it, and adopted it as the formal code name for the army.

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Amazing but true …

The British army incorporated a large contingent of troops from all over the empire to swell its ranks. The Australian and New Zealand Army Corps (Anzac) was stationed in Egypt ready for action at Gallipoli.

◄ **Source 4.76**
An artist's representation of an Anzac recruit

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Significant places: Gallipoli

Of all the places Australians fought, Gallipoli stands largest in the public's imagination. Prime ministers travel there on Anzac Day, and thousands of Australians have followed them. In other parts of the world, many people have never heard of Gallipoli, while others ask in amazement why we so enthusiastically celebrate such a tragic, pointless and murderous military defeat. The real place of Gallipoli is shrouded with both respectful memory and a certain amount of myth. Historians – keen to get our national history right – work hard to maintain the memory and the respect, but also to correct the myths. Our greatest duty to the men and women who served there is to find out what exactly they *really* went through.

Why was an Allied invasion of Turkey necessary?

Video
The military invasion of Turkey

As war approached in 1914, both sides assumed and hoped that Turkey, then known as the Ottoman Empire, would stay neutral, because its military power was weak. One of its main military and political leaders, Enver Pasha, decided otherwise. On 2 August 1914, he made a secret agreement allowing the Germans to sail battleships into the Dardanelles waterway and to anchor near Constantinople (the modern city of Istanbul). The Germans then closed the waterway with mines, and proceeded to shell Russian naval bases, and to prevent any supplies reaching Russia by sea. Russia could no longer export (sell) its products such as wheat or oil. More importantly, it could not be supplied with the crucial ammunition it needed for the war. The Allies – Britain and France – understood how much this would weaken Russia's war effort, and declared war on the Ottoman Empire.

Winston Churchill's plan for a naval attack on the Dardanelles

By late 1914, the war settled down into stalemate. Commanders wondered how to break the deadlock of the trenches. In December, Britain's War Cabinet considered pressuring the enemy by attacking some point in the Mediterranean area. Russia then requested that the Allies attack Turkish forces in the area, to assist Russian troops defending their territory.

A young Winston Churchill suggested a bold plan to sail battleships into the Dardanelles waterway and blow up the fortresses there. While it was certainly important to re-open the Dardanelles waterway, the plan had its weaknesses. Historian Dr Martin Ball reminds us that mistakes *were* made: the British minesweepers (ships used to

▲ **Source 4.77** In 1914, the Ottoman Empire was regarded as an empire in decay. It had gradually lost territories in Europe and North Africa.

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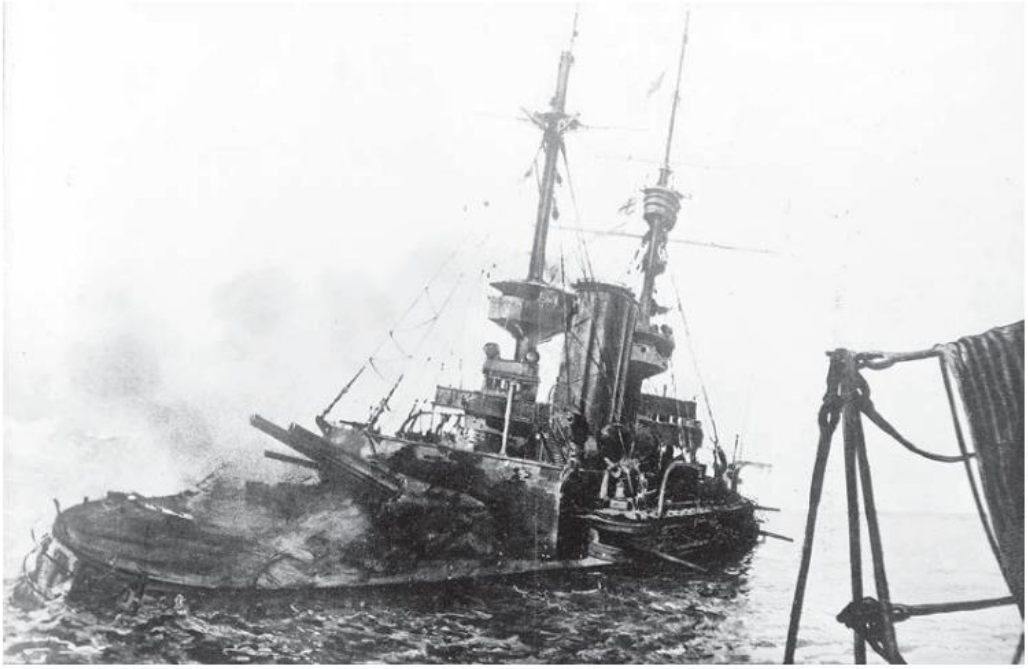


◄ **Source 4.78** The result of Churchill's misjudgement of the Turkish navy and defences. The British battleship HMS *Irresistible*, shown here, was sunk by fire from shore batteries at Gallipoli.

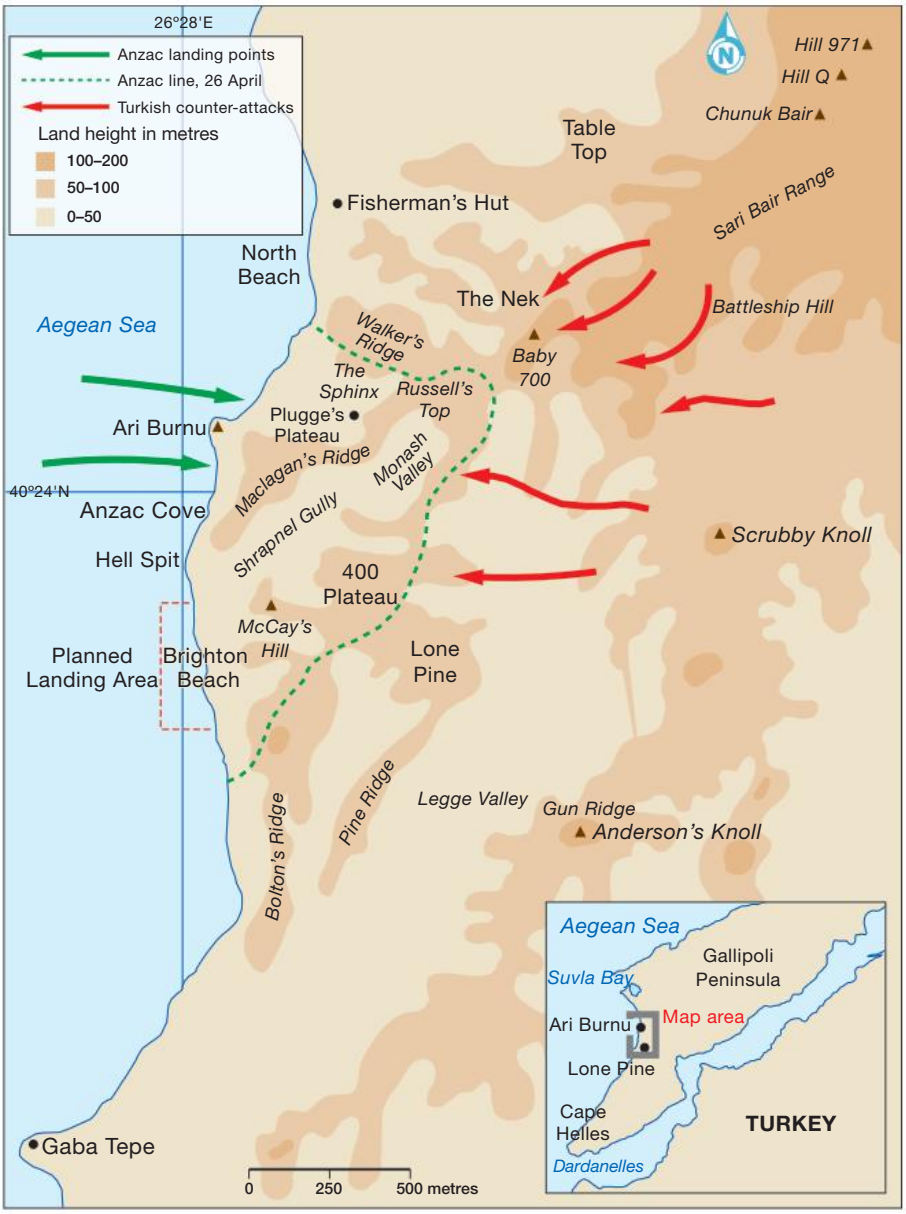
▲ **Source 4.79** Winston Churchill, First Lord of the Admiralty in the British navy, oversaw the Dardanelles Campaign in 1915

remove mines), for example, were not powerful enough to go against the strong current in this body of water. In addition, Churchill might have underestimated the Turkish navy and the fortress defences, expecting that the mighty British navy could easily defeat that of an inferior power. He was not, after all, fighting the mighty German navy. This plan ended in disaster, as several ships hit mines, and the attack was called off on 18 March 1915.

The plan for a land attack

The British navy demanded army support in future attacks. The commander of the Mediterranean Expeditionary Force, General Sir Ian Hamilton, hastily planned a land invasion for 25 April 1915. It is sometimes assumed that Winston Churchill was also responsible for the second disastrous plan, the landing of British, French and Australian troops on the Gallipoli Peninsula. This is incorrect. Churchill was angry and alarmed when he heard that a plan was being drawn up in haste for such a dangerous landing.

▼ **Source 4.80** The battles at Gallipoli



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He was wrongly blamed for its disastrous failure. Numerous Members of Parliament, especially from the Conservative Party, blamed him for *both* failures, and insisted that the government demote him from First Lord of the Admiralty.

General Hamilton's plan for a quick campaign

General Sir Ian Hamilton assigned the landing places according to the difficulty of each location. Contrary to myth, he did not throw the fresh Australian troops at the hardest point of landing. He assigned his own experienced, hardened troops of the 29th Division to the most difficult landing at Cape Helles. He correctly judged the Anzacs to be less experienced, and gave them the supposedly easier landing at Gaba Tepe Headland. A small French army was assigned another landing. Hamilton expected rapid victory, and promised to capture the Turkish capital in three weeks. He therefore only ordered supplies of food and ammunition for a short campaign. Expecting a small casualty rate of about 3000 men only, he ordered few doctors, nurses and medical supplies.

The Anzac landing (25 April 1915)

The commander of the Anzac forces, General Birdwood, first landed 4000 men on Gallipoli at dawn, making the Australians the first to land. These 4000 men were to secure the coast as far as the third ridge, and then cover the landing of the rest of the Anzac forces. Small steamboats towed lines of lifeboats from the battleships towards the shore.

It is unclear what went wrong. Some believe that the captains mistook a small headland for the larger Gaba Tepe headland. Others believe that strong currents swept the boats off course. Whatever the cause, they landed 2 kilometres away from the site that Hamilton had carefully chosen. Tragically, this placed them right amid the Sari Bair hills, an impossible landscape of steep cliffs to the sea, then ridges and deep ravines. The terrain was so hostile that the Turks thought that this was the least likely place to land, and therefore had stationed fewer troops there. As the Australians landed they were met with a hail of bullets, and realised that the plan had gone dreadfully wrong. The second group of Australians then landed on the beach now known to us as Anzac Cove.

ACTIVITY 4.10

Using historical sources as evidence

◄ **Source 4.81** George Lambert was not personally at the landing at Gallipoli in 1915, and only painted this work some years later, in 1920–22. He spent six weeks at Gallipoli after the war, carefully studying the site and the battlefields there and made many sketches that he then used to do this painting when he came back to Australia.

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Responding to the source

1 Describe this source. Who created it, and when was it created?
2 How accurate do you think this source might be as a depiction of the Anzac landing?
3 What does this source tell you about the conditions at Anzac Cove?

One soldier vividly described the dangerous advance onto the beach:

> Now we have commenced up those steep cliffs, parts of which one has to almost pull himself branch by branch, in many places to fall back again. We are near them now, only fifty yards away, then a roar and a yell as we are charging at them. On and on, up those awful cliffs and through the dense scrub, where every few yards a Turk jumps out with his bayonet ready …

▲ **Source 4.82** Jonathan King, *Gallipoli Diaries*, 2003, pp. 27–28

Another Anzac soldier recalled:

> Then [the firing] opened out into a terrific chorus. The key was being turned on the lock on the lid of hell. Some men crouched in the crowded boat, some sat up nonchalantly, some laughed, while others cursed with ferocious delight.

▲ **Source 4.83** Extract from an anonymous Gallipoli diary, quoted in Bill Gammage, *The Broken Years: Australian Soldiers in the Great War*, 2010, p. 65

The threat of Turkish snipers

Soldier Bert Facey remembered that landing, when they first discovered the cleverly hidden Turkish snipers. He wondered why some of the advancing Australian troops had been shot in the back, seeing the Turkish troops were in front of them:

> Our casualties were heavy. We lost many of our chaps from snipers and found that some of these had been shot from behind. This was puzzling, so several of us went back to investigate, and what we found put us wise to one of the Turks' tricks. They were sitting or standing in bushes, dressed all in green – their hands, faces, boots, rifles and bayonets were all the same colour as the bushes and the scrub. You could walk close to them and not know. We had to find a way to flush the snipers out. What we did was fire several shots into every clump that was big enough to hold a man. Many times after we did this the Turks jumped out and surrendered or fell out dead.

'[Turkish snipers] were sitting or standing in bushes, dressed all in green – their hands, faces, boots, rifles and bayonets were all the same colour as the bushes and the scrub.'

–Bert Facey, Anzac soldier at Gallipoli

▲ **Source 4.85** A.B. Facey, *A Fortunate Life*, 1981, p. 325

▲ **Source 4.84** This photograph shows a Turkish sniper at Gallipoli, disguised as a bush. These men waited until the Australian troops had charged and run past their hiding place, then shot them from behind.

The terrible first day

Historian A.K. Macdougall contends that the first day included some of the most savage fighting in the conflict. The Turks were commanded by the brilliant officer Kemal Ataturk, who later founded the Republic of Turkey, while the soldiers fought with enormous courage to defend their homeland. Turkish officers quickly moved more troops up to the area. The Australians were caught in a hailstorm of bullets, grenades and shells. Their officers were often killed first, so groups of soldiers struggled forward unguided

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to try to capture the target of the Third Ridge. Ataturk himself led his own regiment against the Australians – whom he called 'the English' – and threw them right back towards the beachhead.

By nightfall, the Anzac forces had suffered 3000 casualties (dead or wounded), and the remaining troops were barely clinging to the First Ridge. Instead of commanding seven kilometres of soil, the Anzacs commanded just one. General Birdwood informed the commander, General Hamilton, that his troops were trapped and might have to be evacuated; Hamilton ordered him to dig in and hold his ground at all cost. After five days, the Anzacs had suffered a staggering total of 8000 casualties (dead and wounded), while the British suffered 5000.[14]

Video
Australians at Anzac Cove

What were conditions like at Gallipoli?

The conditions at Gallipoli were some of the harshest any soldiers could experience. One English reporter wrote: 'The Australians are in the most extraordinary position an army has ever found itself, clinging as they are to the face of the cliff' (Ellis Ashmead-Bartlett, quoted in A.K. Macdougall, *Gallipoli and the Middle East*, 2004, p. 15). The area in which the 40 000 troops had to live was very small: 162 hectares of land – not much bigger than a modest dairy farm back in Australia.

The terrain was very steep. The daily act of carrying heavy cans of water and crates of food and ammunition up to the top of the ridge was utterly exhausting, and was harder work than fighting in the trenches. In particular, there was not a single source of natural water at Anzac Cove. It was brought by ship in barrels, then put into metal cans and carried by men or mules up to the troops. Water became a precious and scarce resource, and this made both washing and hydration against extreme heat very difficult.

The army never mastered the basic skill of building adequate toilets, so soldiers used tin cans instead. Some 50 per cent of Anzac deaths here were not from Turkish bullets, but from disease.

▲ **Source 4.86** Frank Crozier, *The Beach at Anzac*, 1919. Crozier painted this large scene after the war, but he did serve in Gallipoli in 1915, and also on the Western Front in Europe, where he witnessed the Battle of Pozières. Of all the artists of the AIF, he had the greatest direct experience of battle conditions.

14 To learn more about Gallipoli, read A.K. Macdougall, *Gallipoli and the Middle East*, 2004.

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Amazing but true …

Evidence has emerged that some 50 Indigenous Australians fought at Gallipoli, and that 13 of them died there. Official documents did not record their ethnicity, and no photographs of these men have survived. These men remain among so many unacknowledged heroes.[15]

A Turkish view of Gallipoli

The situation at Gallipoli met almost every criterion for a military disaster. The Turkish troops were already dug in, commanded high ground, and had cut down all trees to allow for a murderous sweep of machine-gun fire. They were highly trained, and were lucky to have short lines of supply from their base. They also felt that they were defending their own homeland against foreign invaders.

▲ **Source 4.87** An example of an improvised 'jam tin' grenade found at Lone Pine, Gallipoli, in January 1919

The Turkish troops fought bravely and fiercely. Their German allies supplied them with plentiful bullets, artillery shells and hand grenades, so they could exert constant pressure bombarding the Australian trenches. On occasions, hand grenades fell like rain into the Australian trenches; men who were good cricketers specialised in catching the grenades and bowling them back at the Turks. The Turks then delayed throwing the grenades after pulling the pin, so that they were ready to explode just as the Australians caught them. Many a fine sportsman died trying to defend his fellow soldiers.

The Turks also had expert snipers who could pick off any soldier who carelessly showed himself above the trenches. Australian troops quickly learned to use a periscope to observe the Turkish front line, and to locate possible snipers.

Australian resilience and improvisation under fire

At Gallipoli, our troops, like the British and French, showed great resilience. For example, while the Turks had plenty of hand grenades provided by their ally Germany, the Anzacs had fewer. All ammunition came by ship from Australia. Not dismayed, they set up a 'bomb factory', making crude bombs out of tin cans filled with explosives, shrapnel and a fuse threaded through a hole in the top of each can.

The great battles at Gallipoli

Gallipoli is also known for the savagery of the battles fought there.

We are well aware of the massive Australian casualty rate at Gallipoli, but we must also bear a thought for the enemy. In the Battle of Anzac (19 May 1915), for example, some 42 000 Turks attacked en masse, simply charging straight into Australian machine guns. At that time, there were only 1700 Anzacs on duty, but they were dug in and ready for the attack.

At first, soldiers reported a fierce delight in mowing down rank after rank of Turkish soldiers. As the battle wore on, and the Turks suffered 10 000 casualties, delight turned to distaste: for professional soldiers, battle is one thing, but mindless slaughter is another.

In the end, the Anzacs could not bear hearing the cries of hundreds of wounded Turks dying slowly in the hot sun, and arranged a ceasefire and actually helped the Turks carry away the wounded and dead. This loss must have been a national trauma for Turkey and meant heartbreak for thousands of families. Ataturk never repeated this costly attempt to drive the Anzacs from the shore.

The Australian forces had their own turn to attack in the summer offensives of mid-1915. In the Battle of Lone Pine (6–9 August 1915), the Australian First Brigade from New South Wales attacked Turkish positions, and met fierce opposition. They charged late in the afternoon, so the low sun was shining in the eyes of the Turks. The Anzacs quickly gained the front trenches, then spread out through the communication trenches. Both sides struggled in murderous hand-to-hand

Additional content

Access the digital versions of this textbook to read the following additional content:

Film and history study: How accurate is the film *Gallipoli*?

15 To find out more about Aboriginal soldiers at Gallipoli, Google 'SBS News 50 Aboriginal soldiers at Gallipoli'.

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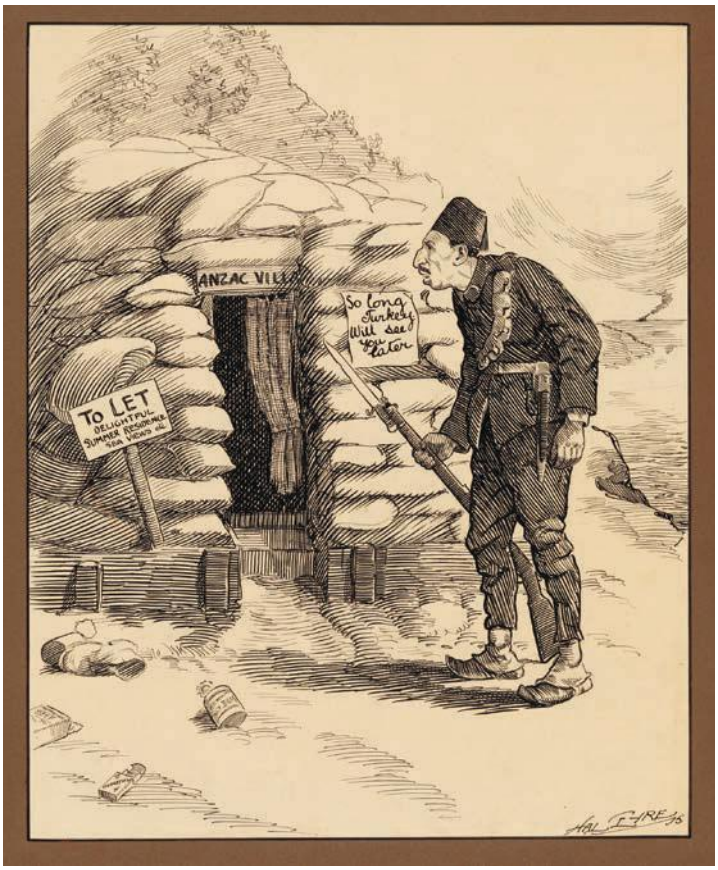

▲ **Source 4.88** 'So long Turkey, see you later!' Hal Eyre, *Daily Telegraph*, 1915, State Library of New South Wales

fighting with bayonets and hand grenades for three days.

When the battle ended, the Anzacs had suffered 2000 casualties, the Turks an even more tragic 6000.[16] The Anzacs captured and held the site. In all, seven Australians received the Victoria Cross for bravery in this savage fighting. The battle took place in the area now occupied by the Lone Pine cemetery.

One important success at Gallipoli: the silence ruse

One of the best examples of the Australian spirit was the evacuation of the Anzac sector on 15–19 December 1915 employing the **silence ruse**. All military retreats are dangerous, because a departing army can be suddenly attacked from behind by the enemy, and suffer massive casualties. However, by the inspired orders of General Sir Brudenell White, the Australian army was able to make a retreat without any serious losses.

KEY TERM

silence ruse a detailed plan to allow Anzac forces to evacuate from Gallipoli in complete silence, and by stages, to avoid the possibility of a Turkish attack on retreating troops

This had to be managed carefully. First, White ordered that our troops stop using artillery or snipers, to create the impression that action was being reduced in preparation for winter. This was so the Turks would not be suspicious as our troops withdrew. Second, the Australian troops heard rumours of a retreat, and were not happy. White announced that they were just going to Lemnos in Greece for rest leave. The troops were resentful when they heard that the dead soldiers would be left behind in their simple graves.

On 15 December, the first of 36 000 Anzac troops were withdrawn, continuing over five nights. Nothing was left behind; all spare ammunition was destroyed. The first to go were the low-level service troops and reserve troops, leaving the battle troops to keep fighting. The fighting troops departed next, leaving only the machine-gunners on duty to come away last.

By 19 December, only 10 000 troops were left on Gallipoli, and the Germans and Turks still suspected nothing. White insisted that the entire retreat must be carried out in complete silence, as the Turkish trenches were so close that the enemy could hear the give-away sounds of an army departing. Thus, the horses were well fed with fodder so that they would not neigh out of hunger. The men were ordered not to speak except in low tones. Even the wheels of carts were greased so they would not make a sound.

White still faced the problem that there were always gunshots from sentries throughout the night, and that the Turks would notice if suddenly the Australian positions fell completely silent. The solution was the ultimate in Australian bush inventiveness.

▲ **Source 4.89** A rifle with a drip bucket attached to the trigger – a key invention that saved many Australian lives

16 To learn more about the Battle of Lone Pine, visit the Australian Government's Anzac Portal and search for 'Battle of Lone Pine'.

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The Australians set up a number of loaded rifles, held in place by sandbags. They then tied a piece of string to the trigger, and onto it they attached an empty bucket. Above that, they suspended a bucket full of water, with holes in its base. The water in the perforated can above dripped water into the second can below, and, when the second bucket gained enough weight of water, it pulled on the trigger.

To make sure that the rifles fired randomly at different times, the Anzacs drilled some buckets with larger holes, so the can filled more quickly and fired earlier, while others were drilled with smaller holes, so that the rifle fired later, during the small hours of the morning.

While Gallipoli was a defeat in military terms, its ending was a triumph of intelligent management. Some 10 000 Anzac troops had been killed in the fighting, but not a single soldier of the 105 000 surviving troops was lost. In addition, the army saved 300 valuable field cannon for later use on the Western Front.

One Anzac sergeant wrote:

> Hearts wrung by the sacrifices made and the irreparable loss of many of the brightest and best of our young nationhood, thousands of us said a sad farewell to those lonely graves on rugged Gallipoli.[17]

▲ **Source 4.90**

The Anzac chaplain Walter Dexter was given the task of mapping the graves of the more than 8000 dead. He wrote:

> I went up the gullies and through the cemeteries, scattering silver wattle seed. If we have to leave here, I intend that a bit of Australia shall be here.

▲ **Source 4.91** Walter Dexter, quoted in Australian Turkish Friendship Memorial Sculpture, *I Went Up the Gullies and Through the Cemeteries*, 2019

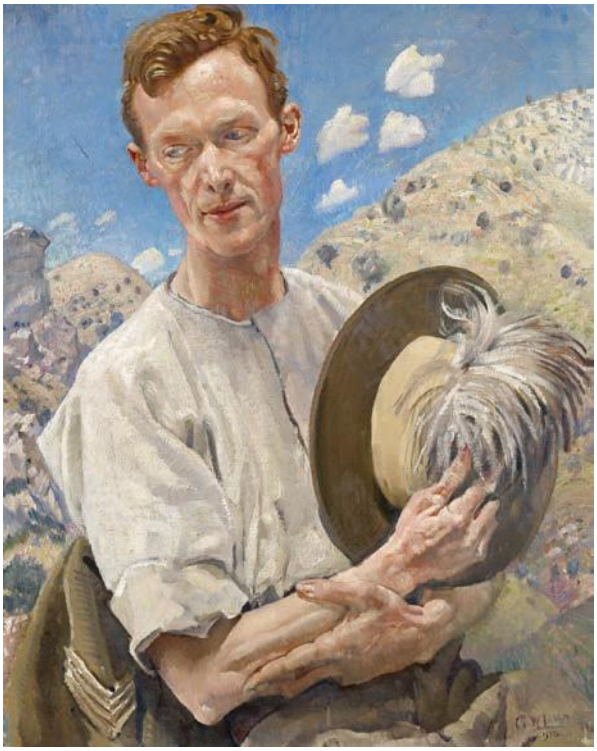
Many points of view about Gallipoli

Australia's involvement in Gallipoli is probably the best-known of our nation's actions in World War I. In recent years, Gallipoli has become the most intensely beloved action in World War I in the public's mind, as Kokoda has been for World War II. Each year, thousands of Australians make a pilgrimage (respectful journey) to Gallipoli, and stand in the chill dawn of Turkey, deeply moved by the memory of the Australians who fought bravely here. Gallipoli was a military defeat, and some people grumble that we remember this defeat with such intensity and forget Australian victories such as the Battle of Beersheba. Others argue that this 'defeat' was actually an achievement of extraordinary courage and perseverance under almost impossible conditions, and reflected well on the sheer bravery and tenacity of Australian and other troops.

Beersheba

In the Middle East, Australian forces fought the Turkish army, which was assisted by German officer-advisers. In 1916, the challenge was to capture the heavily fortified town of Beersheba, to break all the other German defences.

The Australian commander was concerned that the Turks were heavily dug-in at Beersheba, and backed by heavy artillery and machine guns. A charge over open desert would slaughter his troops. He had a simple but brilliant idea. He realised that the Germans, expecting the usual



▲ **Source 4.92** The Australian forces were technically called 'Light Horse', meaning that they were actually infantry who rode up to the enemy on horseback, dismounted, then attacked on foot. They differed from cavalry, which always attacks on horseback. This painting by George Lambert shows the uniform of the Light Horse. Their slouch hat has the distinctive symbol of the cluster of feathers, which is absurdly called 'Kangaroo Feathers'.

17 Anzac diary online.

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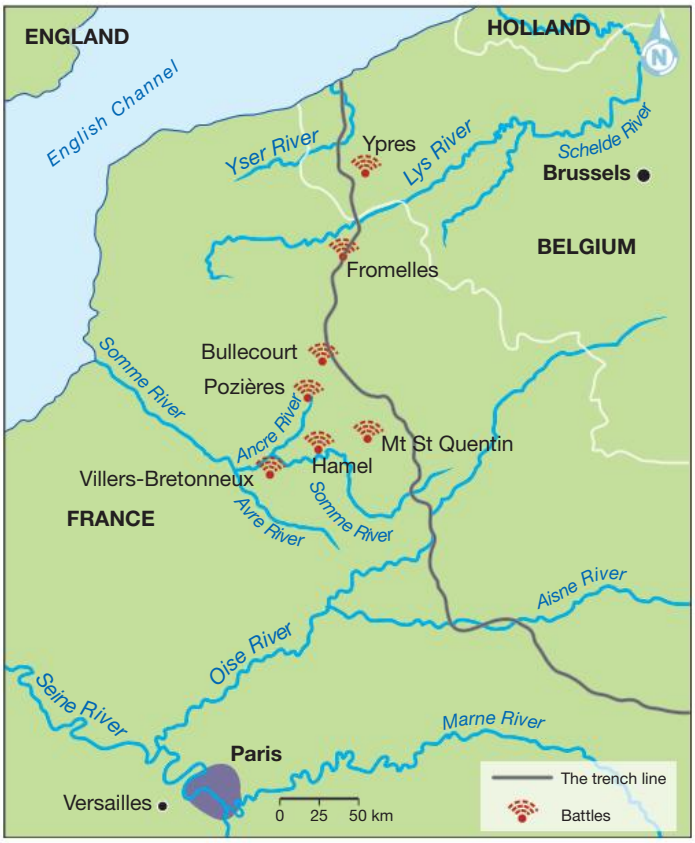
attack, would already have set their guns to fire at a certain range – that is, exactly the point at which the Light Horsemen usually dismounted. It would not be easy to quickly rewind the guns to change their range. He therefore ordered his troops to charge, galloping at high speed like cavalry, and to use their bayonets like swords. The attack was so quick that the German guns were ineffective, and the Australians captured Beersheba with few casualties.

Video
The Australian Light Horsemen

Significant places: the Western Front

The Australian action at Gallipoli stands larger in our national memory than any other campaign in World War I, and yet Australia's actions on the Western Front in Europe were of greater scale and of larger importance to the war. Military historian Robert Fleming writes: 'Although Gallipoli is often described as Australia's "baptism of fire", it would pale in comparison to what the Diggers were to experience on the Western Front' (Robert Fleming, *The Australian Army in World War I,* 2012, p. 20).



▲ **Source 4.93** The principal battle areas of the Western Front where Australians fought between 1916 and 1918

The Battle of Pozières (23 July to 3 September 1916)

The French village of Pozières was the scene of a savage battle that completely destroyed the village and killed many of the British and Australian troops holding it against the German counter-attack. The name Pozières still strikes a chill in our national memory because this place was, as Charles Bean put it, 'more densely sown with Australian sacrifice than any other place on earth'.[18]

Australians were among the troops sent to capture this village, which was valuable because it was on a high ridge giving a view over the battlefields below. The Australians of the 1st, 2nd and 4th Divisions made a total of 19 attempts over 42 days to capture the site, and suffered a devastating 23 000 casualties (killed, wounded or captured). In just the first day of the attack, the Australian 1st Division suffered 5285 casualties.

The heavy losses were partly due to their early success in capturing the village. Having taken

▲ **Source 4.94** The main street of Pozières in 1914

▲ **Source 4.95** The main street of Pozières in 1916, after the shelling

18 To find out more about Pozières, visit ABC News and search for 'Fromelles and Pozières: A look back at two of Australia's bloodiest WWI offensives'.

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Pozières, they discovered that they were almost completely open to bombardment from German artillery. The German guns began pounding the village to rubble, and there was literally no shelter in which to hide. One Australian officer recalled walking past and seeing a group of five Australian soldiers sitting at a table in the open, calmly playing cards as German shells rained down around them. When the officer returned later, the same men were slumped in their chairs, dead, having played their card game until, inevitably, a German shell finally hit them.

This occurred at the same time as the French were facing a massive German attack nearby at Verdun and as the British were also facing attack at the Battle of the Somme. The men who survived this slaughter came away deeply shocked by what they had been through. One observer noted:

> They looked like men who had been in Hell … drawn and haggard and so dazed that they appeared to be walking in a dream and their eyes looked glassy and starey.

▲ **Source 4.96** C.E.W. Bean, *The Australian Imperial Force in France: 1916. Official History of Australia in the War of 1914–1918*, Australian War Memorial, Canberra, 1941 [1929], p. 599

Australia's greatest military disaster: the Battle of Fromelles (19–20 July 1916)

For military historians, the name of the Battle of Fromelles is also a chilling one, because it was, for Australia, one of the most tragic and wasteful battles of the Western Front. In just 24 hours, 5533 Australian soldiers would be dead, wounded or missing. In all, 1719 of our troops were killed. Another 470 were taken prisoner. The attack did not achieve any goal whatsoever – apart from briefly confusing the Germans – and no land was captured. The Battle of Fromelles remains the worst one-day disaster, statistically, in Australian military history.

The Australian diversionary attack at Fromelles

At this time, the British forces were planning their great attack of the Battle of the Somme, which they hoped would finally break through the German lines. They ordered Australian forces to attack nearby, near Fromelles, to create a diversionary attack (fake attack) to confuse the Germans as to where the real attack was. The Australian commanders warned the British generals that this was too dangerous a place to attack, but the orders were given. Three brigades of Australian troops were ordered to attack a heavily defended German position, across open land. The German positions were on the slight rise of Aubers Ridge, some 40 metres high, from which the Germans had a vantage point over all Australian troops. A young corporal named Adolf Hitler was in a concrete blockhouse during this battle.

Most bodies recently found at Fromelles still have pouches full of ammunition, suggesting that they barely lived long enough to fire a shot.

You will learn much more about Hitler if you study History in year 10.

The 5th Australian Division consisted of 12 battalions of troops who had only a few weeks' training and were not battle-hardened. The Australian and British attack began at 6 p.m., so they were attacking in full summer daylight. Heavy bombardments had not destroyed the German defences, which now gave heavy fire. The Australian troops had to run across 80–400 metres of open ground in full view of machine-gunners. The German machine-gun fire was so intense that whole lines of men were cut down. Some men were cut in half by the bullets. The entire 15th Victorian brigade was cut down in the first 15 minutes of the battle. Sergeant Jimmy Downing recalled: 'Hundreds were mown down in the flicker of an eyelid, like great rows of teeth knocked from a comb. It was all over in five minutes' (Sergeant Jimmy Downing, quoted in Ashley Ekins, 'The Battle of Fromelles', *Wartime*, Issue 44, 2008).

Most bodies recently found at Fromelles still have pouches full of ammunition, suggesting that they barely lived long enough to fire a shot. The men who survived were ordered to move forward and to capture the single German line. The Germans

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had built a line of earth embankments, not trenches, because the ground here was waterlogged. The Australian troops got lost in the landscape and became separated. During the evening, they huddled in small groups in craters, while the German troops returned from their fortified ridge and surrounded them. The slaughter is remembered as the greatest loss by any one division in a 24-hour period during the entire war.

Video
Australians on the Western Front

Additional content
Access the digital versions of this textbook to read the following additional content: Two dedicated historians who pursued the truth about Fromelles.

▲ **Source 4.97** An Australian Digger killed in the German second line, held throughout the night by the 5th Australian Division during the Battle of Fromelles

ACTIVITY 4.11

Using historical sources as evidence

There are thousands of letters, diaries and memoirs surviving from the battlefields of World War I, of which the most famous is the German soldier's account by Erich Maria Remarque, *All Quiet on the Western Front* (1929). Among the many memoirs by Australian troops, one of the most detailed, convincing and terrifying accounts is Walter Hubert Downing's *To the Last Ridge*.

This work qualifies as a **primary source**, because it was written by a witness who was actually fighting in the trenches, and who wrote down his recollections shortly after the event, when we might expect his recollection to be quite accurate. He probably wrote quite detailed notes while at the Western Front, and then wrote them up into book form when he returned to Melbourne in 1919. The book was published in 1920.

▲ **Source 4.98**
Walter Hubert Downing

Downing records that the mud of the trenches was already full of the bodies of soldiers who had been killed before he arrived:

> The dead lay everywhere. The deeper one dug, the more bodies one exhumed [dug up]. Hands and faces protruded from the slimy, toppling walls of trenches. Knees, shoulders and buttocks poked from the foul morass. Here had been a heavy slaughter of English lads four days before … There were also German dead, but it was hard to tell them from the rest, for khaki is grey when soaked and muddy.

▲ **Source 4.99** Walter Downing, *To the Last Ridge*, 1998, p. 17

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Downing confirms from his direct experience that the Australian troops literally walked out into the open ground of no man's land and straight into machine-gun fire, which cut them down in their hundreds:

> The 60th [regiment] climbed on the parapet [front wall of the trench], heavily laden, dragging with them scaling ladders, light bridges, picks, shovels and bags of bombs. There was wire to go through, and sinking ground, a creek to cross, more marsh and wire; then the German line. Scores of stammering German machine-guns spluttered violently, drowning the work of the cannonade [shelling]. The air was thick with bullets, swishing in a flat lattice of death. There were gaps in the lines of men – wide ones, small ones. The survivors spread across the front, keeping the line straight. There was no hesitation, no recoil, no dropping of the unwounded into shell holes. The bullets skimmed low, from knee to groin, riddling the tumbling bodies before they touched the ground. Still the line went on. Hundreds were mown down in the flicker of an eyelid, but still the line went on, thinning and stretching. Wounded wriggled into shell holes or were hit again. Men were cut in two by streams of bullets. Fifty-six remained of a full thousand. It was over in minutes.

▲ **Source 4.100** Walter Downing, *To the Last Ridge*, 1998, pp. 8–9

Downing also joined in smaller attacks called trench raids. He recorded that some men took joy in finally engaging with the enemy and killing him. He also recorded some of the comments made by Germans and Australians in the heat of the killing:

> In a few seconds we were through the remnants of the [barbed] wire … There were cries of 'Share that among you', as a shower of bombs fell in the trench. The appeal of 'Mercy kamarad' [friend, comrade] was dismissed with a curt 'No kamarad of mine, son!' or the sardonic 'You're just two years late'. Knobkerries [clubs] and bayonets were hard at work. A cry was heard, 'No, no Englander, I haf seven kinder.' [children] 'That's to make sure you don't have seven more.' Crash went a bomb [hand grenade] and vmm-m-m went the fragments … No living thing was left behind us in that trench.

▲ **Source 4.101** Walter Downing, *To the Last Ridge*, 1998, p. 34

Downing is very frank in admitting that, as the cruel winter of 1917 set in, he and his mates began to worry about death, and to doubt his country:

> We just go out into the line again and again until we get knocked [killed]. We'll never get out of this. Just in and out, in and out, and somebody stonkered [killed] every time. Australia has forgotten us, and so has God. I wouldn't wish my worst enemy to have to put up with this life. But we've got to go, and why shouldn't they too?

▲ **Source 4.102** Walter Downing, *To the Last Ridge*, 1998, p. 34

Responding to the source

Research the life and career of Walter Hubert Downing by examining his war record on the Australian War Memorial website. If possible, read a selection of chapters from Downing's *To the Last Ridge*, either from the hard copy book or from an electronic version.[19]

1. Describe this source. Who created it, and when was it created?
2. Consider the **dates** of Downing's service, and evaluate the extent to which you think he is able to give a complete account of all the great battles of World War I.
3. Consider the **places** and the battles where Downing served and fought. Do you believe that Downing experienced the true nature of the savage fighting of trench warfare in World War I?

19 An electronic version can be found on the National Library of Australia Trove website. This source can also be accessed as an audiobook on the Trove website.

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4 Read Downing's description of the **trench raid**. He often describes that men running into battle experienced a 'fierce ecstasy' and enjoyed killing the enemy German soldiers. What are some of the other reactions of men and women placed in such a dangerous situation as war?

5 Downing's descriptions contain many precise details of the names of shells and bullets, and even of the sound they made. Why was this necessary knowledge for every soldier to survive in the trenches?

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.5

The contestability of historical evidence: Australian war photographer Frank Hurley

We usually assume that photographic primary sources, being snapshots made on a camera, are a reliable source of information. As historians, however, we need to be careful before assuming that any source can be taken literally.

The career of the photographer-adventurer Frank Hurley (1885–1962) highlights the problems of making visual records of war. In reality, battles simply happen too quickly to be recorded properly. Hurley was determined to use his photography 'to illustrate to the public the things our fellows do and how war is conducted' (Jennifer Wellington, *Exhibiting War: The Great War, Museums and Memory in Britain, Canada and Australia*, 2017, p. 79).

▲ **Source 4.103** Frank Hurley in his uniform as an official war photographer in June 1917

He volunteered to the AIF as a Captain, and went to the front, risking his life among the savage fighting of the Third Battle of Ypres. He took terrible risks: a photograph of 12 October 1917 proves that he went to a deadly spot called Hellfire Corner. This was exposed to German shells, and very dangerous. He could not risk standing up to click the button on the camera as a shell exploded; he would have been cut to pieces by shrapnel. To give an accurate impression of this dangerous stretch of road, he photographed it when safe, and then later, in the studio, added another photograph of an explosion.

He recorded his experiences in a written personal diary and in his photographs, including colour images and great panoramas of the battlefields. He took photographs and wrote the following description of troops 'going over the top' at Zonnebeke in October 1917:

> '4 October 1917: Punctually at 6 a.m. our infantry attacked along an eight mile front after first it had been battered by our artillery barrage. By a remarkable coincidence the Boche [Germans] had also planned a counter attack at precisely the same hour: but our frightful barrage descended & absolutely demoralised & almost annihilated his attacking line. Our infantry followed up in three waves, the barrage being lifted for each attack & carried all objectives. We penetrated his line over 1000 yards ahead of Zonnebeke & gained the commanding ridge, which places us in a very gratifying [good] position. The enemy are now on the slope of the ridge immediately ahead & we look down on him. About 3,000 prisoners were captured & several machine guns. Our casualties regrettably were higher than usual. The battle was fought in a misty rain – heavier falls having taken place overnight, so that the entire battlefield was a great quagmire of mud. It's marvellous what conditions our fellows can & will fight under. There are no troops in the whole fighting force equal to the Australians for storming troops. I went into Zonnebeke during the day to try & get pictures but it was being so heavily shelled that we (Joyce & myself) were fortunate to escape injury. The entire country is ploughed into waves of pulverised muddy earth, the craters being filled with water, so that it is extremely difficult to move about. During a battle the whole back area is [busy] with fatigue parties & stretcher-bearers,

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streams of prisoners under escort, Supply Columns, etc. Shells burst in places where the Hun knows there are likely to be numbers of men: but the work goes on & the whole process continues, as though some great game was being enacted. I don't know whether one becomes callous or turns a fatalist, for the wounded & dead scarce make any impression, & one is absolutely heedless of the fact that his turn might be next instant. It's a damnable business. I wake up in the morning as though I had passed through some weird wild dream. It's impossible to realise that men are just murdering each other around you, & that you are in the heart of a great battle. The frightful roar of artillery & scream of shell though brings one to reality, but even it passes off as soon as you leave the scene of battle, & when I am back again in my cosy room at Steenvorde, I quickly forget the horrible doings of the day & after a good dinner, develop my plates & then turn in with no more thoughts for the day, than if I had been at business all the while, & had just returned from a late evening working overtime!'

▲ **Source 4.104** Hurley's original image

▲ **Source 4.105** Frank Hurley, quoted in State Library of New South Wales, *Frank Hurley War Diary, 21 August–28 October 1917*, 2019

Witness to war?

Given the efforts Hurley made to engage closely with the fighting and to record it, his work is surely a reliable primary source. But Hurley's work caused criticism. He was seriously challenged when, in 1918, his exhibition *Australian War Pictures and Photographs* contained images that were montages, photographs that had things added that were not in the original snapshot.

▲ **Source 4.106** Hurley's second image; the original image can be seen to the bottom right of the second image.

For war correspondent Charles Bean, this meant that the photographs were not accurate, but fake. In October 1917, the Australian army ordered him not to produce composite images. He resigned (briefly) in protest. Hurley argued: 'to get pictures one must go into the hottest and even then come out disappointed. To get war pictures of striking interest and sensation is like attempting the impossible' (Daniel O'Keefe, *Hurley at War: The Photography and Diaries of Frank Hurley at War*, 1986, p. 50). He argued that battles move so quickly that no single snapshot can include everything. In the doctored (altered) photograph shown in Source 4.106, Hurley combined two things – the troops beginning to attack, with planes overhead – to give an overall impression of what happened.

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Additional content
Access the digital versions of this textbook to read the following additional content:
Will Dyson: a critic of warfare who volunteered for the Western Front.

Research and discussion

Frank Hurley's photographs are an example of how a process of 'faking' could result in telling a greater truth about a battle. Research his photographs, and decide to what extent Hurley really faked his pictures. In class or group discussion, draw your own conclusions as to whether you would accept Hurley's work as a reliable primary source. Which aspects of his career seem to make him a very reliable witness, and his photographs useful primary sources? What are the problems with Hurley's alteration of his photographs?

Responding to the sources

1. Describe these sources. Who created them, and when were they created?
2. What did Frank Hurley do to maximise his direct experience of the fighting in the trenches?
3. Why did Hurley discover that even the modern camera was not able to capture all aspects of a battle?
4. After having looked at Hurley's photographs, would you have supported Hurley against Charles Bean's criticisms? If so, why?

The Germans fight back with new strength: the Spring Offensive (March 1918)

Until now, the armies of Germany and its allies had been divided in two, having to fight on the Western Front in France and on the Eastern Front with Russia. But in October 1917, the Germans had a stroke of luck. The revolutionary leader Lenin and his Communist Party (then called Bolsheviks) seized power in Russia. The Bolsheviks knew that they could only stay in power if they withdrew Russia from the war.

In the Treaty of Brest-Litovsk (3 March 1918), Russia made its own agreement with Germany to exit the war, without consulting with its former allies. Thousands of German troops came flooding back from Russia to the Western Front, bringing overwhelming reinforcements. The German commander, Ludendorff, was aware that the United States would shortly enter the war, and hastily organised a massive attack of 63 German divisions across a vast front of 110 kilometres.

The Battle of Villers-Bretonneux (24–27 April 1918)

The Australian effort at the Battle of Villers-Bretonneux has received so much praise – especially from the grateful French of that region – that it is easy to miss the true significance of the event. In 1918, the German army had made a final great push for victory, and had smashed through the Allied lines. As the Germans approached the town of Villers-Bretonneux, they were close to capturing the major city of Amiens. This city was the centre of the main railway line to Paris, which was the lifeline along which the Allies could move their troops up to the front. If Amiens were captured, the Allies would not be able to move more troops to the front, and the war would be lost. The Allies were, literally, just days from defeat. The Great War could have been lost at this point.

▲ **Source 4.107** Australian wartime artist Will Dyson sketching his impressions of the war in France in 1918

We can see the result of this victory in Streeton's painting *Amiens Cathedral*. The point about this cathedral is that it is intact. It has not shared the terrible fate of Reims Cathedral, which the

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▲ **Source 4.108** Arthur Streeton, *Amiens Cathedral* (painted in London, August–September 1918, Collection of Melbourne Grammar School)

Germans deliberately hit with incendiary shells, causing the entire structure to be gutted by a fierce blaze. But the preservation of Amiens also had a tactical importance. The Germans realised that it was a major administrative centre for the region, and a vital transport hub for the rapid movement of troop reinforcements. They launched a determined push to capture the city (March–April 1918).

It was largely due to the Australians' capture of Villers-Bretonneux that Amiens was saved, as the Germans needed that high point from which to use artillery against the city. Denied such a facility, the Germans did not have a direct line of sight or of fire, and were further back from Amiens. They used long-range guns, and sent about 10 shells blindly towards Amiens. These shells damaged houses around the cathedral, as depicted accurately by Streeton in this painting.

Sir John Monash designs a new attack strategy

Sir John (General) Monash is commonly described as the greatest military commander in Australia's history, and an effective tactical planner among the stalemate of the Western Front. In particular, he designed a completely new form of attack that would allow the Allies to break the Germans' hold on the front. This consisted of a carefully planned, unified use of infantry closely backed by tanks, artillery and aircraft. In this respect, his thinking is judged revolutionary, and to have shown the British a more effective way of fighting the war. Monash explained the keystone of his theory:

> … the true role of infantry was not to expend itself upon heroic physical effort, not to wither away under merciless machine-gun fire, not to impale itself on hostile bayonets nor to tear itself to pieces in hostile entanglements – (I am thinking of Pozières and Stormy Trench and Bullecourt, and other bloody fields) – but on the contrary, to advance under the maximum possible protection of the maximum possible array of mechanical resources, in the form of guns, machine-guns, tanks, mortars [cannon] and aeroplanes; to advance with as little impediment as possible; to be relieved as far as possible of the obligation to fight their way forward; to march, resolutely, regardless of the din and tumult of battle, to the appointed goal; and there to hold and defend the territory gained; and to gather in the form of prisoners, guns and stores, the fruits of victory.

▲ **Source 4.109** John Monash, *The Australian Victories in France in 1918*, 1920, p. 96

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FAMOUS FACE

JOHN MONASH (1865–1931)

John Monash is respected as one of Australia's finest military commanders, one who responded creatively and successfully to the challenges created by trench warfare in World War I. He served first at Gallipoli (1915) then at the Western Front in France. Promoted to Major-General, he commanded the Australian Third Division. He demonstrated the importance of careful organisation and explanation by his success in the Battle of Hamel. He showed that supplies could be carried to the troops by tanks, which could also cover soldiers as they advanced.

A triumph of Australian strategy: the Battle of Hamel (4–5 July 1918)

The Battle of Hamel was not simply an Allied victory, but a sign that Australian forces were leaders in developing new strategies to bring the stalemate of war to a successful conclusion.

The military context of the battle

Hamel was important because it was located on a rise near Villers-Bretonneux, providing the Germans with a platform from which to shell that town. From there, they could also threaten the major city and railway line of Amiens. The British handed the task of capturing Hamel to Lieutenant General John Monash.

Monash was very much aware that the Allies desperately needed a success in battle. He would have been aware that troop morale would improve. He was also sharply aware that people on the home front in Australia were dismayed by the massive lists of casualties, which the government still allowed the newspapers to publish without any censorship. His comments show that he recognised the importance of a successful encounter:

> It was high time that the anxiety and nervousness of the public, at the sinister encroachments of the enemy upon regions which he had never previously trodden, should be allayed by a demonstration that there was still some kick left in the British Army. I was ambitious that any such kick should be administered, first, at any rate, by the Australians.

▲ **Source 4.110** John Monash, quoted in Australian War Memorial, *Hamel: The Textbook Victory – 4 July 1918*, 2019

Monash imagines a new strategy

Monash rejected the traditional, but pointless, tactic of mass infantry attacks, across open ground, against machine-gun fire. This had only led to repeated slaughters and to massive casualties, often without any ground being captured.

He developed instead the idea of combined arms, by which most of the heavy work was done by artillery fire, gas attack, aircraft attack and massed machine-gun fire, all coordinated in one attack to cover the advance of the infantry. He believed that, if the infantry was properly supported by covering fire, it could capture the fortified German position at Hamel in 90 minutes. In the event, it took just 93 minutes.

Monash was a brilliant planner with new ideas and a mastery of fine detail. He briefed every soldier in detail about the plan of attack. His stroke of genius was to recognise that supplies must go forward more quickly. Instead of using 1200 men to laboriously carry heavy supplies across no man's land, he planned to move up more quickly. He used aeroplanes to drop ammunition and medicine by parachute. This was the first time that planes had been used this way on the Western Front.

He also invented the use of fast, light tanks to rush heavier supplies, such as guns, up to the advancing troops. This was a brilliant solution to an old problem. Previously, if the infantry charged forward, it used to run out of ammunition and food quite quickly, and could not continue fighting. Now, they could advance as far as they wished, and still be assured of fresh supplies at the end of the day.

Monash also organised better communications by giving his officers wirelesses so they could report where they were and what they had captured. Under Monash's careful organisation,

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the battlefield became more like a well-oiled machine, in which his troops could function efficiently.

Monash also requested the use of 64 British tanks, but realised that the Australians were not comfortable with these machines, because in previous battles they had proved very unreliable, and got in the way when they broke down. He solved this by having the infantry and the tank crews camp together and train together. He also thought of painting a battalion's colours on the side of each tank, so that the soldiers were always clear which vehicle they should be following into battle.

Military leaders such as British Field Marshall Bernard Montgomery praised Monash as the best Allied general on the Western Front

Monash also carefully gathered a massive artillery cover for his troops. He begged from the British and the French 302 heavy cannon and 326 lighter cannon. He carefully organised that these would send off a similar barrage of shells at the same time each day, so that the day of the attack would begin much the same as any other day. He also mustered 46 heavy machine guns for the planned attack.

The implementation of the plan

Monash's plan worked superbly well. At 3 a.m. on 4 July 1918, the artillery opened fire, as they had done every morning for weeks. As usual, the Germans put on their gas masks, meaning that – as Monash intended – they could not see, communicate or aim their weapons as well. The noise of the exploding shells covered the advance of 60 tanks towards the front line. At the same time, the RAF sent a squadron to pound the German trenches with 350 heavy bombs, forcing the enemy to stay deep in their dugouts. The artillery then began a creeping barrage that moved slowly forward across the battlefield, jumping ahead a set distance every few minutes.

The Australian and American infantry now stood up and began walking across no man's land under cover of the artillery fire. Unfortunately, some shells misfired and fell short of their proper distance, and landed on Australian and American troops, killing a number of them. The troops then reached three strongpoints – the 'Pear' (shaped) Trench, the Hamel Woods and Hamel Village – and began to fight the enemy.

At the 'Pear' Trench, the attack was only partially successful, because the covering tanks had failed to arrive, and the Australians had to storm machine-gun nests using just bayonets. By the time their tanks caught up with them, the soldiers had captured the targets and were all having a smoke break. At the Hamel Woods, the tanks did their work properly, but once again victory also depended on some truly brave actions by individual soldiers who captured machine-gun nests alone. At Hamel Village, too, the 27 tanks assigned as support arrived late, and the infantry had to capture the site by a traditional attack on foot. There was heavy fighting in and near the village, but the eventual arrival of the tanks allowed the Australians and the Americans to capture the site.

Monash further confused and divided the Germans by launching a diversionary attack at nearby Ville-sur-Ancre, which made the Germans move some troops there, away from Hamel.

Outcomes of the battle

The Battle of Hamel was, by any measure, a clear victory for the Allies. All the objectives were finally captured, despite some failures by the covering tanks. It is true that a determined group of German stormtroopers counter-attacked the following day, 5 July, but they were finally fought off.

The casualty statistics were very different from those of the great slaughters of 1915 and 1916. Allied losses amounted to around 1400 Allied killed or wounded. There were 1062 Australian casualties (including 800 dead) and 176 American casualties (including between 13 and 26 killed) during the main attack and a further 142 casualties among the 15th Brigade during their diversionary assault around Ville-sur-Ancre. The Germans suffered 3600 casualties, 2000 killed and 1600 captured, along with the loss of much of their equipment.

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The attack was a demonstration that a coordinated approach, making strategic use of artillery, gas and aeroplanes, could in fact largely cover an infantry advance by keeping the enemy pinned down in the shelter of their trenches. This technique had also been used to some degree in the earlier Battle of Cambrai (1917), but this now proved the point beyond doubt, and the tactic was adopted, very successfully, in the much larger Battle of Amiens (1918). Military leaders such as British Field Marshall Bernard Montgomery praised Monash as the best Allied general on the Western Front, and even the French President, Georges Clemenceau, came to the front to praise the Australian and American troops who had achieved this military victory.

The Battle of Hamel did not, by itself, secure final victory. The German troops were clearly stunned by this new tactic, but they fought back with determination. Stormtroopers were sent in later to recapture the sites. In addition, the Germans were still able to mount a major force to strike back, as they did in the Second Battle of the Marne. What was clear, however, was that the Allies, assisted by Monash, had finally developed a technique to overcome the deadly conditions of trench warfare by careful planning to shelter the infantry from enemy fire and by concentrating suppressing fire upon them.

The Hundred Days Offensive (1918)

The Battle of Amiens (8–11 August 1918)

It was these tactics that led to the success of the Allied forces in the Battle of Amiens, which Monash planned in keeping with his new theory of war. This battle was the first major step in the great Hundred Days Offensive, which in due course led to Allied victory in the war. The results were dramatic. After years of stalemate and static warfare, the Allies advanced again, capturing an astonishing 11 kilometres of territory. The commander was the British general Henry Rawlinson (British Fourth Army), but almost half of this force was made up of Australian troops commanded by Monash and Canadian troops commanded by General Arthur Currie. This was one of the largest single advances made in the entire war. The Germans were devastated. Their general, Ludendorff, admitted that this was 'the blackest day of the German army'.

▼ **Source 4.111** As the war dragged on into 1918, both sides became desperate for new, powerful weapons. At Amiens, the Germans took a massive gun from a battleship and mounted it on a heavy railway carriage. It could be moved quickly to a battle scene, and its 28-centimetre-wide shells created devastating explosions.

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An Australian triumph: the Battle of Mont Saint-Quentin (31 August 1918)

By this stage of the war, the British commanders clearly felt that Australian troops – like their Canadian comrades – were capable of heavy and sustained fighting, and could be given some of the most difficult tasks. In the case of the heavily fortified bare hill Mont Saint-Quentin, the attack was dangerous, almost suicidal. The hill itself was only 100 metres high, but it was heavily fortified by barbed wire, and the German cannon and machine-gunners could see anything that moved on the bare slopes below. This strongpoint was also manned by a crack battalion of Prussian soldiers. It is immediately clear from Arthur Streeton's painting why this German position – in August 1918 – provided a crucial vantage point for their artillery, and why it was heavily protected with machine guns.

Monash decided to capture this crucial strongpoint of the German defences. On 31 August 1918, The Second Australian Division crossed the Somme River and attacked the stronghold. This took courage, because this division was badly down in numbers. Monash knew this would bother his troops, so he instructed them to yell loudly all the time they were attacking, to make it sound like they were twice the number.

Then a miracle occurred: as they charged the first trench, the Germans were so stunned to be attacked that they surrendered. The Australians simply instructed them to walk away to the rear, under the guard of just a few lightly injured soldiers. As the Australians charged forward from trench to trench, they seemed unstoppable. By now, hundreds of German troops were walking past the advancing soldiers to obediently surrender at the back lines.

In an extraordinary move, the Australian troops captured the site in one morning, making this one of the most outstanding achievements of the AIF in World War I. It is true that the Germans counter-attacked and recaptured the hill, but between 1 and 3 September 1918 the Australian forces retook and held the hill for good.

Germany had just lost one of the strongest points in the famous Hindenburg Line. The German High Command started to realise that they could not win the war. Here, as elsewhere, the massive rate of surrender was a terrible shock. Soldiers tend to be much quicker than generals in realising when a war is lost, and when all further fighting is pointless.

▼ **Source 4.112** Arthur Streeton, *The Attack on Mont Saint Quentin* (London, 1919. National Gallery of Victoria). This enormous battle painting by Arthur Streeton shows the Australian attack on Mont Saint-Quentin. Streeton chose his vantage point behind and above the ruined village of Feuillaucourt, looking east for a clear view of the assault on Mont St Quentin. Typically, Streeton shows a vast expanse of countryside bathed in sunlight. The devastated buildings and shredded trees of Feuillaucourt are most visible, and the advancing Australian forces are merely tiny figures in the distance.

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Amazing but true …

One of the greatest mysteries of the war is the sudden death of Baron Manfred von Richthofen, also known as the Red Baron. Germany's most effective and murderous air ace dominated the skies in his Fokker plane, which was painted blood red. His kill-rate was extraordinary. He shot down 80 Allied planes, bringing down a total of 123 airmen, of whom 79 died. Just before the end of the war, on 21 April 1918, Richthofen was flying over the Allied trenches. A British fighter plane, flown by Canadian pilot Captain Arthur Roy Brown, followed him and fired a burst of machine-gun bullets at the baron's plane. Shortly after, Richthofen flew over the Australian trenches, and one soldier, Sergeant Cedric Popkin, lifted his Vickers gun and fired at random at the plane. The plane dipped and crashed to the ground. Richthofen was found dead inside. Was it a British or Canadian pilot or the Australian soldier who brought him down?

▲ **Source 4.113** A Vickers machine gun mounted on a tripod, like the one used by Sergeant Popkin

We may never know. One clue might be that it was found the baron died of a single bullet which happened to go right through his heart, killing him immediately. Had the pilot been hit by a British machine-gun spray, we might have expected multiple bullets. Another clue is that the angle of the wound showed he had clearly been hit from below, not from a shooter at the same height. Thus, the single bullet might have come, miraculously, from a single rapid, throwaway shot by a skilled Australian gunner.

▲ **Source 4.114** Canadian pilot Captain Arthur Roy Brown in his Sopwith Camel pursuing a German Fokker triplane piloted by Baron Manfred von Richthofen, 21 April 1918

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Changes in war require a new way of writing its history

The very nature of World War I – the large number of nations involved, the numerous different fronts, the enormous number of troops participating – made it one of the most complicated wars ever. This meant that the old-fashioned way of writing history was no longer good enough. Previously, historians simply described how each battle went; now, the task was more like trying to describe an enormous, moving jigsaw puzzle. The best historians understood that they must write about war in a new way.

KEY HISTORIAN

CAPTAIN CHARLES (C.E.W.) BEAN

For Australia, one of the most significant historians was Sir Charles Bean. Soon after the outbreak of war, he was appointed official war correspondent to the Australian Imperial Forces (September 1914), and served with the rank of Captain in every area where Australian troops fought. He observed our troops under fire in Gallipoli, and then on the Western Front in Europe, with the exception of just one battle.

In so far as he was present to witness events directly, and was specifically required to keep accurate records, he is both valuable and reliable as a witness. His greatest work is his *Official History of Australia in the War of 1914–1918*.

Bean's new style of history was not just detailed, it was much more careful and analytical. He realised that modern warfare is very fast-moving and therefore confusing. In particular, communication is difficult, so there are misunderstandings between the troops at the front and other forces, such as the air force and artillery backup. He saw how, in some cases, a simple mistake of a few minutes in the timing of an artillery bombardment allowed the enemy to recover and be ready to kill thousands of our troops.

He also realised that there was a serious problem in gathering evidence from troops who only saw a small part of the larger battlefield. He could certainly interview men about what they had seen, but their view might be limited, or simply wrong. If the men were still in shock from violent fighting, or actually shell-shocked by the impact of high explosive, their evidence was even more doubtful. In essence, Bean turned History from being an act of recording to an act of investigation and careful analysis.

◄ **Source 4.115** Charles Bean (front row, right) as a war correspondent in France, 1916

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.6

Cause and effect

Create a timeline of Australia's involvement in World War I. Be sure to include dates and place names, and images to go with your work.

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Additional content
See the digital versions of this book for weblinks for this research task.

ACTIVITY 4.12

Research task

1 Briefly describe Albert Jacka's family background and education.
2 Investigate the dangerous conditions that Australian soldiers faced at Anzac Cove during the Gallipoli campaign (1915). What did Jacka do to win the first Victoria Cross ever awarded to Australian forces in World War I?
3 Investigate the Battle of Pozières on the Western Front (France). Explain why this was one of the most dangerous, and bloodiest, battles fought by Australian troops.
4 Investigate the savage debate over conscription that erupted in Australia during World War I. How was Jacka's name and fame misused during this debate?
5 Investigate how Australia's great war historian, Charles Bean, described Jacka's style of leadership. Why did his men admire him? Why did his superiors dislike him?
6 Investigate Jacka's leadership skills, and explain why an ordinary working man could rise so quickly to become an officer.
7 Investigate the early controversy about the award of the VC to Jacka. Why have some thought that this might have been caused by British snobbery towards Australians? What have historians found to be the true cause of this initial refusal?
8 Why did Jacka finally have to leave the Western Front in 1918?
9 How was Jacka greeted upon his arrival back in Australia?
10 Although Jacka is still described as 'Australia's greatest front-line soldier' for his bravery in battle, historians do know that he did on occasion make mistakes. Does this in your opinion decrease his standing as a national hero?

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 4.4

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 When and why did Australia fire the first shot in World War I?
2 What were the conditions at Gallipoli that made it so dangerous to Allied troops?
3 How did the Australian Light Horsemen capture the heavily fortified town of Beersheba?
4 Why is the Battle of Fromelles remembered as the most wasteful and tragic episode in Australian military history?

Interpret

5 What were the two main reasons that made Sir John Monash feel that it was urgent to achieve some victories in the late stages of the war?
6 Explain why the Battle of Mont Saint-Quentin was so important to eventual Allied victory in 1918.

Argue

7 Explain how historian Charles Bean developed a new and more effective way of writing about the experience of war.
8 Explain how one famous painter, photographer or writer used his or her skills to go to the front and record the experiences of soldiers in the trenches.

Extension

1 Investigate the military career of Sir John Monash, and decide whether he deserves to be seen as a general who had the creativity and inventiveness to better organise his troops for battle.

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4.5 Sisters in arms: how women contributed to the war effort

FOCUS QUESTION

How did Australian women contribute to Australia's war effort?

Historians uncover the true role of women in conflict

Traditionally, the writing of the history of any major event, such as war, had a serious blind spot: the role of women is forgotten or seriously underestimated. This is partly due to a careless assumption that the great public events of any time are driven mainly by men, while women stay at home, in what is known as the private sphere, and play no role. Historians now know that we cannot afford to write half history: a history of just 50 per cent of the population is no real history at all.

New histories discover the real roles of women

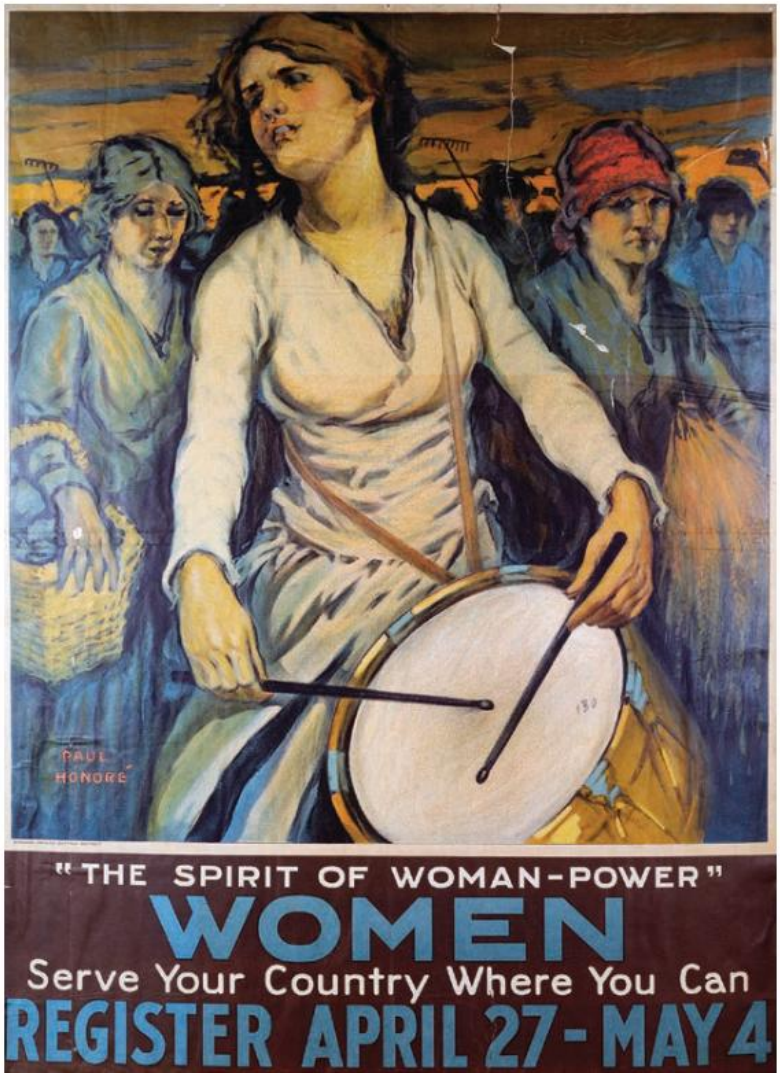
Women in 1914–18 were often restricted by the societal beliefs from the period about what they were capable of doing. This does not mean that they did nothing. The important discipline of Women's History uncovers stories of what women really experienced and did. Feminist History also analyses the power relationships between men and women. These two disciplines have helped uncover how much women really did in the Great War, despite not being allowed to fight. These new histories do not aim to underplay the role of men. Instead, they want to do justice to the often neglected or forgotten roles of women.

To illustrate this point, do some research of your own. Australian women served as nurses from 1914 to 1918. How many years was it before there was a memorial monument created in Canberra to recognise their service? When you have your answer, you will understand about the silences of History.

The contribution of women in Britain

It is only when historians start investigating women's roles in war that we realise their enormous contribution to the war effort. The statistics speak for themselves.

▼ **Source 4.116** This poster by Paul Honoré was published in America to encourage women to enlist for auxiliary services and labouring jobs on the home front. His wording is interesting because his reference to 'woman-power' anticipates later feminist ideals.



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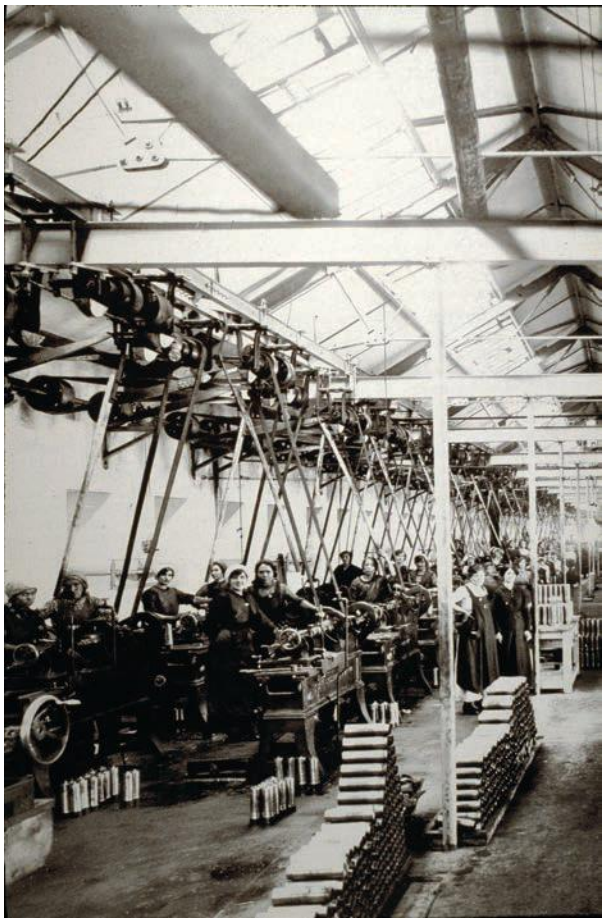

▲ **Source 4.117 (Left)** Women working in a munitions factory. **(Right)** British poster 'Women are working day and night to win the war'.

Women keep up the supply of weapons to the front

In Britain, because many men went to the front, women's employment in the transport industry increased 555 per cent. These women did equal work, but were paid 50 per cent of men's wages. They also went into weapons factories, and by 1917 were producing 80 per cent of the weapons being made for the army. Other women entered the more dangerous shell factories, handling the poisonous explosive TNT without protection. In time, this chemical turned their skin bright yellow. These women were referred to as 'the canary girls'. Handling a live artillery shell required great concentration, because any mistake could cause a massive explosion. At the Chilwell factory, just one careless mistake caused an explosion that flattened the entire building and killed 134 workers. As a result of women's work, the vital supply of weapons and shells to the soldiers in the field was maintained.[20]

British women prevent the nation from starvation

By 1915, Germany was trying a new and deadly tactic: using its submarines to sink ships bringing supplies to Britain, hoping to cause the country to starve. By 1917, Britain had only three weeks of food supplies left. Once again, some 200 000 British women stepped in to the new Women's Land Army. Women who were used to a comfortable city life now learned how to milk cows, plough a field (without a tractor) and harvest a crop of wheat.

Women keep the British Government running

Another 200 000 women took up positions in the British Government, and proved to be very capable administrators. Women also joined the secret Women's Defence Relief Corps, and learned to march and use firearms. Initially, this was intended to be a sort of Home Guard, but

20 Do you want to find out more about women working to create weapons for the front line? Read April Madden (ed.), *The Story of the First World War*, 2018.

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then it was realised that these women were perfectly competent to teach men how to shoot military weapons. These women all discovered that they could do a man's job perfectly well, surprising their male employers and making some of them very uncomfortable.[21]

The military service of Australian women

In Australia, women made a massive contribution to the war effort. Their most obvious contribution to war was in the active service of nursing. Australian women could enlist as nurses, providing they were not married; once they married, they had to resign. Women volunteered to serve because they knew the troops would need nurses and doctors. Nurse Evelyn Davies stated:

> I feel that now I have the opportunity, I ought to go. Nurses are badly needed, goodness knows, and someone must do it. I want to do the right thing.

▲ **Source 4.118** Department of Veterans' Affairs, *Gallipoli and the Anzacs: A Resource for Secondary Schools*, 2010, p. 13

Australian nurses at Gallipoli

They did not all work safely behind the lines, far from the fighting. At Gallipoli, these women worked so close to the action that they came under direct enemy fire. They continued calmly tending to their patients as enemy shells fell around them. Some of the hospital ships at Gallipoli were so close to shore that they came under Turkish fire. Nurse Daisy Richmond, on the ship *Neuralia*, recalled the moment she narrowly missed a Turkish bullet:

> We were well under fire, many bullets coming on the decks. I was speaking to one boy, moved away to another patient when a bullet hit him and lodged in his thigh. It just missed.

▲ **Source 4.119** Nurse Daisy Richmond, quoted in R. Reid, *Gallipoli*, 2014, p. 20

These nurses realised the real tragedy of Gallipoli: there were not enough doctors, nurses or even beds for the hundreds of wounded men brought daily from Anzac Cove to the hospital ships. The most seriously wounded men were lifted aboard in special wooden trays. Once aboard, patients were examined and sorted according to the severity of their injuries. Australian nurses also worked in the Third Australian General Hospital on the Greek island of Lemnos.

Nurses provided psychological help

Historian Janet Butler has explored more deeply how the nurses assisted their patients. Most obvious was their provision of medical care with a cool, calm professional attitude. Equally importantly, they offered a particular sort of friendship, both with each other and with their patients. Friendship between nurses helped them deal with the heavy workloads and the distressing scenes of suffering. But the nurses also offered a special friendship to their patients. The men felt free to tell the nurses about their fears, which they could not confide to their mates in the field, and about their sufferings, which they preferred not to share with their families at home.

▲ **Source 4.120** An artist's representation of an Australian nurse

21 Learn more about women in government during World War I by reading April Madden (ed.), *The Story of the First World War*, 2018.

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Additional content
Access the digital versions of this textbook to read the following additional content:
Uncovering the untold stories of the Anzac Girls.

Personal accounts of difficulty and trauma

Historians have recently examined the primary sources of these nurses' diaries and letters to uncover some startling insights into what these young women, fresh from peaceful homes in Australia, suffered when exposed to the violence of a murderous war. Butler points out that we naturally tend to focus on the trauma, the shell shock and the post-traumatic stress disorder of the soldiers themselves. Nobody checked how the nurses were coping, because they were not the ones wounded. Worse, in 1914–18, nobody even understood the shell shock of the men, and the term 'post-traumatic stress disorder' had not even been heard of.

The story of Kit McNaughton, nurse, 1915–18

The story of Kit McNaughton, who served as a nurse from July 1915, first at Gallipoli then at the Western Front, is just one of many of a young woman exposed to unimaginable horrors. On one occasion, she tended an injured German soldier. She had mixed feelings about doing so. Her thinking changed when she saw that his chest was blown open; she could actually see his beating heart. Despite her care, the young man died.

Women defy the military ban to serve as doctors in the Great War

Equally remarkable is the story of Australian women who went to the Western Front to serve as doctors. Historians Heather Sheard and Ruth Lee have uncovered the story of the 24 female doctors who disobeyed official military policy and went to war as surgeons and medical officers. Typical of them was Dr Helen Sexton, who went to France and opened her own hospital – the Australian Hospital in Paris – in July 1915. The French military was rather more encouraging than the Australian military, and gave her an elegant mansion near the Auteuil Racecourse capable of holding 21 beds.

Additional content
Access the digital versions of this textbook to read the following additional content:
The significance of Australia's munitions production.

She quickly had to accustom herself to the truly terrible wounds caused by the high-powered weapons developed during the war. More importantly, she was able to use her schoolgirl French to question her patients about what had happened to them. She carefully noted their stories, such as that of a young French-Tunisian soldier who had been hit by shrapnel during the Battle of Ypres. Unable to stand, he painfully inched his way backwards for four kilometres by using his elbows to 'walk' instead of his legs. Almost dying of thirst, he crawled under a cow to take some milk, but was only kicked in the head. The authors point out that the very existence of these women, and their brave service, is hardly recognised in any military records.[22]

Women as industrial workers: the munitions girls

The second important role of Australian women was as industrial workers, when they stepped in to fill the jobs in factories when men volunteered for the front. They had to learn manufacturing techniques unfamiliar to them, to work extremely long hours and in dangerous conditions requiring enormous concentration and care.

These women joined an enormous industry that is little known to modern Australians. It was centred in the western Melbourne suburb of Maribyrnong. This was the heart of a great industrial complex, producing vital uniforms, small arms, bullets and artillery shells. It was known as 'the Arsenal of Australia', and functioned from 1910 until the 1980s. The women who worked here were not just temporarily helping out until the boys came home, but were the industrial workers who helped establish Australia's national war industry.[23]

Women enter the national debate on conscription

Women also contributed their intellect and their voices to the public debate that erupted in Australia regarding the war and, specifically, the government's proposal to introduce conscription (calling up men for the army). Contrary to common belief, women proved that they could think politically and campaign energetically in the

22 Do you want to learn more about female doctors in World War I? Read Heather Sheard and Ruth Lee, *Women to the Front: The Extraordianry Australian Women Doctors of the Great War*, 2019.

23 Some of these buildings have disappeared due to a massive fire in February 2018.

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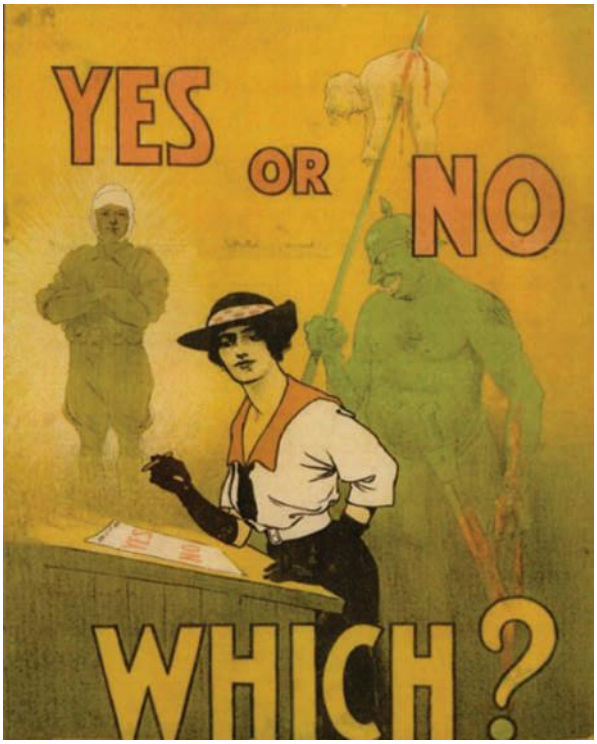
public sphere. Some women spoke passionately at public rallies in favour of conscription, only to be shouted down by returned soldiers, who argued that no man should be made to experience what they had experienced in the trenches. Other women spoke forcefully against conscription, only to be shouted down as cowards and traitors who would not allow the government to send men who were desperately needed.



▲ **Source 4.121** A conscription debate poster aimed at women

Vida Goldstein

One of the most remarkable voices was that of Vida Goldstein, who was a passionate campaigner for women's rights and a convinced pacifist (opponent of war). She campaigned to serve in parliament, and stated her ambition to be prime minister. She became chairperson of the Peace Alliance, and in 1915 formed the Women's Peace Army. She was the most eloquent voice against conscription.

Dora Meeson: artist, feminist, women's war activist

The women mentioned above all tried to play their part by working within the official structures of nursing and manufacturing. It is much more difficult to find records of the activities of women who worked on a private level, often going against the government by criticising it. These activists played an important role, and their actions deserve to be recognised.

Dora Meeson and her husband were also political activists, supporting the ideas of the Suffragettes, who were demanding that women in Britain have the right to vote. She painted the union banner for the great Suffrage March of 1908 in London. Her husband marched with her. He was of a like mind, politically, to her. Meeson wrote:

> George and I both threw ourselves heart and soul into the suffrage movement … he was keen on fair play and believed in granting the same facilities to women as to men to further their natural abilities, and he had the very human wish to support anything that would improve the condition of the masses.

▲ **Source 4.122** Richard Haese, 'Meeson, Dora (1869–1955)', *Australian Dictionary of Biography*, 1981, p. 50

Meeson was also an activist for women's rights, and a great suffragette. She was in charge of the London Branch of the Australian and New Zealand Voters' Committee.

Meeson was an independent person, refusing to be limited by social traditions. For example, she used to go out painting among the working men of the Thames riverside. It was during her explorations into the London docklands that she got to know the poor working-class families of the area. After the declaration of war in 1914, she was more aware than most people of the real economic difficulty that these poor families almost immediately suffered once the male wage earner was gone, whether he was still on active service or reported killed in battle.

When the Great War broke out, she realised that the conflict caused serious hardship for the women left behind in Britain. She noticed that many women and children were being left in poverty by the departure of their menfolk to the front, especially when government payments took months to come through. Accordingly, Meeson worked to help establish the Women's Police Volunteers, which attempted to help women who were often so desperate that they were forced into prostitution. These volunteers were, on the whole, educated middle-class women who used their greater resources and agency to assist Belgian refugees, and British women of working-class families.

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ACTIVITY 4.13

Using historical sources as evidence

Responding to the source

Dora Meeson's painting reminds us that war forces women to endure separation and to take over full management of the home front.

Focus: what are the meanings that are written into this painting?

1 Dora Meeson's painting avoids making the soldier a hero. She places his departure for war in the setting of the family as a whole. How does her painting remind us that war affects all members of society in some way? How might you predict that the various members of this family might be affected by the soldier's absence?

2 How does Dora Meeson remind us that the experience of separation – and of managing at home – has traditionally been a significant part of women's role over the generations?

Focus: how does this primary source fit into the context of World War I?

3 When this soldier was departing for the front in 1916, the situation was quite different from the hopeful, optimistic conditions of 1914. What was the nature of the war to which this man knew he was going?

▲ **Source 4.123** Dora Meeson, *Leaving for the Front*, 1916

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 4.5

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What are the aims of Women's History and Feminist History?
2 What was the Women's Defence Relief Force (Britain)?
3 Explain why British women's farm work was crucial to Britain's war effort.
4 How important was the work of women in the munitions industries in Britain and Australia?

Interpret

5 How does the story of the 24 Australian female doctors who went to the front illustrate the prejudices against women at this time, and how does it demonstrate their strategies to overcome them?
6 What does the story of the nurses' memorial (Canberra, 1999) illustrate about the problems of commemorating women's contribution to the war effort?

Argue

7 Explain the nature of sexist prejudices against women in the workplace, and evaluate the degree to which the war created new opportunities, skills and extra income for women in Britain and Australia.

Extension

1 Investigate the career of political activist and artist Dora Meeson, and explain how she helped British women campaign for the vote.

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4.6 How World War I created the idea of the home front

FOCUS QUESTION

What was the impact of World War I on Australia? Was it 'the war that changed us'?

Modern warfare produces the idea of the home front

Traditionally, military history focused on battles, commanders, weapons and tactics. The front was simply the battlefield: soldiers left home, went to a distant country to fight, then returned. The home country was not usually affected by distant wars. (There were some exceptions to the rule. In the American Civil War, for example, both sides attacked towns held by enemy forces.) World War I changed that because it drew entire civilian populations into the vast war effort. It also directly threatened their safety, even in their own homes.

More recently, military history has tried to look more broadly to appreciate the experience of millions of other Australians who did not *go* to war but who nonetheless were unavoidably *part* of the war. This is known as the home front, involving the experiences of civilian men, women and children.

Historian Mark McAndrew explains that, previously, wars were smaller in scale, involving smaller armies. World War I, however, was massive and forced governments to introduce new controls over their people to be able to win the war. In democratic countries, governments passed laws giving themselves complete power to control politics, information and especially production of food and industrial goods.[24] As the war dragged on, politicians and generals saw victory as worth any sacrifice of rights and freedoms.

Governments sought to control the flow of information to the public by censorship (blocking) of documents on sensitive issues, either by banning their publication or by removing some information. In the trenches, soldiers' letters home were opened, read and censored of any information that could help the enemy.

Governments also introduced new measures to recruit more troops and to stamp out expressions of public opinion opposing the war. In 1914, public opinion in most countries was strongly for the war, either through patriotism or a sense of adventure. By 1916, the endless battles and massive casualty rates had made people more negative. In this mood, some insisted that the war should be continued, while others criticised it.

Governments had to ensure that economic production (production of goods and services) was massively increased. Every man who joined the army ceased work and production on the farm or in the factory, but still needed to be fed and clothed to the standard expected of the army. It was vital to ensure that food production was increased to guarantee that the troops were fed. Industry was also placed under massive strain to produce uniforms, guns, ships and, most especially, millions of bullets and shells. The Great War, it was said, would be won or lost on the factory floor.

Governments also limited food consumption by civilians at home to be able to redirect more food to the troops. This involved rationing (limiting food per person). This shocked people unused to food shortages and led some people to sell food illegally at high prices on the black market. In Canada, for example, the government was forced to make food hoarding illegal (see Source 4.124).

24 To learn more about how governments handled World War I on the home front, read Mark McAndrew et al., *The Great War and its Aftermath, 1914–1921*, 2001.

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▲ **Source 4.124** This Canadian poster shows that the government had enacted laws to prevent both black market sales and hoarding of food, and also that people were breaking these laws. Apart from the legal threat represented by the passing policeman, the poster appeals to Canadian loyalty to stop the cheating.

▲ **Source 4.125** The British Empire Union was an organisation formed to warn British people of the danger of German spies. Examine the image carefully, and make a list of the hostile acts that Germans were accused of committing.

Finally, governments took security measures against their own citizens of foreign origin, declaring them enemies. The possibility of spying for military information, or even sabotage (destroying military equipment), was very real. In Britain, the pressures of war created anti-German hysteria, as expressed in this poster by the British Empire Union (Source 4.125).

McAndrew concludes with an interesting point: the amount of government control was not equal in every country. Government control was greatest in countries that were close to the battle front (France, Germany) but more relaxed in countries that were far from the fighting (Australia, United States). Between these extremes, Britain certainly took some measures of war control but, being protected by the English Channel, was not as strict about them.

The home front in Australia

Historian Craig Wilcox argues:

> War was something that damaged other people, far away in time and place. No one was ready for the political and economic demands of global and industrial society, one fought by mass armies and mighty navies, where men would be killed by poison gas and children starved by blockade, where the enemy never came close to Australia but nonetheless threatened the heart of empire. No one expected that while their volunteers went to Gallipoli then to France, their families would also be called upon to wage war on the home front.

▲ **Source 4.126** Craig Wilcox, *Home Front*, 2011, p. 7

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Australia passes wartime laws

The Australian home front was scarred by one very cruel, and unnecessary, injustice: the internment in prison camps of citizens now branded as aliens because their place of birth was an enemy country. This applied especially to Australians of German descent.

This seemed a logical precaution then, but now it appears unjust. First, it was actually unnecessary. Not a single hostile act by a German Australian was ever discovered. Second, these innocent people were subjected to harsh mistreatment. One man with a 'German' accent was imprisoned, but he actually came from the neutral country of Sweden.

In Australia, the Labor government of Prime Minister Andrew Fisher passed the *War Precautions Act 1914* giving the authorities unlimited powers for security measures. The government could instruct newspapers to alter or to remove stories. Armed soldiers arrested some 7000 people – mainly Germans and Austrians – and detained them in rough wooden huts behind barbed wire.

Dignity and strength under oppression

As Australians proud of our history and our democracy, we must regret the harsh treatment of innocent Australian civilians who became 'aliens' and 'enemies' in their own country.

The home front: the fine art of persuasion/propaganda

Propaganda is the art of persuasion. In war, propaganda is designed to hide any problems, to discourage any criticism, to keep morale high, to persuade men and women to volunteer for service, and to encourage civilians to work hard to support the war effort. Propaganda is often commissioned by the government, so it is really the government speaking to its people about the war.

Recruiting

War always produces casualties, but nobody could have predicted how very many there would be. Out of its small population of five million, Australia lost 700 000 men.

The home front: loss and grief

The most emotionally intense aspect of life on the home front was, of course, news of the war and of loved ones. A steady flow of letters from a husband, brother or son was reassuring, although these could scarcely describe the full horror of what he experienced.

The stopping of letters caused great anxiety among families. Relatives also dreaded the arrival of an official telegram, bringing bad news of a man wounded, lost in action, captured or killed. Many Australian women described the

▼ **Source 4.127** A group of German prisoners of war playing zithers and guitars in their national dress, Berrima Concentration Camp, New South Wales, circa 1916

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terrible fear of seeing a post-boy approaching the front door.

The Australian Government did not hide the losses. Casualty lists were published in the newspapers, revealing the terrible cost of the war in human lives.

Bruce Scates has written:

> The Great War cast a shadow across Australia. Of some 330,000 Australians who served overseas, over 60,000 died. Around one in four families suffered the loss of a husband or son. Those who have been called the 'secondary bereaved', those who mourned a cousin, uncle or friend, widened the … grief even further. In Ken Inglis' estimate every second Australian family suffered a loss from the war.

▲ **Source 4.128** Bruce Scates, 'Bereavement and Mourning (Australia)', *International Encyclopedia of the First World War*, 2016, p. 1

The home front in Britain

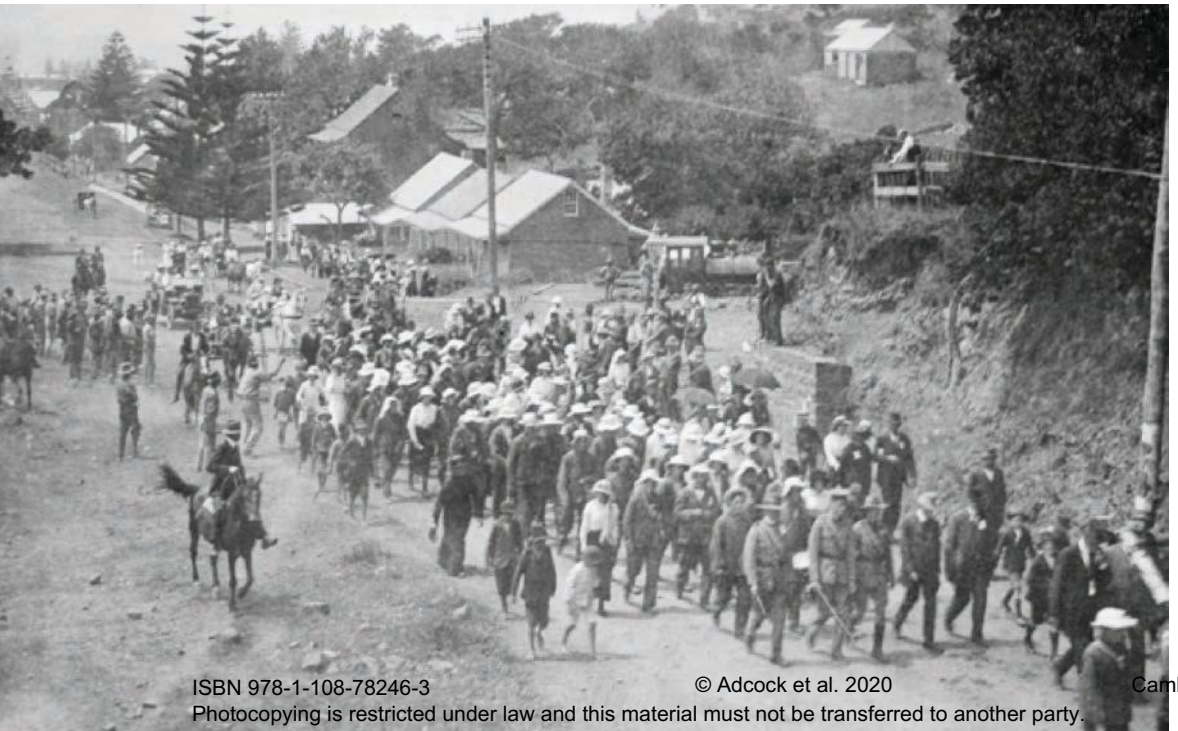
While Australia was far from the fighting in Europe and the Middle East, the home front in Britain and France was much closer and more dangerous. There, towns and civilians came under attack in what is known as total war, meaning that an enemy army would even attack unarmed civilians not involved in the fighting.

Zeppelin raids on British cities

It was the German navy that first adopted the technology of the Zeppelin (large hot-air balloons) to create its Airship Division to conduct the first air raids on Allied towns behind the front line. The first attack in history occurred at Great Yarmouth in England on 9 January 1915. There, the citizens awoke to see a vast 250-metre motor-driven balloon hovering right over their rooftops, and then suffered a rain of high-explosive bombs that killed local people in the streets. More attacks followed, and during 1915–16 there was little protection available to stop these bombing raids.

By May 1915, German commanders were able to steer their huge craft all the way to London. On 8 September, the commanders were given permission to set the centre of London alight with bombs. One Zeppelin attacked London from a height of 4000 metres, dropping 15 bombs that first created massive explosions, and then scattered small incendiary bombs to cause fires in buildings. London was completely defenceless. The anti-aircraft guns could not reach the Zeppelin at that height. Some RAF planes did attempt to shoot down the Zeppelin, but its commander simply took it higher, to 6600 feet, where the planes could not follow.

Some 660 pounds of bombs had been dropped on the city, setting whole suburbs alight, killing 22 defenceless civilians and wounding 87 others. In all, more than 500 people in Britain were killed in these air raids. One entire busload of people was killed by one bomb. For Londoners, the psychological impact was truly terrible. They felt completely vulnerable, and some even felt that the end of the world had come.



◄ **Source 4.129** This recruiting was done by a group called the Coo-ees, who walked through New South Wales to Sydney, recruiting on average one man per kilometre they walked. According to historian Keith Hancock, these volunteers felt greater love of Britain than of their country Australia and many called themselves 'independent Australian Britons'.

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▲ **Source 4.130** This 1915 poster by British artist Frank Brangwyn expresses the anger and helplessness of British people when subjected to their first experience of war coming to the home front. These raids never created the casualties caused by attacks in World War II, but they were the first time that civilians in British cities realised that they were no longer safe on their island nation.

▲ **Source 4.131** This poster by Fritz Erler was commissioned by the German army in about 1917 to help persuade German people to support the war effort generally and specifically by buying government war bonds to finance the war. Erler shows a young, alert soldier, his eyes burning with courage and patriotism, looking out at the enemy. He is begging, 'Help us fight!'

The home front in Germany

The German Government used propaganda intensively to control public opinion. The Supreme Army Command was quick to employ artists, such as Fritz Erler, to produce powerful posters to form public opinion.

The home front in Germany was also characterised by very strict censorship (government control) of information. Officials proudly proclaimed every victory but carefully silenced reports of any defeat. For example, the devastating list of German deaths in the Battle of the Marne was never published, and the military disaster remained a deep secret. Even relatively minor setbacks were covered up with 'fake news'.

An English woman, Ethel Cooper, who lived in Germany during the war, was able to uncover one example of this falsification:

> We had an excitement here on Thursday at midday when the great Leipzig airship sheds were blown up. Till last night no (news)paper in Germany mentioned it. Then came an official report from [the government] that owing to an accumulation of snow on the roof it had fallen in, pulling down the walls and injuring thirty workmen who were having their lunch in the shed! Now those sheds were of solid concrete, and though there is a lot of snow lying about, yet it has neither broken down the roofs and walls of other buildings … not even my little summer house. Do they really expect people to believe such things when they print them officially?

▲ **Source 4.132** Susan Johnston, *Experiences of the Great War, 1914–1918: A Documentary Resource Book for Senior Students*, 1987, p. 245

This tactic finally proved very dangerous. In 1918, Germany's great attack faltered and the Allies successfully counter-attacked. The German Government hid the defeats and falsely published reports of continued victories. This meant that when the armistice was signed, most German people were shocked because they had been led to believe that Germany was still winning. Their anger and resentment were enormous, and would provide fuel for rumours of a 'stab in the back' by hidden enemies. In later years, Adolf Hitler, in particular, would use this myth very effectively to appeal to the German people.

Additional content
Access the digital versions of this textbook to read the following additional content:
Postcard propaganda: Putting the best spin on the war.

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Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 4.6

Review questions

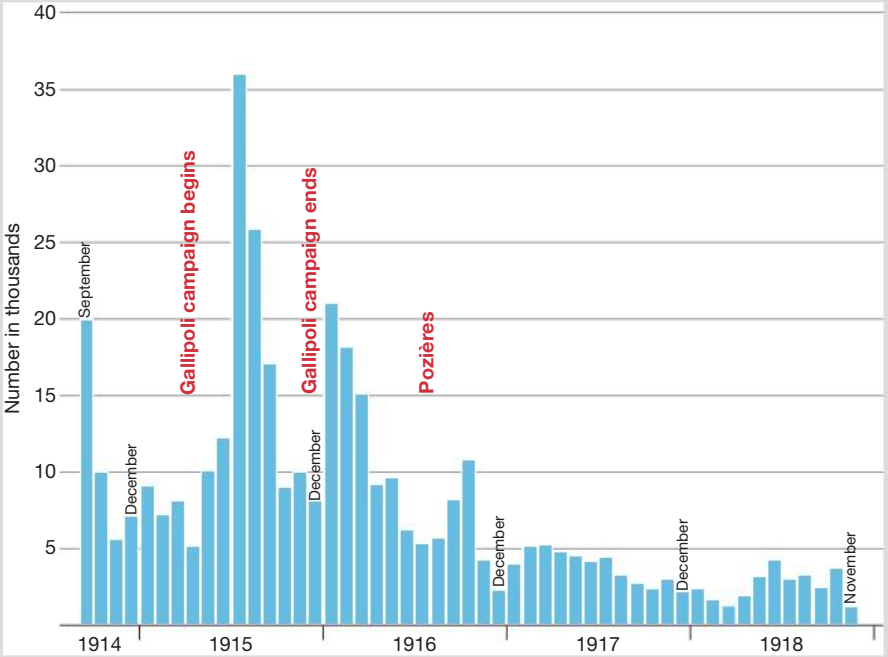
Answer these questions on paper or in the Interactive Textbook.

Recall

1 In what ways were governments forced to exercise more control over their people during World War I?
2 How did the invention of the Zeppelin increase the threat to civilians on the home front?
3 What proportion of families in Australia was affected by the casualties of war?
4 Why was the experience of the loss of a loved one particularly difficult to bear in World War I?

Interpret

5 To what extent can it be said that World War I 'invented' the idea of the home front?
6 According to the graph in Source 4.133 of Australian enlistments in the war, which campaign inspired the greatest rise in enlistments?



▲ **Source 4.133** The monthly total of enlistments during the war from September 1914 to November 1918. Note the peaks and troughs, and the gradual decline in numbers.

Argue

7 Explain why the efforts of people on the home front were arguably crucial to eventual Allied victory in the war.

Extension

1 Read the additional content: 'Postcard propaganda: Putting the best spin on the war' in the Interactive Textbook. To what extent were official war postcards more a form of propaganda than communication?
2 Investigate the experiences of the 7000 people who were suddenly declared to be 'enemy aliens' and imprisoned. Describe the conditions they endured, and then conduct an argument as to whether Australia's treatment of them was a regrettable necessity or a tragic and cruel overreaction.

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4.7 Debates about World War I and its commemoration

FOCUS QUESTIONS

- Why do we commemorate wars? *Should* we commemorate wars?
- What is the most appropriate way of honouring and remembering those who have served our nation?
- What is 'the Anzac Myth'?

Our History course asks us to study '*different* historical interpretations and *contested debates* about World War I and the significance of Australian commemorations of the war'. You may wonder *how* Australians could possibly have different views of the commemoration of World War I. For example, there is absolutely no doubt that Australia made a very significant contribution to the Allied war effort, far out of proportion to its relatively small population. There is also no doubt that our troops fought bravely in the same horrific conditions of modern warfare that our other Allies also suffered. Finally, there can be no debate about the quality of their service and their achievement, because Australian forces really did perform impressively in the tasks assigned to them. It properly falls to us, the present generations, to make ourselves aware of what they suffered and to acknowledge how very much they achieved. What, then, is there left to debate?

Having survived the war …

How did men and women feel when the guns finally fell silent on 11 November 1918? Was there wild cheering, relief and excitement to be going home?

Perhaps. Curiously, though, many men were actually quite subdued. For example, the veterans

▼ **Source 4.134** Poppies projected onto the Sydney Opera House on Remembrance Day, 11 November 2017

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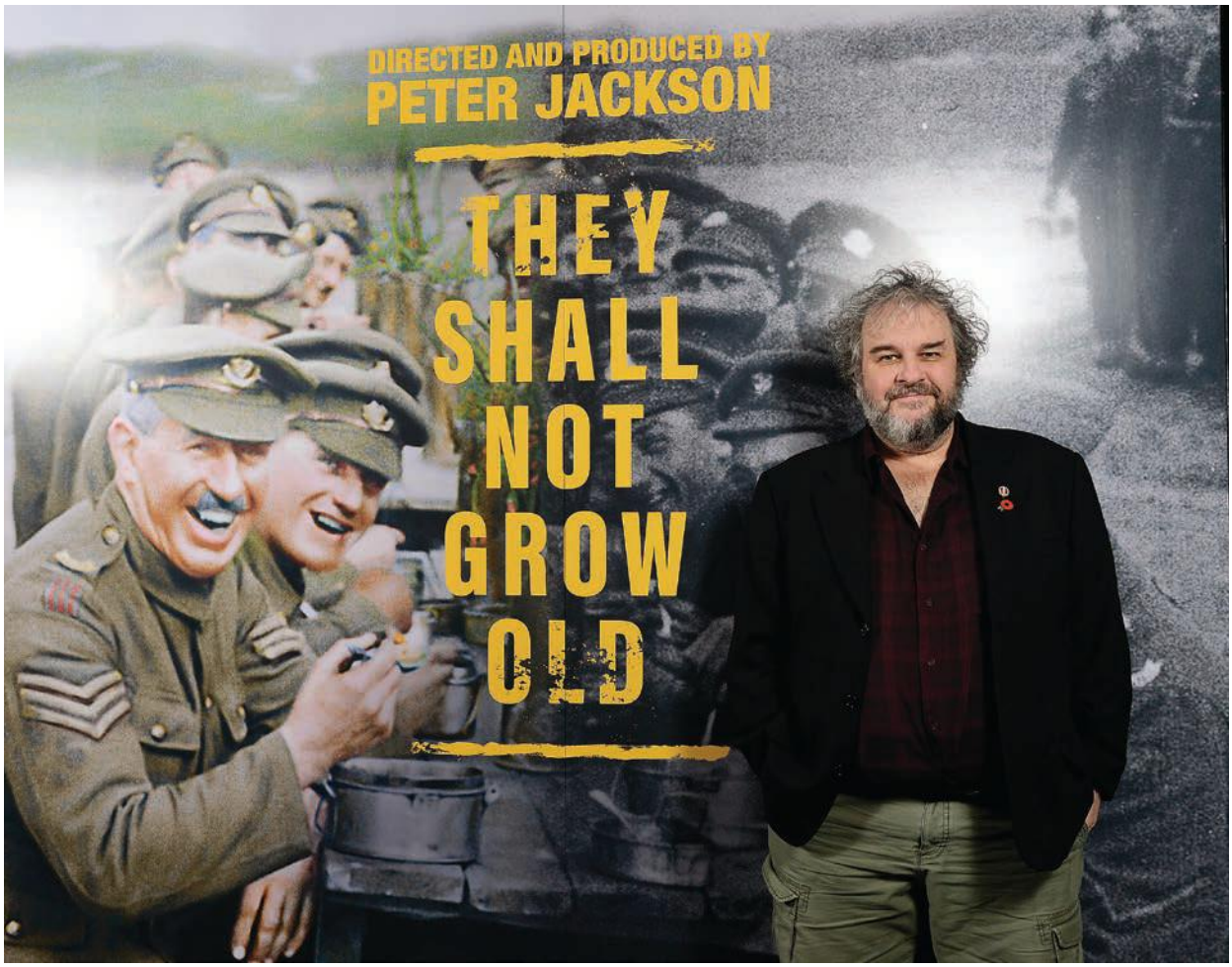

▲ **Source 4.135** Peter Jackson's *They Shall Not Grow Old*, 2018

interviewed in the film *They Shall Not Grow Old* noted that people were very quiet, almost gloomy. One reason for this is that they had actually enjoyed the life in the services. More than one admitted that, despite all the horror and danger, the war had been one vast, exciting adventure. Another soldier said that it had been like playing a glorious game. Others had enjoyed the mateship of fighting together. Others admitted that they simply wondered what they were going to do in life now. They had nothing planned; the war had seemed set to go on forever.

Going home

To properly understand what these men and women went through, we need to trace the last part of their story: going home. This should have been a relief and a pleasure, but often it was not. German soldier and writer Erich Maria Remarque was deeply distressed when he went home, because he found that civilian life had been carrying on much as normal, and that people had absolutely no idea of what he had been through at the front. The British soldiers interviewed in *They Shall Not Grow Old* told heartbreaking stories about how, when they tried to express what they had been through, people just did not want to know. In Britain, there were no jobs available, and businesses put up signs saying 'No veterans need apply'.

The soldiers had assumed that they would at least be recognised for serving their country. They were now devastated to discover that nobody even wanted to talk about the war. Nobody was interested, and everyone just wanted to get on with life. The decade of the Roaring Twenties was, for some, one in which people enjoyed life and forgot the war altogether. These men therefore bottled up their dark memories and lived with them, hauntingly, for the rest of their lives.

We learn from this that Australians have a duty to acknowledge those who serve.

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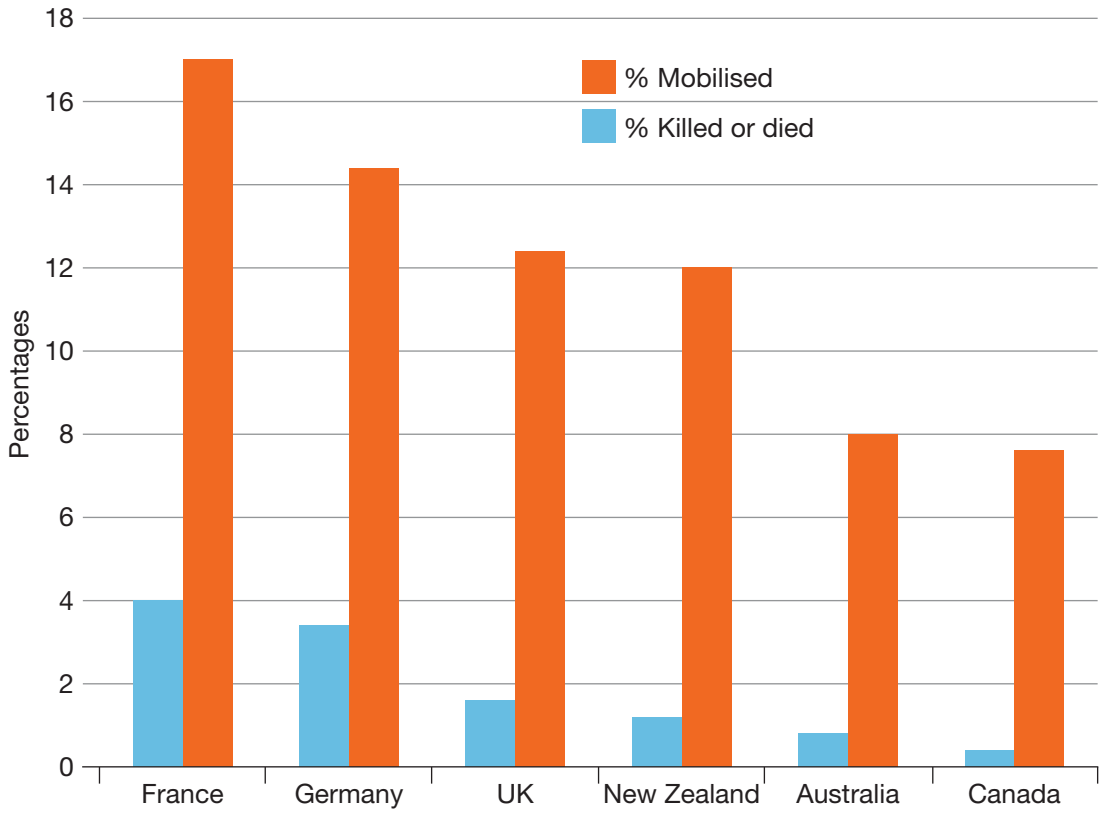
What was the final cost of the war?



▲ **Source 4.136** Comparative percentages of troops mobilised and troop deaths across six key nations

Does commemoration mean glorification of war?

Many Australians are, however, rightly cautious about commemorating a war, because they fear that this could so easily slip over into *glorifying* war. Glorification of war is anything that suggests that war is good, heroic, adventurous or a good experience for a nation to have. These ideas are indeed potentially dangerous, because they might make a nation more willing to use armed force rather than diplomacy and negotiation.

More importantly, those who have served would want us to tell the truth about the war. The artist Will Dyson, for example, was a patriotic Australian who greatly admired our soldiers and their achievements. Having exposed himself to danger by sketching at the front line, he was one of the best informed about the truly terrible nature of this war. He wrote to Charles Bean: 'I'll never draw a line to show war except as the filthy business it is' (Will Dyson, quoted in Ross McMullin, *Will Dyson: Australia's Radical Genius*, 2006).

What does Anzac Day mean to Australians?

It is a curious fact that Anzac Day has not always been as intensively celebrated as it is today. During the 1960s, for example, when the anti-war movement reached its peak in response to the Vietnam War, peace activists often stated that Anzac Day commemorations were just a glorification of war and of militarism.

In recent years, however, commemoration of Anzac Day, and of Australia's experience in war, has enjoyed enormous popularity. It is unusual that, the further we get away from the event, the more it has become deeply meaningful to many Australian people. Far from forgetting the event – as human memory tends to do with time – we now feel deeply moved by this commemoration.

Anzac Day is a good moment to pause and reflect why we commemorate this event and how we can best do so. More than anything else, we are paying a debt of gratitude to young men and women who voluntarily went to war. This is in no way a

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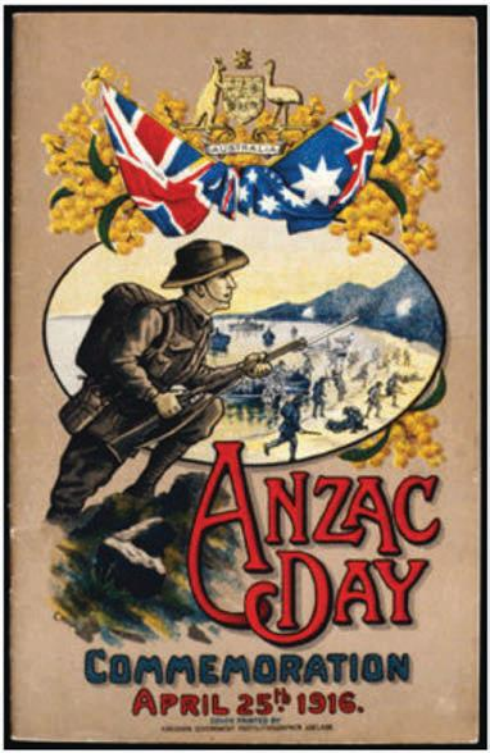

▲ **Source 4.137** Poster of the first Anzac Day, 1916

glorification of war itself, nor praise of the spirit of militarism. Quite the opposite, we are being asked to look directly at the horror of war and draw lessons from it.

Military historian Peter Dennis states:

> Anzac Day commemorates the landing at Gallipoli of Australian forces on that day in 1915; it is the day on which Australians remember the nation's war dead and all those who have served and suffered in war; and it is also the day on which Australians remember what it is to be Australian. It is a day of both solemn ritual and boisterous celebration.

▲ **Source 4.138** Peter Dennis, *The Oxford Companion to Australian Military History*, 2008, pp. 32–7

Commemoration is not the same in all countries. In Australia, Gallipoli is the focus of our national commemoration. Those other Anzacs, the New Zealanders, respect a quite different battle. For them, their great national achievement was the Battle of Chunuk Bair.[25] In Britain, America and France, people have generally not even heard of Gallipoli, least of all the disastrous campaign of 1915.

The origins of the Anzac 'myth': Captain Charles Bean

In the case of Australia, our commemoration of World War I actually began while the war was still in progress. This meant that so many important memories, as well as important objects, were saved even before the war ended.

We owe this to Captain Charles Bean. While he was still reporting as war correspondent to Australia, he began to imagine the idea of a new type of museum to preserve historical objects and, more broadly, save the memories and experiences of the men and women who had fought and suffered. The Australian Government also realised the importance of gathering and saving artefacts (historical objects). Captain John Treloar was appointed head of the Australian War Records Section, with a responsibility to select and save both documents and objects that could later be used to tell the story of this war.

▲ **Source 4.139** Charles Bean after the war

25 For more information on New Zealand's Anzac Day, see Colin Townsend, 'The Legacy of Chunuk Bair', *Wartime*, Winter 2001, Issue 14.

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DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.7

The skill of historical empathy

Preparation: Take some time to research Charles Bean and especially why he came to believe, even when the Great War was still in progress, that it should be commemorated.

Activity: Imagine that you are a newspaper reporter sent to interview Captain Charles Bean about his work during and after the war. Your aim is to write an article about the idea of a national war memorial and its purpose. How might Bean have responded to the questions below? Complete the interview by recording what he would respond if questioned today.

1. Captain Charles Bean, you have become a leading figure in Australia's history of the Great War. To what extent do you believe that you are a reliable witness of this enormous conflict?
2. Given that you held the rank of officer, and did not have to do any actual fighting, are you sure that you are really equipped to understand what the common soldier went through? How much of the real fighting did you see?
3. When, and why, did you conceive the idea of creating a national war memorial?
4. Why do you believe that Australia should spend time and resources on building a memorial to this terrible war? Would we not be better advised to put money into directly helping the wounded veterans who are now coming home?
5. Is it possible that a national war memorial is really going to glorify war instead of showing its horrors and tragedy? How do we know that it will not inspire future generations to think of war as a glorious adventure and a good way of resolving international conflict?

Some of our most eminent historians of Gallipoli, such as Professor Ken Inglis and Dr Martin Ball, show enormous respect (and sympathy) for the men and women who served at Gallipoli, but they are also careful to dispel the many myths that have since gathered around the Gallipoli experience. These historians insist that the greatest respect we can pay these men and women is to clear away the distortions and to drill down to find out what really happened during that fateful campaign.[26]

Additional content
Access the digital versions of this textbook to read the following additional content:
The Anzac myth examined: John Simpson and his donkey

◄ **Source 4.140** Australians attend an Anzac Day dawn service at the Shrine of Remembrance, Melbourne.

26 To read more about this issue of myth versus reality, see Ken Inglis, *Anzac Remembered*, 1998.

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▼ **Source 4.144** Statue of a soldier at an Anzac war memorial in Queensland

Using your historical judgement: is Anzac a myth?

For most Australians, our nation's achievements in war are a matter of enormous interest and, for many, of national pride. And yet there are other voices – equally credible – who argue that the reality of our war service has been blown up into a myth, one that needs to be questioned and corrected.

KEY HISTORIAN

ROBERT FLEMING

Military historians, such as Robert Fleming, have helped establish some of the realities.

First, Australia definitely made a big contribution to the war effort, far greater than our size would suggest.

Robert Fleming wrote:

> Australia's role was remarkable, given the nation's comparative population – in 1914, barely 7 million (compared to 40 million in France, 46 million in Britain, and 68 million in Germany).

▲ **Source 4.141** Robert Fleming, *The Australian Army in World War I*, 2012, p. 3

Second, it cannot be denied that Australian commanders and soldiers made a very significant contribution to bringing the war to an end in 1918. At first, these soldiers might have felt that they were simply volunteering to help out the Allied war effort but, as the British commanders readily admit, our troops won crucial and deadly battles that helped win the war.

Robert Fleming wrote:

> The Australian Army's participation in World War I began as a loyal response to a call to protect British Imperial interests, but became a significant contribution to the Allied victory over the German and Ottoman armies.

▲ **Source 4.142** Robert Fleming, *The Australian Army in World War I*, 2012, p. 3

Third, there is no doubt that the bravery and competence of Australian troops made the world more aware of Australia as a nation, and won admiration and respect. Some historians would also say it gave the Australians themselves a new sense of identity as a nation, not just as Victorians, Tasmanians or Western Australians.

Robert Fleming wrote:

> The response in 1914 was the more extraordinary in that the Australian nation was only thirteen years old, and had not yet created a unified sense of itself. Each of the six colonies that had recently federated to become states of the Commonwealth of Australia had its own unique history, characteristics and cultural identity.

▲ **Source 4.143** Robert Fleming, *The Australian Army in World War I*, 2012, p. 3

KEY HISTORIAN

MARILYN LAKE AND HENRY REYNOLDS

In 2010, historians Marilyn Lake and Henry Reynolds published a book with the startling title *What's Wrong with Anzac?* Given the respect we owe to the men and women who have served as Anzacs, it may seem curious to question their contribution. But like all things that unsettle us, it is important here to establish exactly what these critics meant.

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Critical issues: did war help make the Australian nation?

The main issue that has caused great debate is the common idea that Australia's involvement in World War I somehow made our nation. Some would argue that Australians proved themselves in the eyes of the world, and especially of Britain, and finally grew up to a sense of national identity.

Others would disagree, arguing that Australians had already defined themselves, constitutionally, in 1901, with the Federation of the colonies into states. The Anzacs may well have won the respect of their British commanders, but there is no evidence that the national identity was forged by the experience of war. Indeed, a sense of an Australian national identity had emerged even earlier, in the 1880s and 1890s.

The militarisation of Australian history?

The second big question is the idea that the Australian Government – encouraged by former Prime Minister John Howard – has sponsored an intensive campaign of publications with public money to focus attention upon the Anzac myth and upon Australian military history. This, say the critics, means that military history is taking over our national history, excluding other important achievements made by Australians, especially during peacetime.

Marilyn Lake and Henry Reynolds wrote:

> Like the many Australians who are concerned with the homage paid to the Anzac spirit and associated militarisation of our history, we are concerned about the ways in which history is used to define our national heritage and national values. We suggest that Australians might look to alternative national traditions that give pride of place to equality of opportunity and the pursuit of social justice: the idea of a living wage and sexual and racial equality. In the myth of Anzac, military achievements are exalted above civilian ones; events overseas are given priority over Australian developments; slow and patient nation-building is eclipsed by the bloody drama of battle; action is exalted above contemplation. The key premise of the Anzac legend is that nations and men are made in war. It is an idea that had currency a hundred years ago. Is it not now time for Australia to cast it aside?

▲ **Source 4.145** Marilyn Lake et al., *What's Wrong with Anzac?*, 2010, p. 167

It is true that there has been a publishing boom in books on Australian military history, as we can readily see just by examining the shelves in any commercial bookshop. We know from letters to the editor in newspapers that some Australians, at least, feel that this has gone too far, and that we are no longer reading so much about aspects of our national history other than war.

It is also true that the Department of Veterans' Affairs has been proactive in sending out curriculum materials to schools. It should be noted, however, that a typical publication – such as its superlative *Australian Light Horse: Palestine, 1916–1918* – is a teaching resource of the highest quality and is eminently useful to any teacher of Australian history. Moreover, these excellent books are sent out free of charge, and there is absolutely no requirement that they must be used by teachers.

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 4.8

Evaluating the historical significance of an event

Some study tips

When you are preparing for an essay, test or examination in history, there is one easy way to make sure that you have a good understanding of your period of study. You might have a mass of detailed notes in your exercise book or computer, but you may have trouble learning them. You need an instrument to make them simpler, clearer and easier to learn.

To solve this problem, draw up a table with a grid showing the date in one column, then a brief description of the event (what happened), then a note whether this caused change or continuity, and finally, most importantly, what the significance of the event was.

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A good technique is to try asking yourself some simple questions to get your thoughts going. For example: Was this event a victory for the Allies or was it a disaster? Why? How did it change the course of the war, if at all?

Accuracy

The skill of chronology is one of the essential skills of history. It is important to know the names of key events and the date on which they occurred. You need to be able to spell the name of the event and to give an accurate date for it. As a general rule, it is good to explain events in the order they happened, so that your examiner knows that you do know their sequence. You can, however, go back and forth in time if this helps you make a point in your argument.

If you make this grid in hard copy, you can place it on the wall of the room where you study, and learn it by heart simply by glancing at it several times. This is called ambient learning and is one of the most powerful learning techniques.

If you do this, you will be able to explain a sequence of events in the order they happened and, more importantly, make an intelligent commentary on their significance. You will walk confidently into the examination not just with facts but with a line of argument and analysis in your mind.

Change and continuity

One of the most powerful ways of making a good historical argument is **evaluation**, which means weighing up the value of something. You can do this by thinking about an event and deciding whether it has been a change from what existed before or a continuation of it. Hint: in some cases, one event can be *both* a change in one sense *and* a continuity in another.

Significance

More importantly, it is absolutely vital to be able to explain the **significance** of an event. Instead of simply listing events in the order they happened, we try to explain what their significance was. What *effect* did the event have?

To sharpen your analysis, try asking yourself some questions. Did the event have any positive outcomes? Did it give one side in the conflict an advantage? Did it introduce a whole new dimension to the war – for example, by introducing a new weapon? Was the strategy for this battle effective or disastrously ineffective?

Evaluate your progress through this chapter by copying out and completing this table, or filling it within the Interactive Textbook. Try to determine the historical significance of each of the following events. The first example has been filled in for you.

Date	Event	What happened?	What was its significance in the overall conflict?
1914			
June	Assassination at Sarajevo	A Bosnian nationalist shoots Archduke Franz Ferdinand in protest against Austrian authority.	A single political murder set in motion the entire machinery of European alliances, provoking war.
August	German invasion of France	German forces cross the border into France and beat back the French army in a rapid advance.	
September	The Battle of the Marne	The French rush troops to meet and push back the advancing Germans.	
September	First Battle of the Aisne	The French inflict horrific casualties on the Germans, then dig in.	
1915			
January	First use of gas by Germans	The Germans try to solve the problem of trench warfare by using poisonous gas against the Allies.	

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Date	Event	What happened?	What was its significance in the overall conflict?
February–September	The German U-boat campaign against Allied shipping	The Germans' use packs of submarines to try to prevent ships bringing vital supplies to Britain from America.	
April	Allied landing at Gallipoli	British, French and Anzac forces land at Gallipoli to open a new front in the war.	
May	Sinking of *Lusitania*	A German U-boat torpedoes the unarmed passenger ship *Lusitania*, which sinks in 20 minutes.	
1916			
January	Allied departure from Gallipoli	Using 'the silence ruse', the Anzacs evacuate Gallipoli without casualties.	
February, continuing until December	The Battles of Verdun	A running series of bloody battles, in which the French had 400 000 casualties, and the Germans 350 000 casualties	
May	The Battle of Jutland	A massive sea battle between the Royal Navy and the German navy, with heavy losses on both sides	
July, continuing to November	The Battle of the Somme	The British launch an attack against German positions, sending men running across open land against machine guns.	
1917			
January	The Zimmermann telegram	German foreign minister Zimmermann sends a message offering to support Mexico if it invaded the southern states of the United States.	
February	Germany resumes its campaign of unrestricted submarine warfare	Germany decides to sink all ships going to Britain, without warning.	
1918			
March to May	The Spring Offensive (or Kaiser's Battle or Ludendorff Offensive)	A massive German attack breaks through Allied lines.	
March	Russia pulls out of the war (Treaty of Brest-Litovsk)	The new Communist regime in Russia makes a separate peace treaty with Germany.	

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Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 4.7

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 When was the first Anzac Day commemoration held?

Interpret

2 Discuss how Anzac Day is typically commemorated in Australia.

Argue

3 Explain why the view of historians Marilyn Lake and Henry Reynolds could be considered to be controversial.

Extension

1 There is still a lively debate about how we commemorate Australia's wars. How would you recommend that our nation best remember and honour wars in the future? Consider these issues:
   - a Do you believe that the act of remembering a war is the same as glorifying war?
   - b Do you feel that existing commemorations, such as Anzac Day, the Dawn Service and the Dawn Service at Gallipoli, are the best ways of honouring those who have served?
   - c Can you explain why some battles (such as Gallipoli, Kokoda) seem to fascinate the general public, while other battles (such as Beersheba) are less well-known?
   - d How would you explain the fact that public interest in our war service has recently been growing with time, rather than decreasing?
   - e Do you sense that Australians today do gain a stronger sense of their national identity by involving themselves in commemorations?
   - f If there is such a thing as an Australian national character, how do you think this is displayed in times of conflict or crisis?
   - g Can you think of any new and creative ways in which we might commemorate wars and teach future generations about them?

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Conclusion: why does it matter today?

The Great War was very destructive. It involved some 70 million men and women, of whom nine million were killed in action, and countless more returned seriously wounded and traumatised. As we have seen, it was the first mechanised war, and the technological advances of the Industrial Revolution were used to develop more and more efficient ways of killing enemy forces.

World War I also changed the face of the nations on Earth. Some states (such as the Ottoman Empire) crumbled to be replaced by new countries (such as Turkey).

The terrible experience of modern warfare inspired a new field of study called International Relations in 1919 and led to the creation of an international body called the League of Nations in 1920, both established with a view of trying to prevent further conflicts of this sort.

After working through this chapter, consider the following question:

What were the main factors that made World War I such a destructive conflict?

▲ **Source 4.146** Late in the war, American troops found this abandoned trench and dugout with a lone skeleton staring at the sky from the mud. Bodies often went unburied, since it was too dangerous to try to bury them. Graphic images like this have often been censored from the public.

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Making thinking visible

I used to think that World War I was …

Now I think that …

In this visible thinking routine, you are asked to track the difference between what you knew about the war before starting this chapter and what new understandings you have acquired at the completion of this chapter.

Using these stem sentences, write a paragraph explaining what you previously knew about the war and another paragraph explaining what you now understand, additionally, about the war.

1A I used to think that World War I was caused by …
1B Now I understand that World War I was caused by …

2A I used to think that World War I was deadly because …
2B Now I understand that World War I was deadly because …

3A I used to think that Australians contributed to World War I by …
3B Now I understand that Australians contributed to World War I by …

4A I used to think that women contributed to World War I by …
4B Now I understand that women contributed to World War I by …

5A I used to think that World War I affected the home front by …
5B Now I understand that World War I affected the home front by …

3 Key terms and names

For each key term or name from the chapter, write a sentence explaining its significance.

1 war of attrition
2 stalemate
3 total war
4 stormtroopers
5 sniper
6 Sir John Monash
7 Charles Bean
8 silence ruse
9 propaganda.

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4 Extended-response question

Analysing the significance of a specific battle in the overall context of World War I.

Topic: Evaluate the importance of one major battle of World War I in terms of the final outcome of the war and victory for the Allies. In your answer, **explain** the military situation that existed at the time of the battle, **describe** what tactics were used and how the battle unfolded, and **discuss** how and why this battle had an important effect on the course of the war.

In your response, you must **substantiate** your argument by providing key names, dates, statistics and terms relevant to World War I.

5 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about WWI

▲ **Source 4.147** A member of the Australian army looks on during the Dawn Service on Anzac Day at the Shrine of Remembrance, Melbourne. You can attend this service, as well as parades throughout the day, every year on the 25 April holiday to commemorate the Gallipoli landing.

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2

Geography

What is geography?

Geography combines the study of the physical features of Earth and the relationships people have with both natural and human environments. For example, geographers might study the shape of a landscape, the type of vegetation it contains, the habitat that this vegetation provides, and the climate and soil types that helped this vegetation to grow. Equally, geographers might study the changes that humans make to landscapes, such as clearing a forest for agricultural production and the positive and negative impacts that follow.

Asking questions about the world is an essential part of any geographical study. Why are some parts of Earth covered in tropical rainforests while others are covered in rocky mountains? Why is rice a staple food source in some regions instead of bread? Why are some countries facing overpopulation while others are trying to increase birth rates? How do local-scale actions lead to global-scale impacts? Studying Geography will provide you with the skills and knowledge needed to answer these questions while helping you to gain a greater appreciation for the natural and human world.

Geographical concepts and skills: *geographical thinking, and using data and information*

Throughout the geography section, you will learn to interpret and analyse a range of data, including maps, graphs, statistics and satellite imagery.

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Geographers collect, analyse and present data in order to answer questions and draw conclusions. This data often has a spatial component in the form of a map, a geotagged photo or a digital interactive map known as a Geographic Information System (GIS). Geographical data is used to compare different environments, determine why environments change, assess the impacts of these changes and evaluate how changes are managed.

Geographers collect their own primary data on a local scale by undertaking fieldwork. Techniques used to gather this data include drawing field sketches, taking photographs, surveying local residents and mapping geographic characteristics. Secondary data is also used, which includes field data collected by others, historical accounts, data gathered remotely by satellites (see images in Figure A and B) and data collected on a larger scale such as in a national census.

Geographic concepts are used to help direct a geographer's thinking. The seven concepts used in the following chapters are place, space, environment, interconnection, sustainability, scale and change. Using the images in Figures A and B, a geographer might investigate how the characteristics of this place have changed, measure the scale and distribution of these changes, consider the interconnections between the factors that have led to the change and address the impacts that these changes might have on the environmental, social and economic sustainability of the region.

These concepts will be expanded upon throughout the following chapters as you compare natural environments around the world, explore the impacts of food production, investigate how technological developments have helped connect people around the world, and consider ways that people's choices and actions can have global consequences.

▼ These satellite images taken in 1985 (left) and 2016 (right) show environmental change in Rondônia, Brazil, as tropical rainforest is cleared for agriculture.

▲ **Figure A** Satellite image of Rondonia, Brazil, from 1985

▲ **Figure B** Satellite image of Rondonia, Brazil, from 2016

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Unit 1

Biomes and food security

Overview

By the middle of the twenty-first century, eating insects could become widely accepted as an alternative to eating meat. Meanwhile, cultured meat grown in a lab from cow stem cells could replace traditional beef production. If this isn't bad enough, climate change could drastically reduce cocoa production, leading to a worldwide chocolate shortage!

In this unit, you will investigate biomes based on their geographic characteristics and spatial distribution. This will help you to understand the types of foods and fibres produced within these environments, and the subsequent social, economic and environmental consequences. By evaluating various management strategies, you will explore ways in which future food production seeks a balance between sustainability and global food security.

Learning goals

After completing this unit, you should be able to answer these questions:

- What are biomes and how do their characteristics vary?
- What is the spatial distribution of biomes on a global scale?
- What factors influence crop yields within Australia and across the world?
- In what ways does the production of food and fibres affect the environment?
- What are the challenges associated with achieving global food security?
- What land and resource management strategies are being used to try to achieve food security on a range of scales?

Video
Unit Overview

Geographical concepts and skills: *space, environment and interconnection*

This unit focuses on developing your understanding of **space**, **environment** and **interconnection**. In Geography, the concept of **environment** includes the characteristics of an environment, the processes that occur within an environment, the ways in which environments support life, and the interrelationships between people and environments. **Space** refers to the spatial distribution of places and the characteristics within these places. Geographers use maps and various forms of spatial technology to examine, monitor and compare spatial distributions in order to assess and manage environmental impacts.

Interconnection involves the links between places and the influences that people have on the characteristics of places. For example, the location of a biome might influence its climate while the interaction between living and non-living components of a biome might determine its characteristics. People are interconnected with these environments in the way that they modify and manage them. For example, deforestation of tropical rainforests in Indonesia is making way for oil palm plantations. Indonesian palm oil is used in products that are manufactured and consumed throughout the world. Therefore, there is an **interconnection** between people and Indonesia's tropical rainforest on a local and global scale.

Please note at the time of writing in early 2020, the global COVID-19 pandemic was unfolding, and having a major effect on the world. The consequences were still largely unknown at the time of publication.

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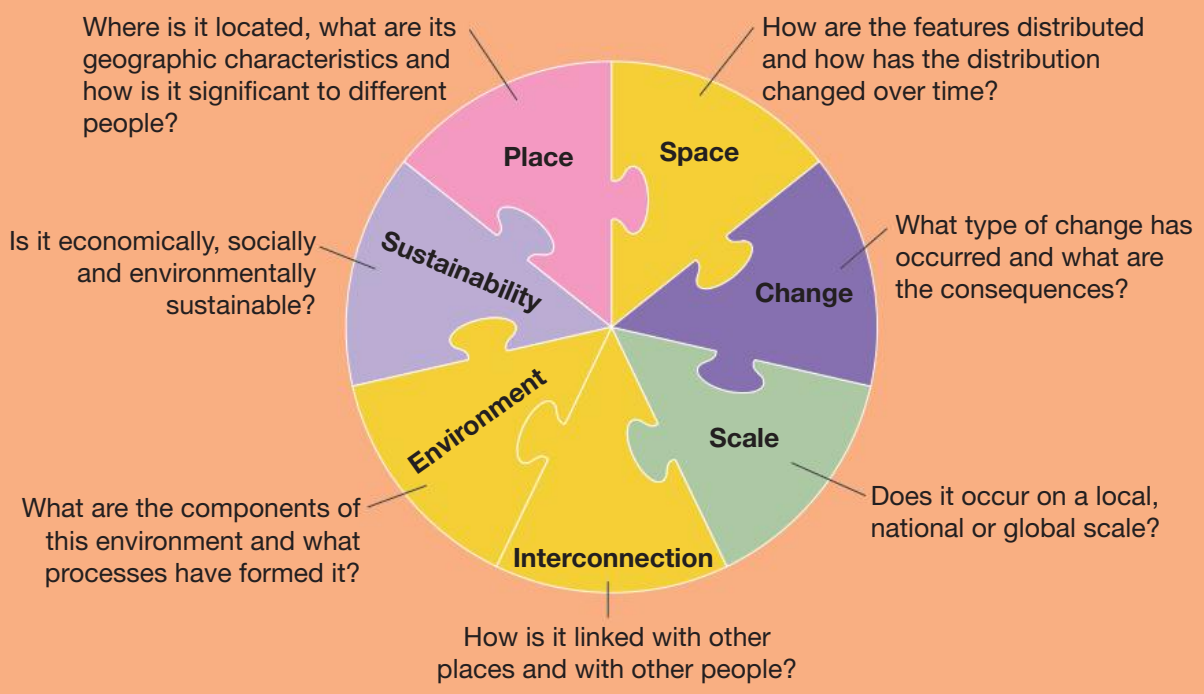
Geography concepts

Although this unit has a specific focus on **space**, **environment** and **interconnection**, these concepts are part of a group of seven interrelated key ideas that help us to think geographically.



▲ **Image:** Workers harvest palm fruit from palm oil plantations. While this provides benefits to the local economy, it is having a devastating impact on tropical rainforest biomes in places like Indonesia and Malaysia.

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CHAPTER 5

Aboriginal or Torres Strait Islander peoples should be aware that this chapter contains images and names of people who have passed away.

Biomes and food security

Setting the scene: the Amazon rainforest – a biome on fire

The Amazon rainforest is one of the most **biodiverse** places on Earth. Its rivers are home to pink river dolphins, piranhas and the carnivorous bladderwort plant. Deep in the forest, anacondas, jaguars, sloths, toucans and the cacao plant (the source of chocolate) flourish. One in ten animals in the world today live in the Amazon rainforest, and many Amazonian plant and animal species are still unknown to us. In August and September 2019, the world watched in horror as 2 500 fires raged through the rainforest.

▲ **Figure 5.1** The pink river dolphin, or boto, is one of five dolphin species that live in the Amazon River

▲ **Figure 5.2** The cacao tree's seeds are used to make chocolate

KEY TERM

biodiversity the variety of plant and animal life found in a place

► **Figure 5.3** A three-toed sloth. Its toes are actually claws, which are an adaptation that helps it live in trees

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As seen in Figure 5.4, the Amazon rainforest is located in the northern region of the South American continent. It is classified as a tropical rainforest **biome**. Biomes are communities of plants and animals that have naturally **adapted** to a region. The strong biodiversity in this biome is due to its climate of warm temperatures and high rainfall, and the extraordinary network of 1 100 **tributaries** that transport water through the region. These **natural characteristics** not only support life within the rainforest but also support us. The Amazon provides us with food, rainfall, oxygen, materials and medicine.

KEY TERMS

biome a large naturally formed community of plants and animals found in a place

adaptation the process of change where an organism becomes better suited to its environment

tributary a small river that feeds its water into a bigger river

natural characteristics the natural qualities of a place

▼ **Figure 5.4** South America, the distribution of the Amazon rainforest, and the fires that were active in August 2019

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The 2 500 fires that burned in the Amazon rainforest in 2019 were, like most fires in this region, started by people. While fires have been lit before, the humid climate of the biome has often ensured that they do not get out of control. So, what caused such a disaster to occur this time?

Using a geographic lens, we can piece together a variety of factors that interconnect (link together or influence each other) to create the perfect conditions for this disaster. In Geography, factors are the circumstances that contribute to or cause something to occur.

KEY TERMS

deforestation clearing a large area of trees

export sell and send goods to another country

import bring goods in from another country

▼ **Table 5.1** Factors that contributed to the Amazon rainforest fires in 2019

Type of factor	Description
Environmental	Climate change is increasing the global temperature and creating longer periods without rain in the region. **Deforestation** is also reducing the amount of water in the region and is drying out the land, increasing the risk of fires.
Economic	Brazil **exports** more beef than any other country. This demand from over 150 countries encourages Brazilian farmers to clear rainforest trees for cattle. There are economic benefits to preserving the rainforest. One acre of land can make six times as much money from medicinal plant growing as cattle farming. However, if sustainable industries are not encouraged, farmers will continue to farm animals.
Social	In 2014, unemployment in Brazil started to go up, people's income started to go down and crime rates were increasing. Many people decided it was time for a change and voted in a new president, Jair Bolsonaro, who became Brazil's leader in January 2019. He promised to go tough on crime and improve the economy. He argued that Brazil's economic growth was being held back because they were not exploiting the resources of the Amazon Rainforest. He promised to allow more farming and mining in the forest.
Historic	When the fires began, the French President, Emmanuel Macron, gathered leaders from the G7 countries to offer Brazil US$20 million to help put out the fires. Bolsonaro initially rejected the assistance, however, meaning the fires lasted longer than they needed to. He said that Europe had already 'destroyed their environment' and if they want to help the environment, they could plant trees in their own countries. The Brazilian government also had issues accepting help from France, a country that had colonised parts of Central and South America in the past and had exploited these regions' resources for France's own benefit. One government official said 'Ninety per cent of [former] French colonies are in a deplorable state…Wherever [the French] went they left a trail of destruction, chaos and misery. They shouldn't be giving anyone advice. This is a joke.'
Technological	Our ability to transport food and goods globally due to technological advancements allows countries to **import** more goods from Brazil. This means that other countries do not have to convert as much of their own land to farming. However, this also puts pressure on exporting countries, such as Brazil, to clear their land for farming to meet overseas demand.
Political	In 2016, Brazil signed a global agreement (called the Paris Agreement) to reduce greenhouse emissions. However, Bolsonaro said, 'Brazil does not owe the world anything'. Though deforestation is considered to be illegal in certain protected areas of Brazil and punishable by fines, the government is not strictly enforcing these laws. Figure 5.7 shows a marked increase in deforestation rates since President Bolsonaro took office in January 2019.

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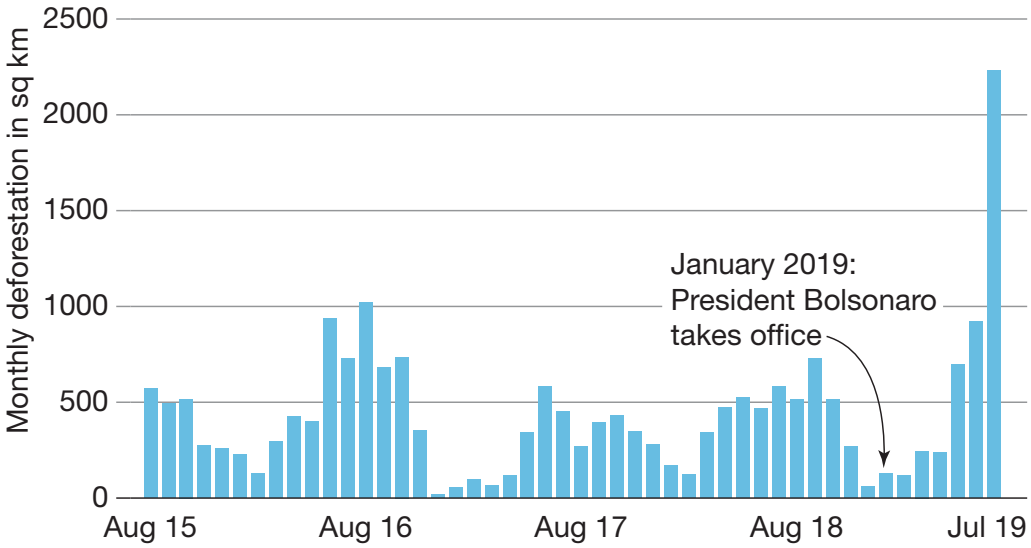
▲ **Figure 5.5** A satellite image of the Amazon River and its tributaries

◄ **Figure 5.6** Brazilian President Jair Bolsonaro took office in January 2019. *The Washington Post* noted when he won office that 'Bolsonaro is a powerful supporter of agribusiness ... and is likely to favor profits over preservation'.



◄ **Figure 5.7** Deforestation rates in the Amazon, 2015–19

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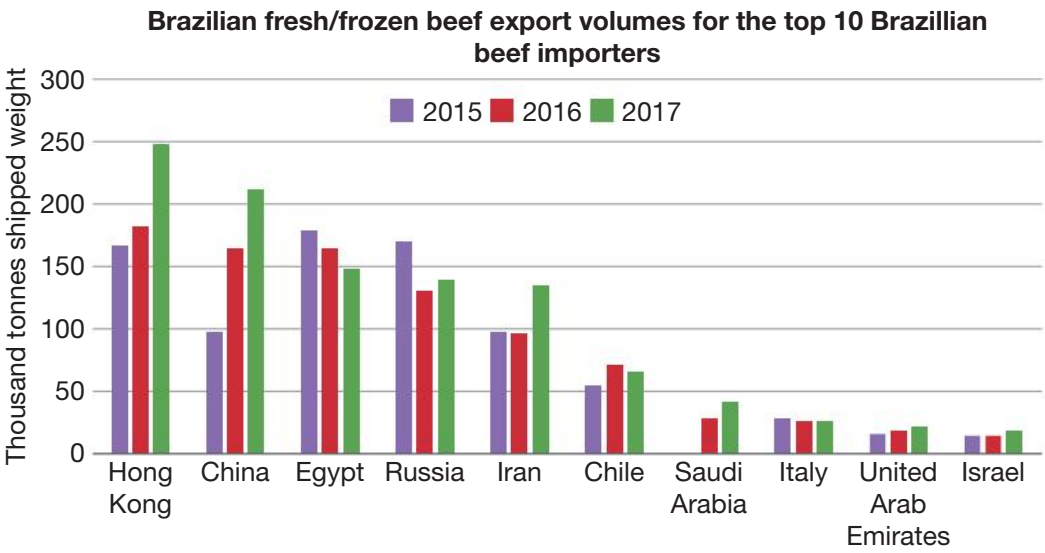

▲ **Figure 5.8** Brazilian beef exports to the top 10 importing countries, 2015–17

▲ **Figure 5.9** Members of the IBAMA forest fire brigade fight burning in the Amazon area of rural settlement PDS Nova Fronteira, in the city of Novo Progresso, Para state, northern Brazil, 3 September 2019

MAKING THINKING VISIBLE 5.1

Think, pair, share

Consider both positive and negative impacts in your answer using the graphs, tables and information provided. Share your thoughts with a partner and justify your opinion.

1 In what ways are other countries interconnected with Brazil and the 2019 Amazon fires?

2 Do you think countries should boycott Brazilian beef?

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Chapter overview

Our natural world is made up of many biomes that have shaped and supported the growth of human life on Earth. In this chapter, you will explore the world's biomes and learn about the ways in which we rely on these to produce food and fibre. You will also investigate the environmental, economic and societal impacts of food and fibre production, and examine the challenges we face when attempting to provide enough food and fibre for a growing population into the future. You will complete a variety of activities, including fieldwork, that will provide you with a broad range of geographic skills as well as allow you to apply the seven geographic concepts.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What are biomes and how do their characteristics vary?
- What is food security?
- What factors influence crop yields within Australia and across the world?
- What is land used for in Australia and the world?
- In what ways does the production of food and fibres affect the environment?
- How did the First Australians live off the land for so long?
- Can agriculture improve the environment?
- What does the fieldwork process involve?

Geographical skills

After completing this chapter, you should be able to:

- Describe spatial distribution using the PQE method
- Describe spatial association using the DQE method
- Read scatter graphs to understand the association between phenomena
- Apply the concept of process by drawing a flowchart
- Apply the concept of change
- Evaluate a response using the sustainability concept
- Describe the trend of a line graph.

▲ **Figure 5.10** Agricultural land in Nepal. Panoramic aerial view of the houses and the agricultural surroundings of a village with green barley fields and steep colourful rock cliffs in the distance.

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5.1 Distribution and characteristics of biomes

FOCUS QUESTION

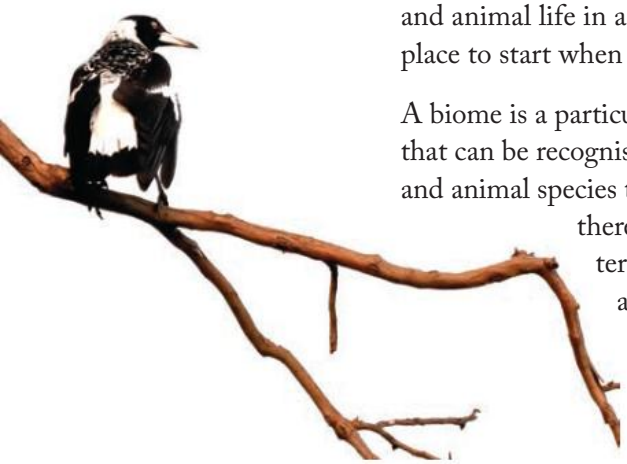
What are biomes and how do their characteristics vary?

KEY TERM
indigenous naturally existing in a specific place

What is a biome?

Consider the types of plants and animals that are **indigenous** to your local region. Are you more likely to see a magpie or gum tree when looking out of your school window than a moose or a polar bear? Observing the indigenous plant and animal life in a region is a good place to start when identifying a biome.

A biome is a particular geographic region that can be recognised by the plants and animal species that naturally live there. *Bios* is a Greek term meaning 'life', and it is the unique collection of life found in each region that characterises each biome.



▲ **Figure 5.11** Are magpies indigenous to your region?

What are the different biomes?

As seen in Table 5.2, there are two main types of biomes: terrestrial (land) biomes and aquatic biomes. These can be further classified into more specific biomes based on the variations of plant and animal species found in each region. A biome is often named after the main characteristic of its environment, such as the dominant vegetation that grows there. For example, the **tundra biome** gets its name from the Finnish word *tundra*, meaning 'treeless plain'. Can you guess which type of vegetation dominates the **grasslands biome**? What do you think may be the main characteristic of the **ice biome**?

▼ **Table 5.2** The main biome classifications. These can still be further classified more specifically.

Terrestrial biomes	Aquatic biomes
Tropical rainforest Temperate forest Desert Tundra Taiga (boreal forest) Grassland Savanna/tropical grassland	Freshwater Marine
The ice biome can be terrestrial in the form of ice sheets and glaciers, or aquatic in the form of sea ice.	

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ACTIVITY 5.1

Biomes

Classify the images in Figure 5.12 (A–D) into one of the biomes mentioned in Table 5.2. What are the main biome characteristics that you can see in each image?

▲ **Figure 5.12 A**

▲ **Figure 5.12 B**

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▲ **Figure 5.12 C**

▲ **Figure 5.12 D**

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Characteristics of biomes and their spatial distribution

Although biomes are recognised by their plant and animal species, there are some important characteristics that influence which species will dominate each region. The most influential is climate. However, latitude, soil and elevation also influence a biome's distribution.

Climate

Climate refers to the average weather conditions of a place over a long time (usually 30 years). Weather conditions are factors that can change on a daily basis, such as temperature, wind and **precipitation**. By calculating the average daily weather conditions of a place over 30 years, we can determine its climate and predict what type of weather we will expect at different times of the year.

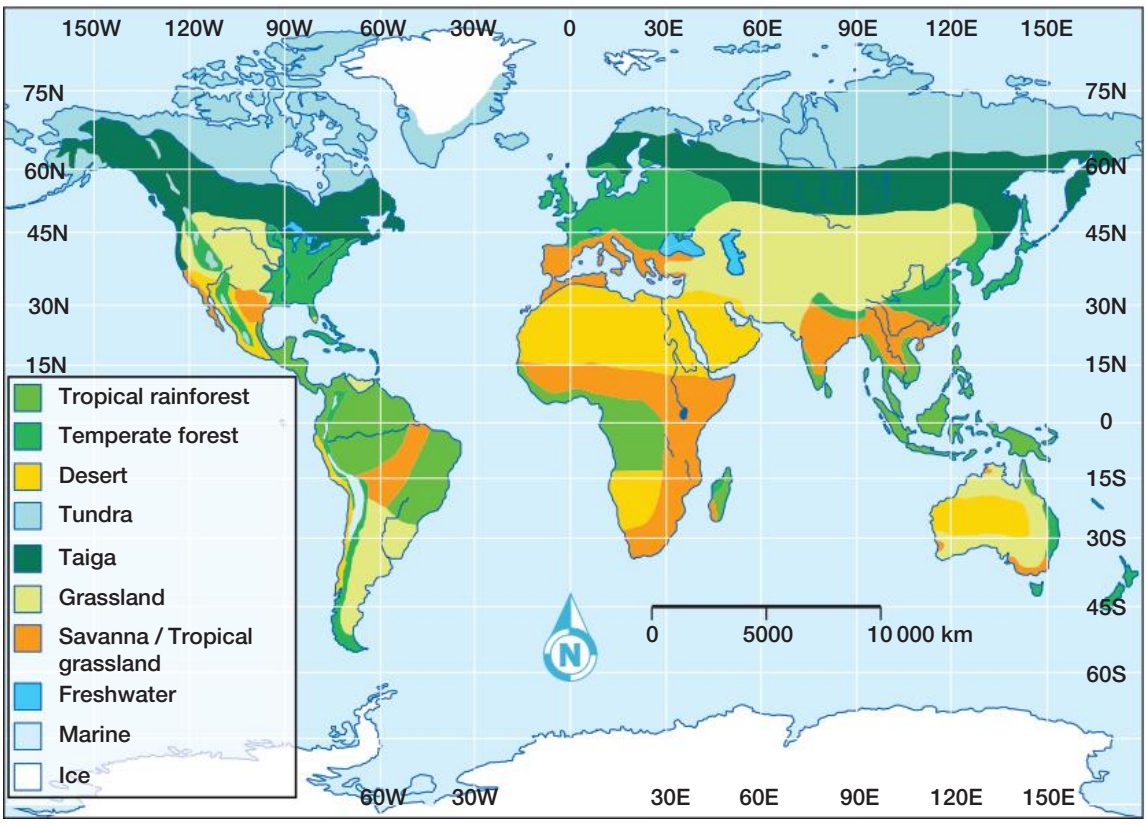
Consider the climate conditions in your region for a moment. If your region has four seasons, you may be living in a temperate climate. A common biome found in this climate is the **temperate forest biome**. These mild temperatures and annual rainfall of over 140 centimetres allow many species of plants and animals to thrive, therefore making it a productive biome. In fact, temperate climate conditions are so appealing that the majority of people worldwide live in this type of climate.

Alternatively, if your region receives less than 25 centimetres of rain per year, it is likely that you are in a **desert biome**. These dry conditions provide a difficult climate for much life to adapt to and thrive in. However, some species have adapted in remarkable ways. For instance, the dorcas gazelle of the Sahara desert in North Africa can survive without drinking water and passes white pellets of uric acid, rather than waste precious water by urinating. Moreover, big ears are popular among the hot desert-dwelling animals, as the large surface area of their ears helps to radiate heat and keep them cool. The Australian thorny devil can drink through its feet.

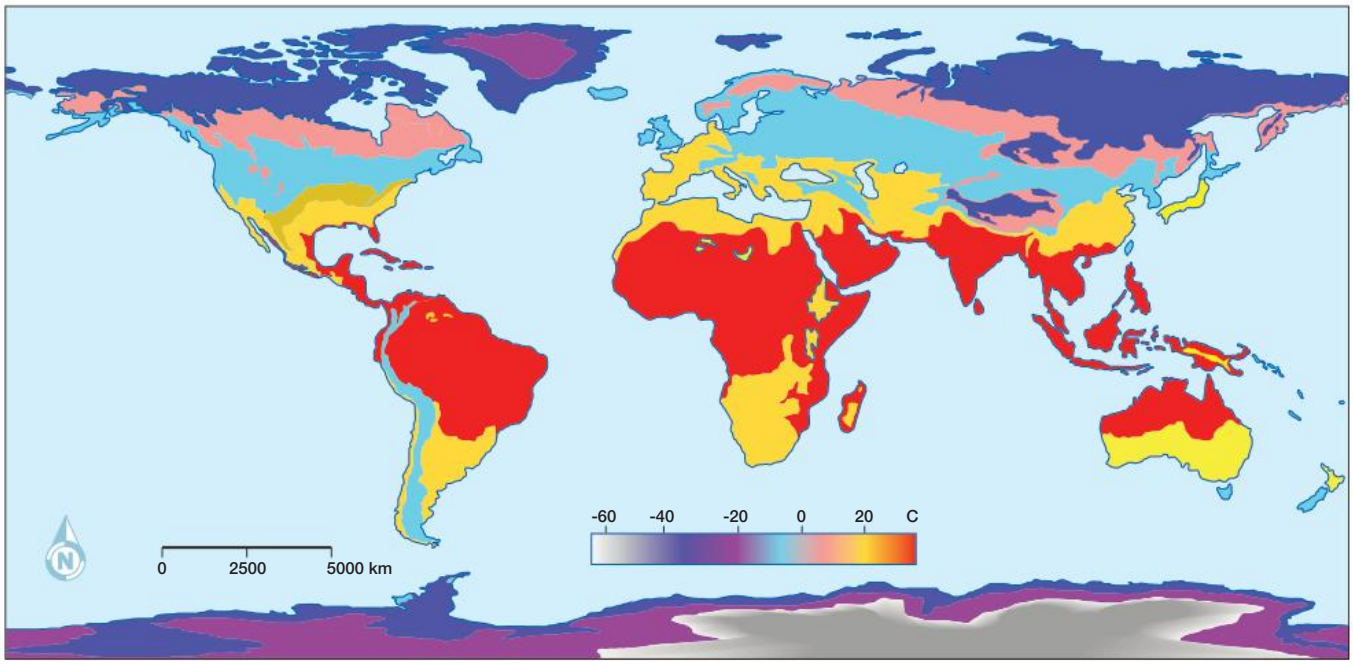
Latitude is another important influence on a biome, and is strongly interconnected with climate, as the latitude of a place can affect its temperature and the amount of sunlight it receives. The tropics, which are located between 23.5° latitude north and south of the equator, receive direct exposure to sunlight all year round. This makes the **tropical rainforest biome** consistently warm. This consistent exposure to sunlight, as well as high amounts of rainfall, makes it the most abundant of all biomes. It is home to approximately 50 per cent of all life, despite only taking up 2 per cent of Earth's surface. In contrast, the **polar ice biomes**, located between 65° and 90° latitude, experience half the amount of sun exposure and are consequently too cold to sustain an abundance of life.

KEY TERM

precipitation liquid or frozen water that forms in the atmosphere and falls to Earth (e.g. rain, snow)



◄ **Figure 5.13** The global distribution of biomes



▲ **Figure 5.14** A choropleth map showing the global distribution of annual average temperature

DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 5.1

Describing spatial distribution using the PQE method

KEY TERM

phenomenon a fact or situation that exists or happens (plural: phenomena)

When describing the distribution of a **phenomenon** using a choropleth map, as seen in Figure 5.14, there are three important things to include: the **pattern**, **quantification** and an **exception**. This is also known as the PQE method. Use at least one sentence to describe each of these with respect to Figure 5.14.

1 **Pattern:** Give a general overview of the distribution.
   a Is the overall distribution even or uneven?
   b Where are areas that have a high or low temperature? Provide some examples.
2 **Quantification:** Provide specific evidence to demonstrate the pattern. Use the temperatures provided in the legend and estimate the size of temperature regions using percentages.
   a Roughly how much of Earth has a high or low temperature?
   b How hot are the majority of the hottest regions? How cold are the majority of the coldest regions?
3 **Exception:** Identify some places as examples of specific places that do not fit your pattern.
   a Is there a place that has a high temperature surrounded by places with a low temperature or vice versa?
   b Is there a place that has a much higher or lower temperature than anywhere else?

DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 5.2

Describing spatial association using the DQE method

Geographers can apply the concept of spatial association when comparing maps to help determine whether two or more phenomena are similarly distributed over Earth's surface. If a similarity exists, there may be a link between the phenomena that a geographer may want to investigate further. When describing spatial

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association, there are three important things to include: the **degree** of association, **quantification** and an **exception**. This is also known as the DQE method. Use at least one sentence to describe each of these.

1 **Degree:** Give a general overview of the degree of association.
   a Is there a strong, moderate, weak or no degree of association between the two phenomena? That is, does the distribution pattern of each map look similar or different?
   b Provide some examples that support your statement. For example, if there is a strong association, provide evidence of locations where both phenomena are similarly distributed.
2 **Quantify:** Provide specific evidence to demonstrate the association. Provide data and estimate the percentage of coverage.
3 **Exception:** Identify an example or several examples of specific places that do not fit the pattern of association.
   a Locate and name the exception.
   b Explain why this is an exception.

For example, if you have stated that there is a strong association, there may still be a location where only one phenomenon is present.

Soil

Soil varies between biomes in terms of its temperature, moisture, organic material and pH. These factors all influence which plants will thrive in each region. For instance, the **tundra biome**, which is mostly distributed within the Arctic Circle or in areas of high elevation, supports low-growing shrubs and mosses that can endure the permanently frozen soils, known as **permafrost**. In the coldest of **grassland biomes**, such as the steppes (large unforested plains) in Siberia, ancient organisms have been found preserved in the frozen soil. In these biomes, the soil is too cold for **decomposition** to occur. Figure 5.15 shows the frozen remains of an extinct lion cub found in Siberia in 2017.

▼ **Figure 5.15** This 50 000-year-old lion is believed to be similar to both African lions and tigers. Scientists hope to be able to bring back the species in a process called de-extinction.

KEY TERMS

permafrost permanently frozen soil, mostly found in the polar and tundra biomes

decomposition the process of being broken down to smaller pieces by bacteria and fungi

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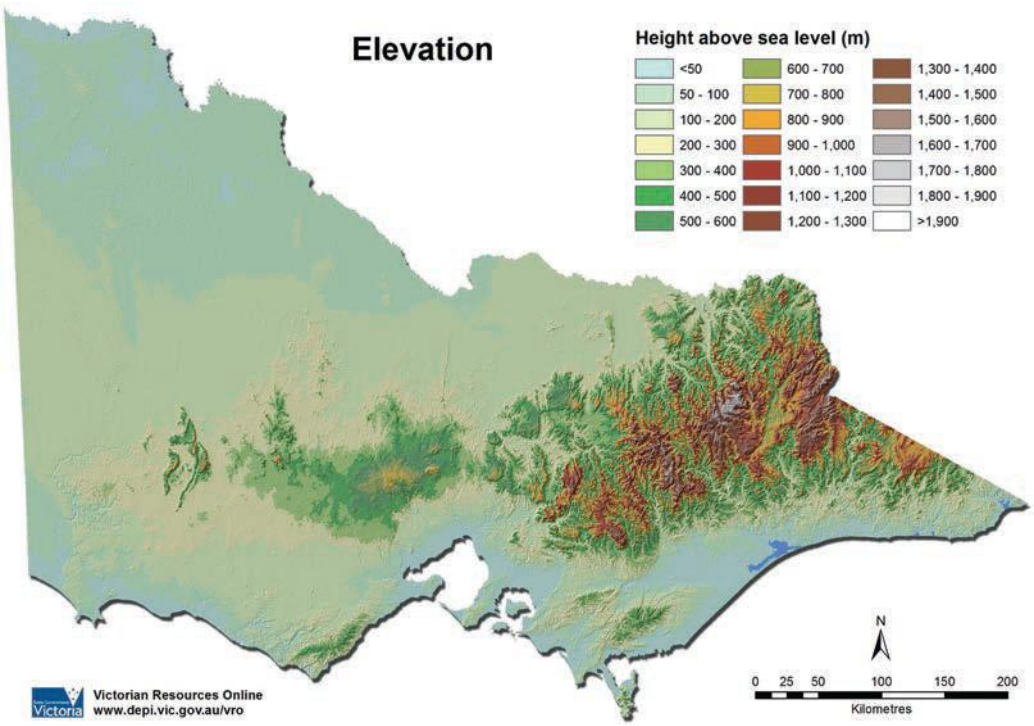
Elevation

Elevation refers to the height of land above or below sea level. Low elevation biomes include the **coastal estuary biome**, which is the place where the river meets the sea, and **marine biomes**, which are below sea level. Biomes located at higher elevations will experience colder temperatures as the atmosphere gets thinner. A thinner atmosphere cannot trap as much heat.

If you were to walk from the base of a mountain to its peak, you would likely walk through a variety of biomes. For instance, in the Andes of central Peru, you would begin your walk through the tropical rainforest, followed by mossy forest, woodland and steppes before you reach the cold, treeless **alpine biome**. An alpine biome often starts where snow begins to form. This can occur at different elevations depending on the particular characteristics of each place. For instance, the interconnections between latitude, ocean currents and how close a place is to the polar land masses can impact the elevation of the snowline.

▲ **Figure 5.16** Hikers make their way through the steppes biome in Peru with the Andes' alpine biome in view



◄ **Figure 5.17** Elevation map of Victoria. The snowline in Victoria is approximately 1300 metres above sea level. Estimate what percentage of Victoria is in an alpine biome.

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The changing distribution of biomes

The distribution of biomes is therefore determined by a unique combination of factors that support an extraordinary diversity of life. These factors have the ability to change over time, resulting in the movement of biomes. Natural changes include the processes of erosion and deposition, which affect the elevation of a region.

Importantly, humans also play a part in changing the distribution of a biome, by altering the land through deforestation, mining, farming and development. Even overhunting or the introduction of certain animal or plant species can disrupt how species interconnect with each other, and therefore change the structure of life in the biome. Some biomes can become extinct, while new biomes can potentially form. Understanding the changes and interconnections within biomes is an important mission for geographers, who work to find a balance between the needs of a growing human population, and the millions of unique and fascinating species that also share life on this planet.

END-OF-SECTION REVIEW 5.1

Digital quiz
Please see the Interactive Textbook to access digital activities

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Define the term 'biome'.
2 What are four characteristics that can determine a biome's distribution?
3 Why do higher elevations experience colder temperatures?
4 What are some of the human and natural activities that can change the distribution of biomes over time?
5 Explain the difference between climate and weather.

Interpret

6 Describe the distribution of biomes in Figure 5.13 using the PQE method.
   a **Pattern:** Is the pattern of distribution even or uneven?
   b **Quantify:** Identify some of the major biomes. Locate where they are found and estimate what percentage of Earth they cover.
   c **Exception:** Are there any exceptions to the pattern? For example, is there a biome found mostly in one region but also to a much lesser degree in another region?
7 Describe the spatial association between Figures 5.13 and 5.14 using the DQE method.
   a **Degree:** Is there a strong, moderate, weak or no degree of spatial association between the two phenomena?
   b **Quantify:** Support your statement in (a) by naming and locating regions and estimating the percentage of overlap between the two phenomena.
   c **Exception:** Are there exceptions to the general pattern of association? Name and locate these exceptions and explain why these are exceptions.

Argue

8 'Some biomes support more plant and animal life than others.' Do you agree with this statement? Ensure that you refer to at least three biomes and their characteristics to justify your reasons.
9 Do you believe that changes in the distribution of biomes are mostly due to human or natural influences? Discuss your viewpoint.

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Extension

Applying spatial concepts

1 Choose one of the following **places** and conduct further research into its biome or biomes by applying the skills below.

- Sahara Desert
- Gobi Desert
- Amazon Rainforest
- Daintree Rainforest
- Himalayas
- Serengeti
- Alaska
- Siberia
- Great Lakes region.

Place

a Describe the place by providing its name and describing its location.

b Identify the indigenous people of this location who call this place home.

Environment

c Identify the biome or biomes found at this location.

d Describe the natural environment of your chosen location.

Space

e Referring to Figure 5.13, describe the distribution of this biome on a global scale.

Interconnection

f Provide an example of how people have modified or managed this environment.

g Choose one indigenous animal or plant species and describe the way it has adapted to live in this environment.

▼ **Figure 5.18** The Serengeti is 30 000km^2 of picturesque land, known for its large predators and the largest mammal migration in the world

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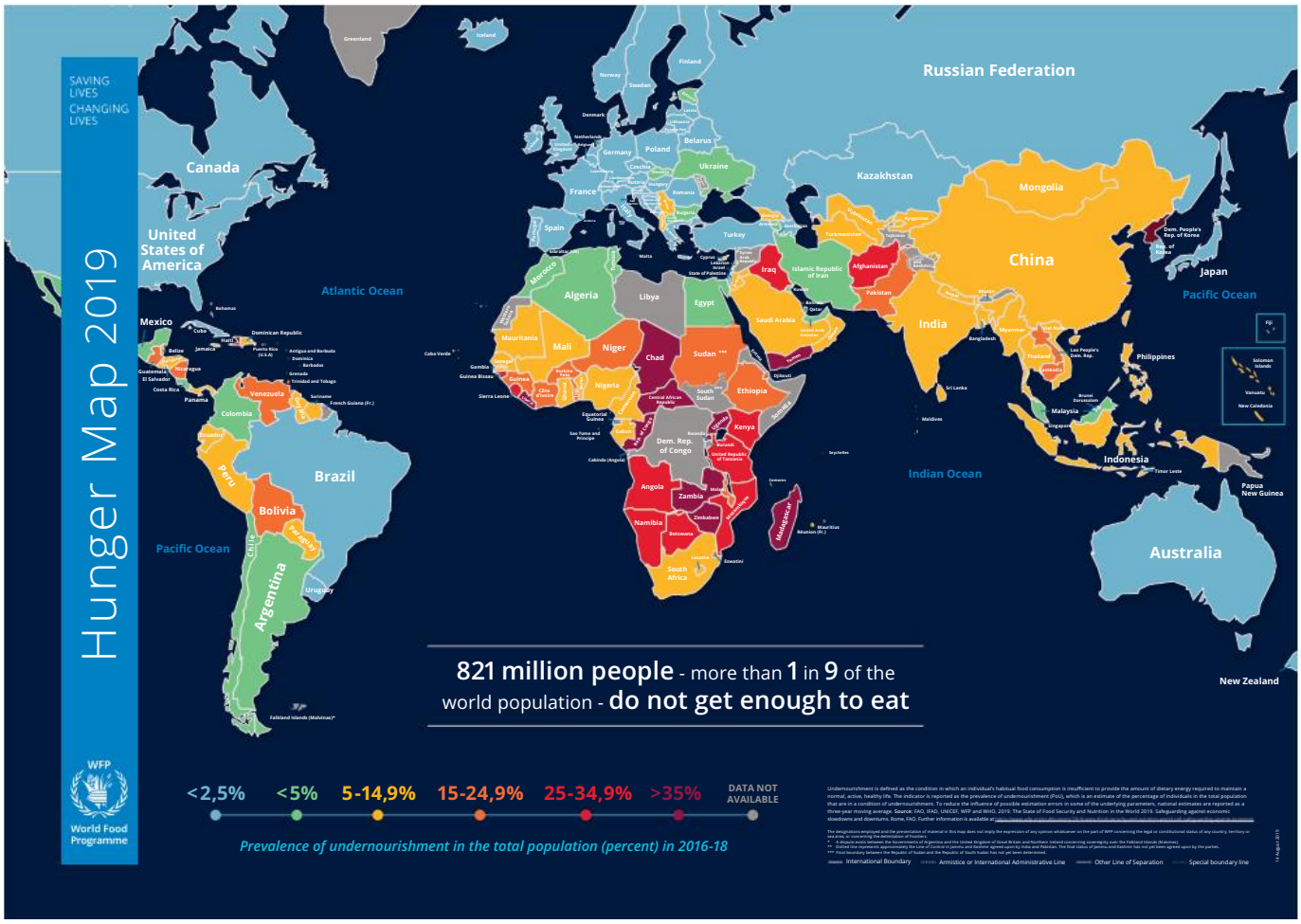
5.2 Food security

FOCUS QUESTION

What is food security?

According to the World Food Summit, food security is achieved 'when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life'.



▲ **Figure 5.19** The global distribution of undernourishment. To read the detailed text on the map clearly, please visit the World Food Program website. Through this website you can also find a lot more detail on this important topic.

When we examine food security on a global scale, as in Figure 5.19, we find that people born in some countries have a higher risk of being undernourished. However, working out who has access to nutritious food is not a simple task. There can be people living in food-secure countries (such as Australia) who go hungry. Conversely, there are people in food-insecure countries (such as Zambia) who have no problem accessing food.

Taking a closer look: changing the scale

The geographic concept of scale focuses on the way that we look at different phenomena at different spatial levels. Looking at things on a small-scale map can give us the big overall picture. Looking at large-scale maps can help us see more specific detail and understand an issue in more depth. To understand the distribution of food security more closely, we need to use a larger, more specific scale.

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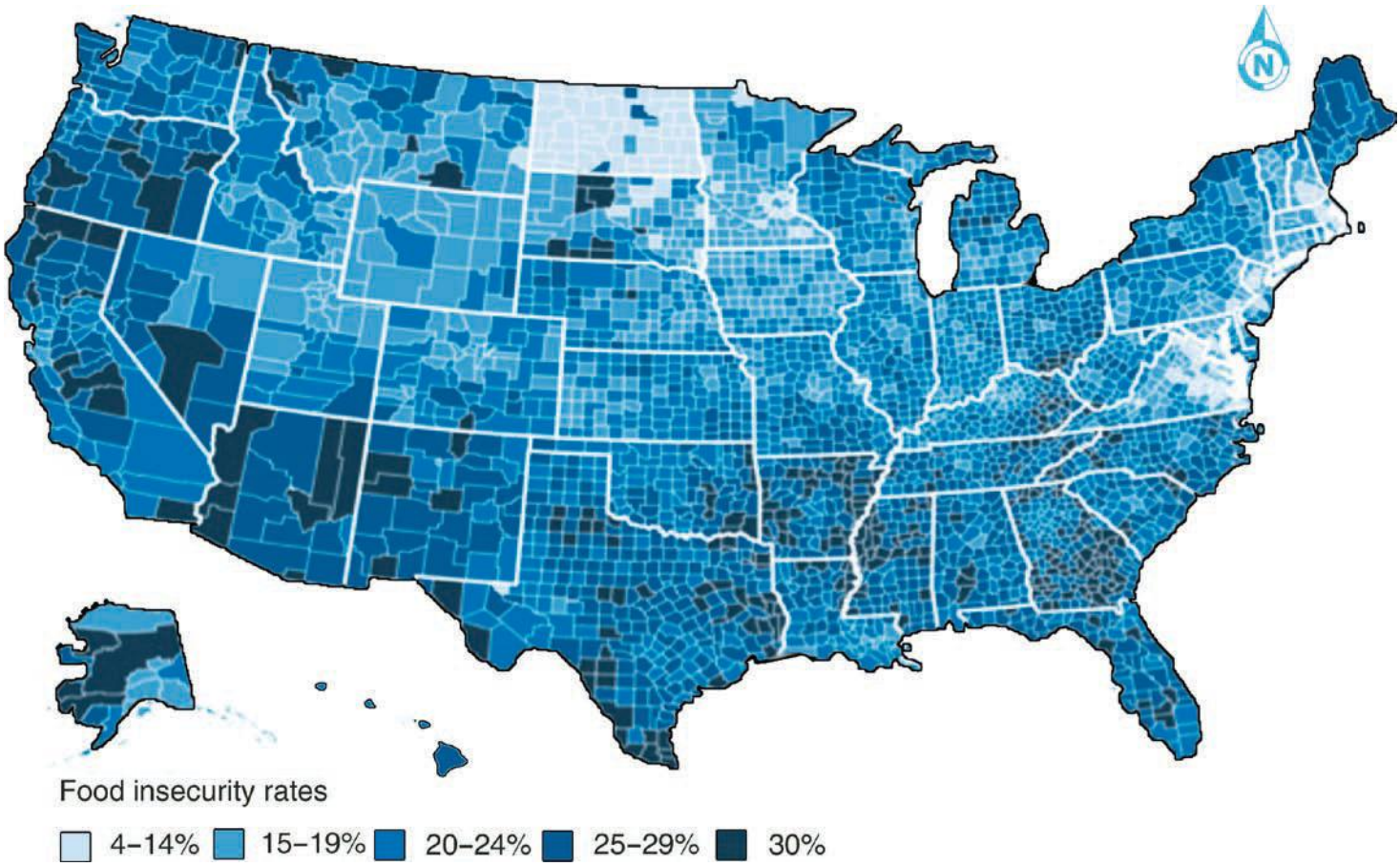
Amazing but true …

How does a smaller-scale map show the bigger picture? Confusing, isn't it? A good way to remember is to think that the bigger an object looks on the map, the bigger the scale of the map.

Figure 5.20 is a choropleth map of food insecurity in the United States on a state and regional scale. The United States is identified in Figure 5.19 as having a low risk of undernourishment. Taking a closer look using Figure 5.20, we discover that there are in fact many US residents who have a much higher risk of being undernourished and experiencing food insecurity.



▲ **Figure 5.20** A choropleth map uses different shades of the same colour or different colours to identify the different data sets

Undernourishment: not eating enough food to maintain good health – *Cambridge Dictionaries Online*

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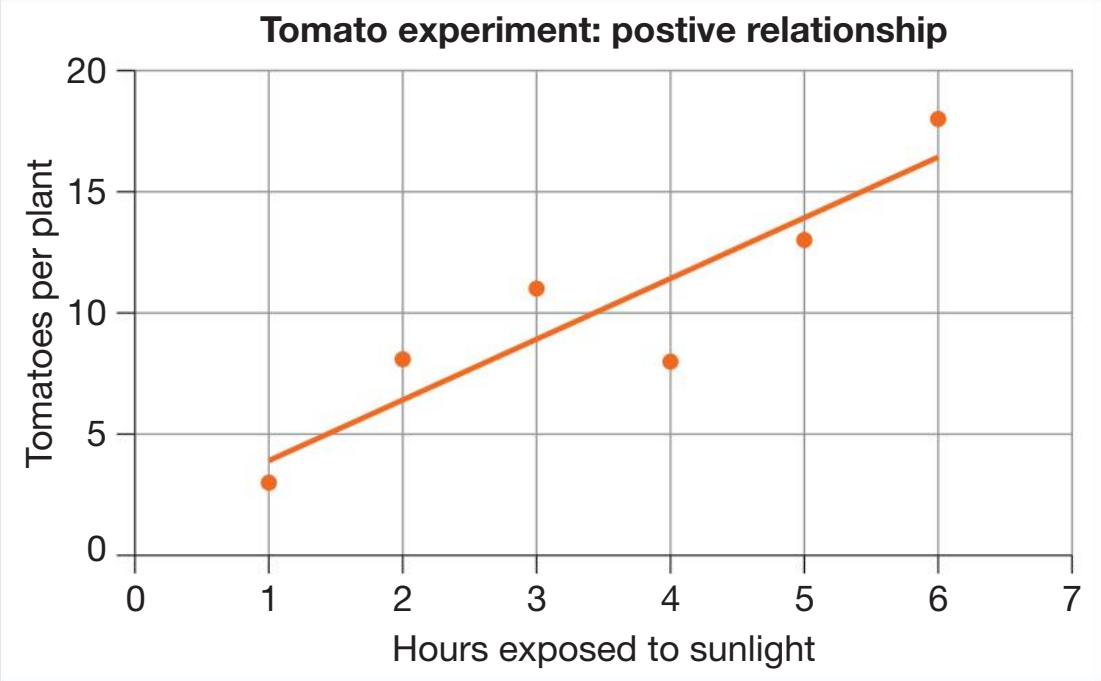
DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 5.3

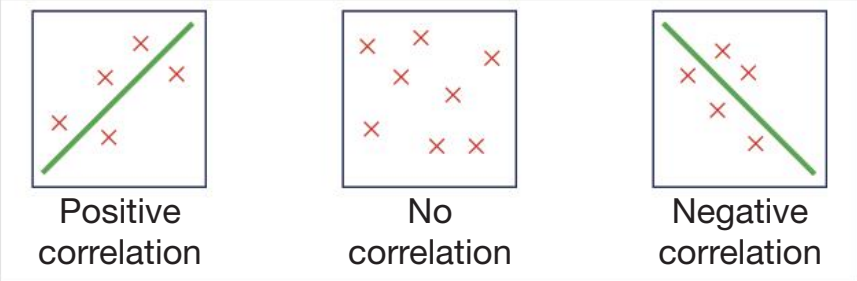
Reading scatter graphs to understand the association between phenomena

Scatter graphs are a tool that geographers can use to examine whether or not there is an association between two phenomena. For example, we can use a scatter graph to examine whether there is a possible association between how much sunlight a tomato plant gets and how many tomatoes plants produce.



▲ **Figure 5.21** A scatter graph plotting the association between exposure to sunlight and tomato yield

To read a scatter graph, either draw or imagine a line running through the middle of all the data that has been plotted on the graph. This is called your 'line of best fit'.



- A **strong correlation** is when the points sit close to the line of best fit.
- A **weak correlation** is when the points sit far from the line of best fit.
- A **positive correlation** is when an increase of the x-axis's phenomena is matched by an increase in the y-axis's phenomena. (The line of best fit goes from the bottom left to the top right.)
- A **negative correlation** is when an increase of the x-axis's phenomena is matched by a decrease in the y-axis's phenomena. (The line of best fit goes from the top left to the bottom right.)

Though a strong correlation may suggest that there is a relationship between two phenomena, ensure that you do not use the word 'cause' when describing the relationship. This is because a correlation does not necessarily mean that one phenomenon causes changes in another one. There are often additional factors that may also influence the relationship.

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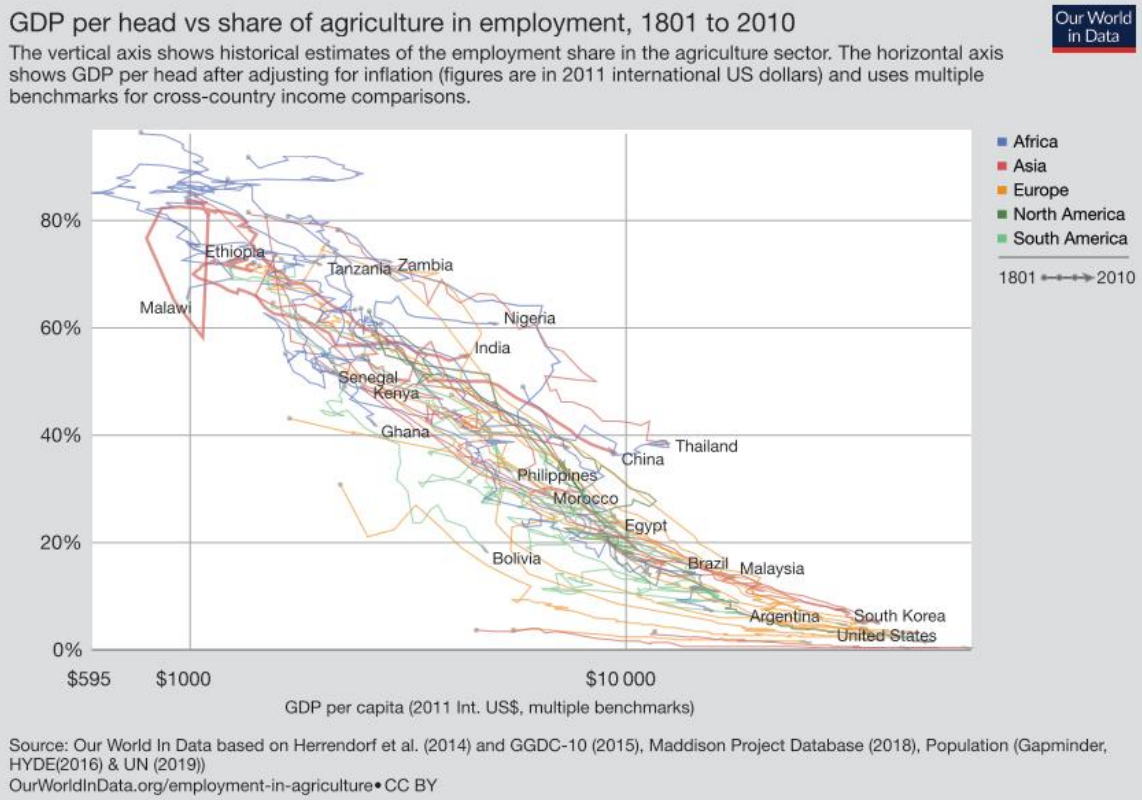
KEY TERM

gross domestic product (GDP)
the total value of goods and services produced by a country in one year

Using Figure 5.22, describe the relationship between **gross domestic product (GDP)** per capita and the percentage of the workforce employed in agriculture.



▲ **Figure 5.22** The relationship between GDP per capita and employment in agriculture

▼ **Figure 5.23** Millions of people are employed in the agriculture industry worldwide, and depend on crop outputs to survive. Here, a man manipulates sesame seeds in a bean shop in Cairo, Egypt, in June 2019.

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END-OF-SECTION REVIEW 5.2

Digital quiz
Please see the Interactive Textbook to access digital activities

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 According to the World Food Summit, what are the three elements that are required to achieve food security?
2 How does a choropleth map show data?
3 Why should you avoid using the word 'cause' when describing a scatter graph?
4 Why is determining who has access to nutritious food a challenging task?

Interpret

5 Describe the distribution of food security on a global scale using the PQE method.
6 Refer to Figure 5.20, plus you should also search for a map of the United States online which shows the names of each state.
   a Which US state appears to have the highest level of food security?
   b Which US state appears to have the lowest level of food security?
   c Write down one question that you have about this map.

Argue

7 Outline the benefits of examining data on a global scale.
8 Outline the benefits of examining data on a regional scale.

Extension

1 Use a scatter graph to see whether the phenomenon of 'income' is associated with the phenomenon of 'nutrition'. Go to the 'Tools' page on the Gapminder website. Click on the x-axis and make sure that it is set to 'income'. Then click on the y-axis and in the search bar, type 'nutrition'. Click on the link and a scatter graph should be created for you. Use your scatter graph to answer the following analysis questions:
   a Is there a strong, moderate or weak correlation between income and nutrition?
   b Is the correlation positive or negative?
   c Explain the relationship between income and nutrition. Quantify by including data from the graph in your answer.
2 Consider another phenomenon that may be associated with nutrition. Change the setting of the x-axis from 'income' to this other factor.
   a Is there a strong, moderate or weak correlation between your chosen phenomenon and nutrition?
   b Is the correlation positive or negative?
   c Explain the relationship between your chosen phenomenon and nutrition. Quantify by including data from the graph in your answer.

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5.3 Factors that influence crop yields in Australia and other areas of the world

FOCUS QUESTION

What factors influence crop yields within Australia and across the world?

What do you think are our most basic human needs?

There is a good chance that these needs are met by the plants and animals that we grow and breed. Our food comes from vegetable and cereal crops as well as dairy, poultry and meat from animals. Our clothing and shelter can also come from plants and animals. Fibre is the thread from plants or animals that is used to make products such as cloth and rope. Cotton is a plant fibre, while wool is an animal fibre.

KEY TERMS

agriculture the process of growing crops and raising animals for human use and food

crop yield the amount of produce that is grown on a piece of land

livestock animals used for work, food or produce

feed lots a place where livestock are fed to gain weight quickly

pasture grassed land suitable for grazing animals

Dating as far back as 65 000 years ago, when Aboriginal and Torres Strait Islander peoples are known to have practised **agriculture**, humans have worked hard to create a consistent food and fibre supply. We have achieved this by altering biomes and increasing the amount of product that could be grown on a piece of land, otherwise known as **crop yield**. In this topic, we will look at factors that influence yields both here and abroad.

What is a crop?

Crops are plants that are grown on a large scale, usually to sell for an income. While we often think of crops as the plants that produce our food, crops are grown for many purposes:

- Feed crops use 33 per cent of global agricultural land. They are grown to feed the 70 billion **livestock** that we eat each year. To make room for these animals, **feed lots** are often used, rather than **pasture**, and animals are fed feed crops such as corn and soy instead of their natural grass diet.
- Fibre crops include cotton and flax. They are vital to our way of life and produce items such as paper, rope and cloth. The extremely versatile hemp crop can be produced into sunscreen, rope, shoes, sustainable building material (hempcrete) and was even used to make the body of the BMW Renew Sports Car.
- Oil crops include canola, olive and palm oil and can be used in food, soaps, cosmetics and for biofuel. Biofuel is made by combining vegetable oils with alcohol and is used to fuel trucks, machinery and cars.

◄ **Figure 5.24** Hemp was used to make the body of this Renew sports car. The creator of the car, Bruce Dietzen, pulls a hemp cloth with Juan Carlo Mejia, who helped Bruce build the car.

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ACTIVITY 5.2

Crops

Can you match the crop with the image? The crops pictured, in no particular order, are: corn, bamboo, coffee, rapeseed, cashew, cotton, lettuce and sugarcane. Copy and complete this table (putting the figure number in the first column), or use the Interactive Textbook to complete this activity.

Crop	Name
▲ Figure 5.25 A	
▲ Figure 5.25 B	
▲ Figure 5.25 C	
▲ Figure 5.25 D	

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Crop	Name
▲ Figure 5.25 E	
▲ Figure 5.25 F	
▲ Figure 5.25 G	
▲ Figure 5.25 H	

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SHEEPT factors

In Geography, factors are the circumstances that contribute to or cause something to occur. One of a geographer's skills is the ability to consider the social, historical, environmental, economic, political and technological factors (or SHEEPT factors) that might influence a phenomenon and to piece this information together. The benefits of this skill include being able to deeply understand an issue, empathise with the many different people involved and their different perspectives, and see how the issue is interconnected to other events that are happening in the world. Understanding the whole picture allows geographers to develop effective responses to issues that not only work but also have the support of the people affected.

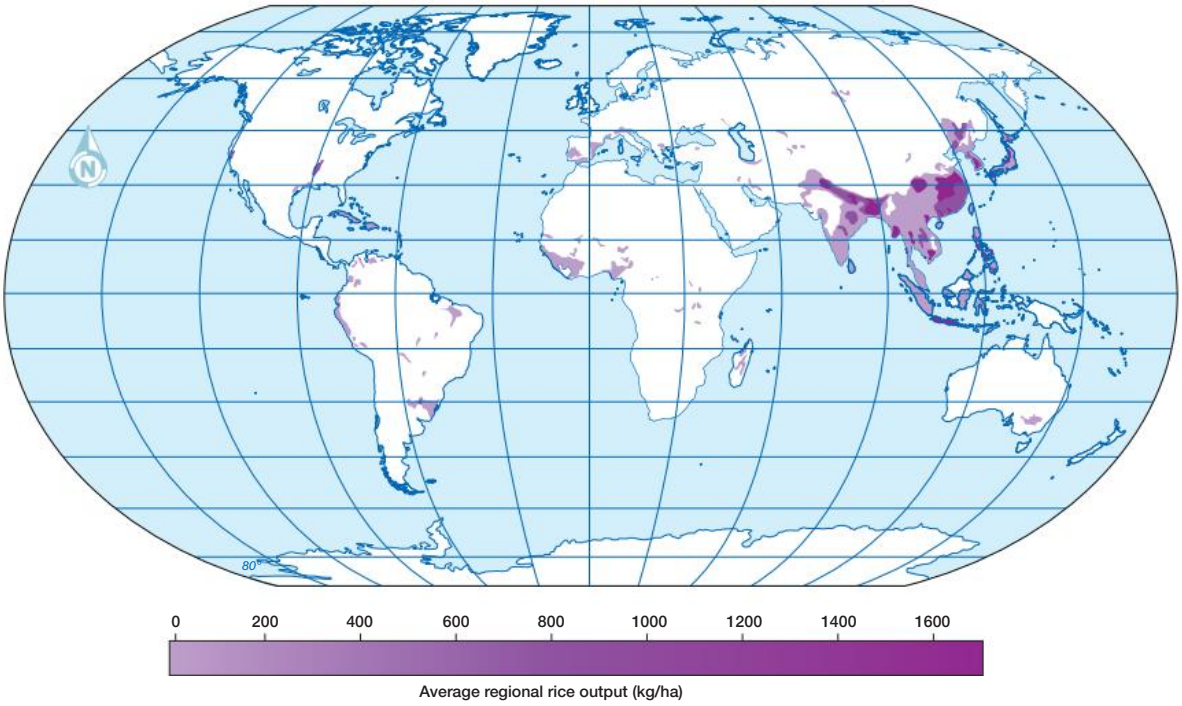
Environmental factors

The environmental conditions of our biomes have always been the most important factor in determining how much crop yield can be produced. Some world regions have been more vulnerable to food and economic insecurity than others, as some biomes produce less food and fibre to eat and trade. The importance of this is enormous; environmental factors have greatly influenced the wealth and prosperity of countries. For example, the five most useful domesticated animals (cow, horse, sheep, goat and pig) all originated from species found in Europe. This allowed the people of Europe to thrive due to their ability to grow meat supplies and use animals for farm work. In South-East Asia, the high temperatures and precipitation levels of

▼ **Table 5.3** Factors can be classified using SHEEPT

Classification	Description
Social	Relating to people and their culture, values, religion, population structure, education and ethnicity
Historical	Actions or events from the past that might influence the present
Environmental	The influence of the characteristics of a natural or human environment
Economic	Relating to the earning or spending of money
Political	Relating to governments and the impacts of their decisions
Technological	The influence and uses of different types of technology

▼ **Figure 5.26** Global distribution of rice production



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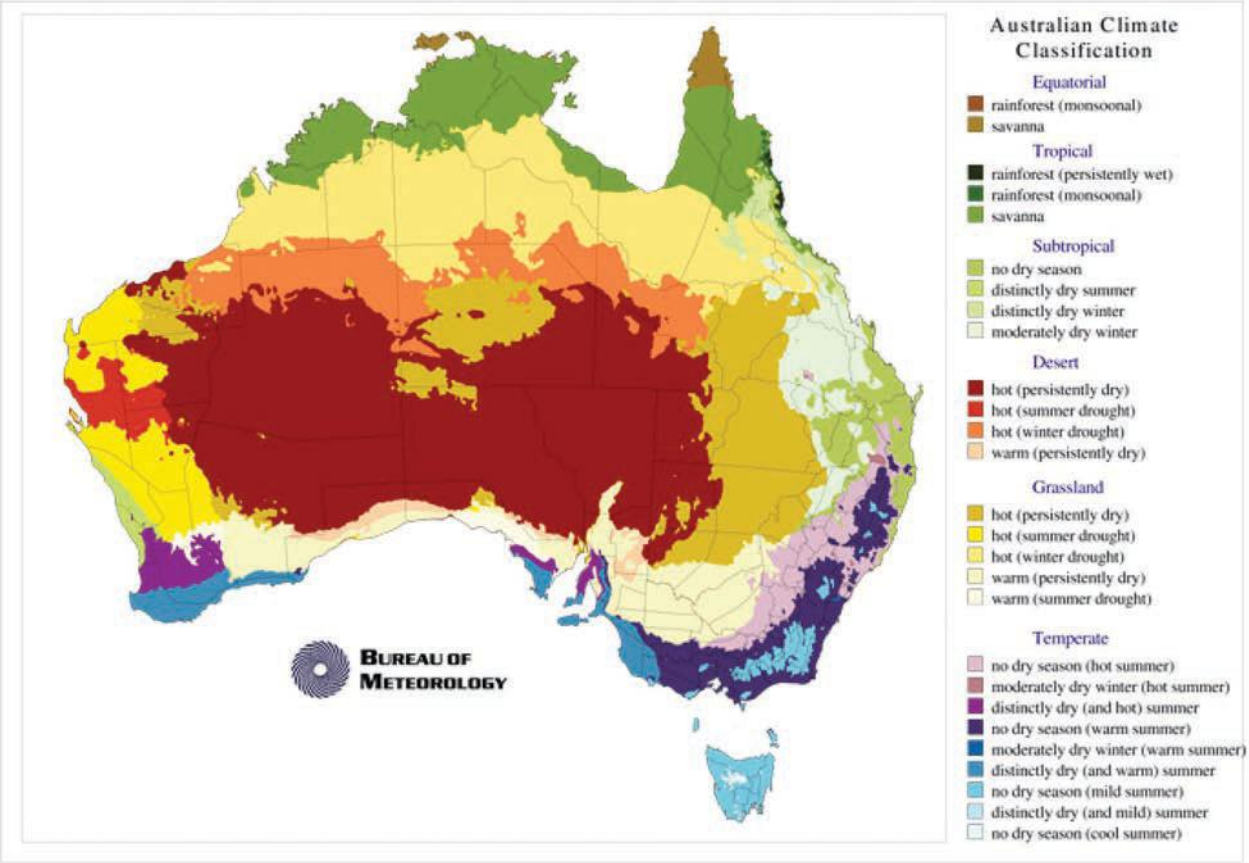
▲ **Figure 5.27** Global distribution of the tropical rainforest biome



▲ **Figure 5.28** Even within temperate climates, there can be variation. This figure shows the distribution of nine different temperate climates within south-western and south-eastern Australia. Can you find the climate for your region? Why do you think Australia has so many climate types?

KEY TERM

staple a food that is eaten so often that it is one of the main parts of a person's diet

the rainforest biome create excellent rice-growing conditions. Rice is a major food **staple** for the region and plays an important role in achieving food security in the region.

Climate

Climate refers to the temperature, precipitation and wind in a region. Although all biomes pose some challenges to farmers, temperate biomes, such as those found on the south-east coast of Australia (see Figure 5.28) are often regarded as favourable for crop production. Temperate

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climates provide the long exposure to sunlight over spring and summer that are needed by many crops to fully develop. These climates are not too cold or too hot. Extreme cold can freeze plant cells, preventing nutrients and water from being able to flow through a plant. Extreme heat can burn crops. Temperate climates also provide a moderate amount of rainfall, and are less likely to be subject to harsh, dry winds, which can dehydrate and damage crops.

Topography

Within large climate regions, there are many smaller regions that have their own particular conditions, known as **microclimates**. **Topography** can play a significant role in determining microclimate distribution. Valleys are prone to frost, which can kill crops such as wheat and canola, due to the cold air sinking and the warm air rising overnight. The **aspect** of a farm can further impact yield. In Australia, a slope facing east will get the gentler morning sun, whereas a west aspect will get the hotter and harsher afternoon sun. As the sun is to our north in Australia, a southern-facing slope will be cooler and is more prone to damaging winds from the Southern Ocean.

A SMART farm is one that uses modern wireless technology as part of its agricultural practices. Geographic information systems (GIS) is used to map the topography of SMART farms in Australia and across the world. GIS is a form of spatial technology that involves gathering and analysing spatial data. By organising the data into layers using interactive maps, you can more easily establish patterns and relationships. In agriculture, topography and other natural characteristics such as wind speed and **soil moisture content** are mapped in different GIS layers. Once all this information is mapped, the SMART farm can determine the best use for each zone. Figure 5.29 shows the topographic layer of a farm in Oregon, USA, while Figure 5.30 shows a weather station with an anemometer, a meteorological tool that measures wind speed. The data collected from the anemeometer can form another layer of information in a GIS map.

KEY TERMS

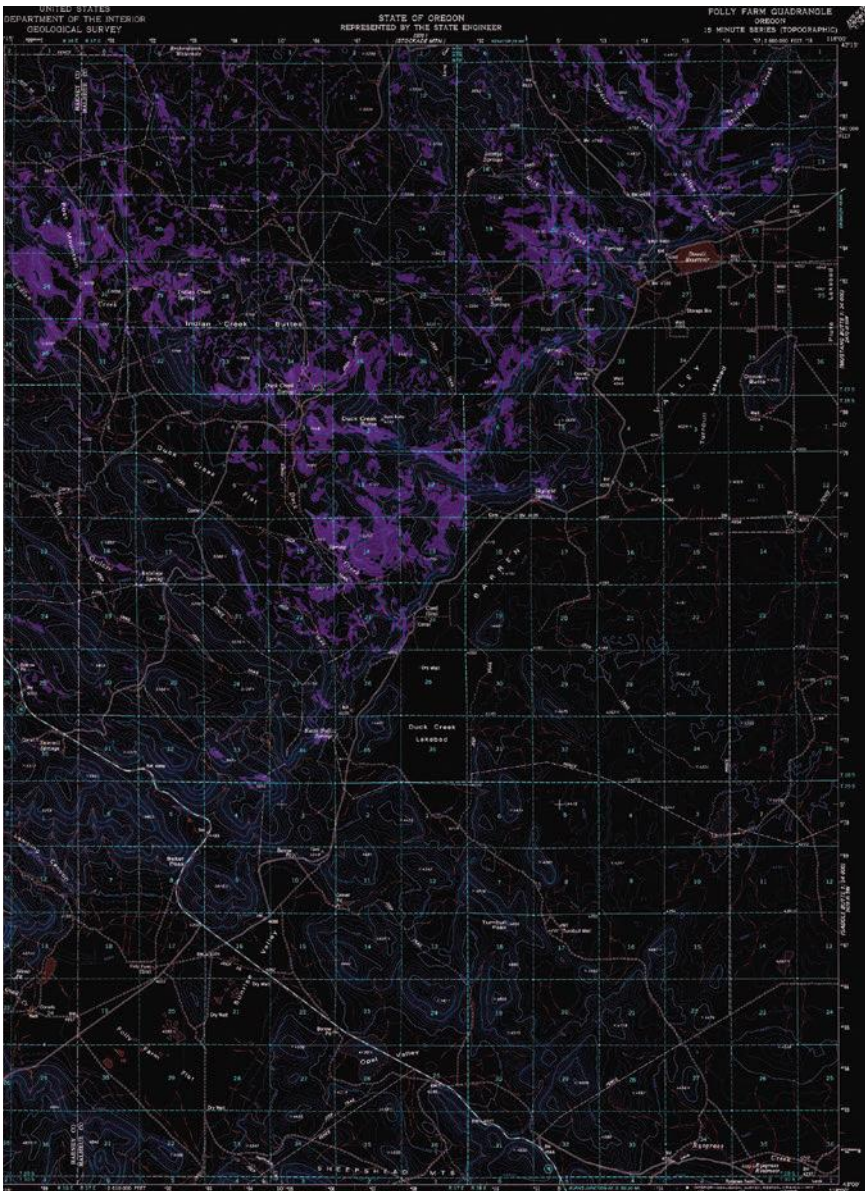
microclimate the climate of a very small area that is different from the surrounding climate

topography the shape of the land's surface, which includes landforms such as hills, plateaus and valleys

aspect the direction that a slope faces

soil moisture content the amount of water in a sample of soil

▼ **Figure 5.29** Mapping the topography of Oregon Folly Farm in the United States



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▲ **Figure 5.30** Weatherstation with anemometer, which is often used for smart agriculture and farming

KEY TERM

terracing sloped land that has been cut into flat platforms for farming

Topography also influences soil moisture content. Adequate soil moisture is needed to provide water to plant roots. Places of higher elevation cannot absorb much water, as gravity causes water to flow downhill too quickly to be absorbed. A steep topography also has very little soil for plants to grow in. This is because the fast movement of water down a steep slope collects the soil and transports it downhill, leaving only bare rock on the hill or mountainside.

Despite these challenges, many regions across the world have found a way to increase crop yield on sloped land. In fact, the art of **terracing** is an old one, used by the Wari culture in the South American Andes over 1000 years ago for potatoes and maize (corn). Terracing involves cutting a series of steps into the side of a slope, as seen in Figure 5.31. The steps help to slow the water as it moves downhill, improving the soil moisture content. It also slows the movement of soil. This gives plants a chance to grow their roots, which bind the soil and reduce erosion. In the high rainfall regions of South-East Asia, rice is a popular terraced crop, while in the drier Mediterranean region, terraced fields grow olives and grapes.

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▲ **Figure 5.31** The Hani of China turned a barren hillside into productive red rice fields that feed thousands of people. The system is so complex that it also farms fish and eel. Water is collected in the forest above and released into channels to flood the fields from December to March.

Soil

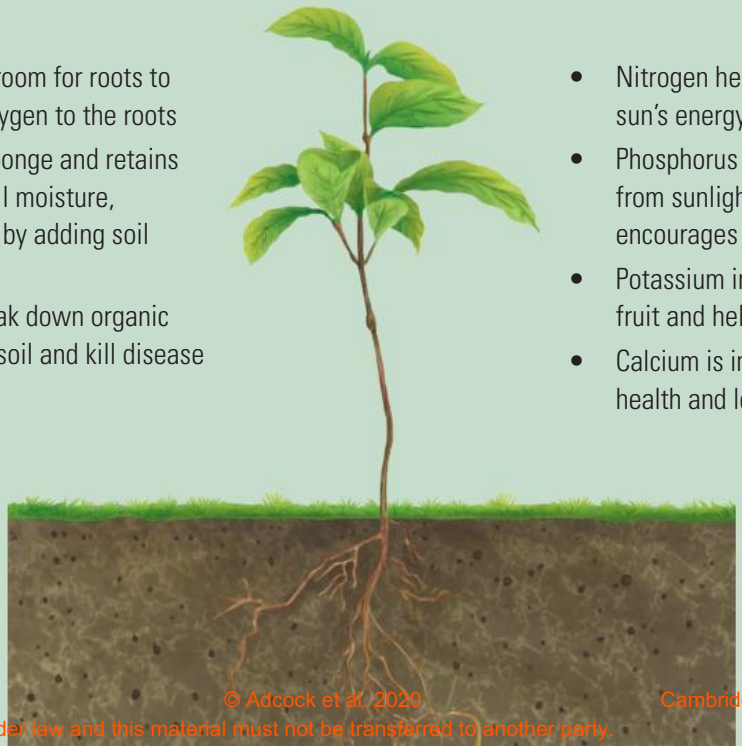
Healthy soil is vital to plant health and yield. Soil is the top layer of earth and consists of minerals, water, air and **humus**. Healthy soil increases plant yield by providing the balance of nutrients, minerals, air, water and microbial life that a plant needs to grow healthily and resist diseases. In healthy soil, you will find more microbes in one teaspoon than you will find humans on Earth. Figure 5.32 lists some of the ways that soil supports plant health.

KEY TERM

humus the organic part of soil that is formed when microorganisms break down plant material

How soil supports plant health

- Air pockets provide room for roots to grow and provide oxygen to the roots
- Humus acts like a sponge and retains water, increasing soil moisture, and reduces erosion by adding soil structure
- Microorganisms break down organic matter, detoxify the soil and kill disease organisms



- Nitrogen helps plants convert the sun's energy to plant food
- Phosphorus helps transfer energy from sunlight to plants and encourages plant growth
- Potassium improves the quality of fruit and helps plants fight disease
- Calcium is important for root health and leaf growth.

► **Figure 5.32** The benefits of healthy soil in improving crop yield

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Figure 5.33 The methods of intensive industrial agriculture. Please see page 286 for more information.

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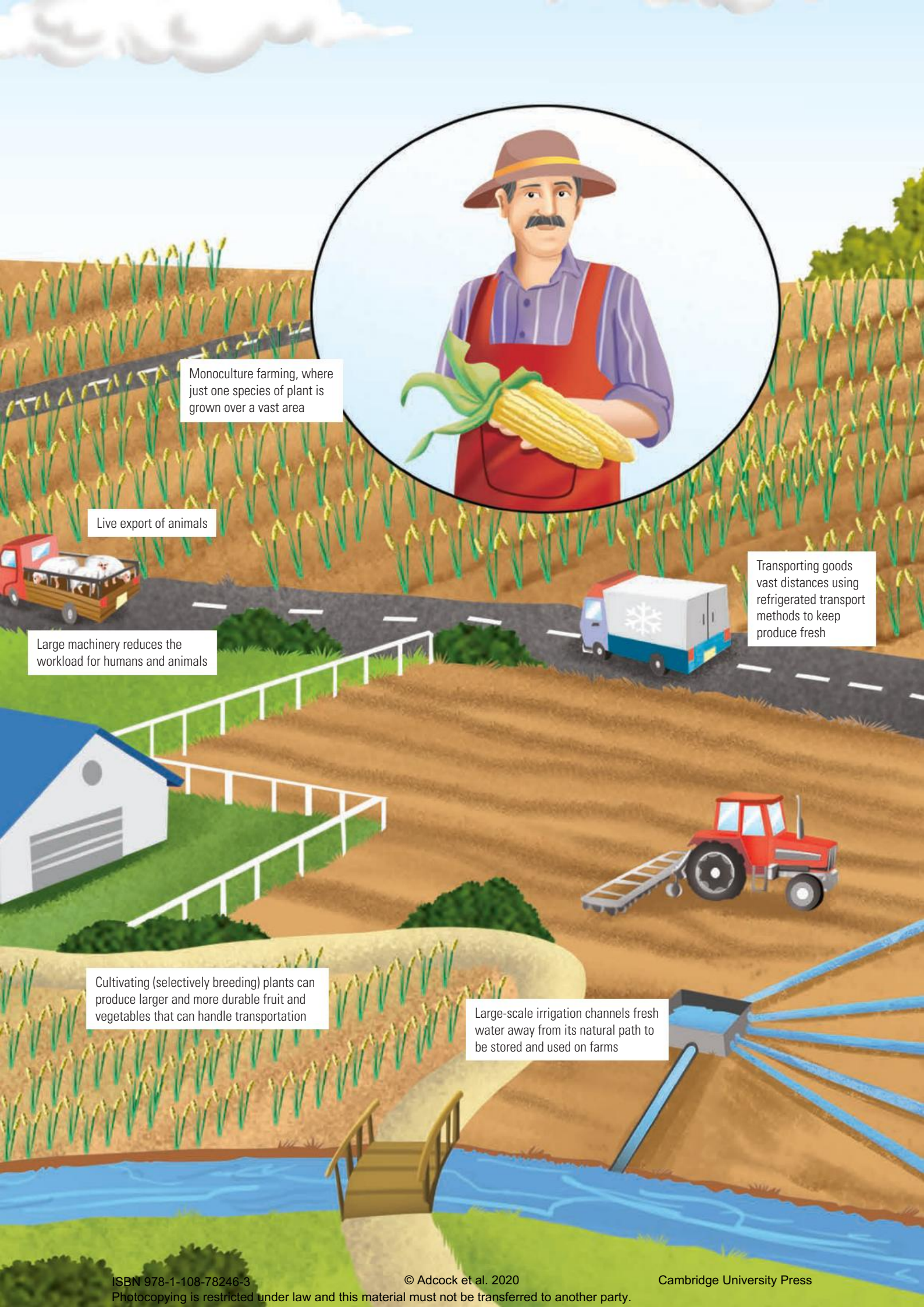

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Technological factors

Agricultural revolutions

The transformation of human societies from hunting and gathering to subsistence agriculture is often referred to as the first agricultural revolution. In subsistence agriculture, farmers grow food crops mainly to feed themselves and their families. If they have excess produce, they may sell it to gain a small profit, but this is not the aim. Subsistence agriculture is still practised by many people, particularly in the regions of sub-Saharan Africa, parts of Asia and Latin America.

The second agricultural revolution in the seventeenth and early eighteenth centuries refers to the dramatic increase of crop yields in Britain. This was due to many changes, including the increased use of the horse-drawn seed drill, which made human labour less intensive and more productive.

The most recent great change occurred during the Green Revolution, or Third Agricultural Revolution, between 1950 and the late 1960s. This revolution has largely set the scene for the type of farming we recognise today, often called intensive industrial agriculture. Figure 5.33 illustrates the methods of intensive industrial agriculture.

▼ **Figure 5.34** An image of an ancient corn (maize) on the left compared to the corn of today on the right, resulting from the cultivation (selective breeding) of maize crops over time

Unlike subsistence agriculture, the goal of intensive industrial agriculture is to increase crop yields to make a profit. The United States is an example of a country that has embraced agricultural technology. This has made it one of the top 10 producers of corn, wheat, potatoes and sugarcane, even though only 1 per cent of people are employed in agriculture. Despite the success that some countries have had, we are beginning to pay more attention to the longer-term economic, environmental and health concerns of these methods, which we will discuss in the next section.

Precision farming

For some farmers, there is a feeling that another revolution is upon us. Precision farming is regarded as the Fourth Agricultural Revolution. It is poised to relieve us from the most negative consequences of intensive industrial agriculture. Precision farming uses spatial technology such as sensors, drones and GPS to reduce the amount of labour, irrigated water, pesticides and fertilisers needed. GPS can be used to direct a tractor using satellite data, without the need for a human driver. Moreover, farmers can gather data about their soil's pH, nutrient and moisture content. This data can determine where to grow particular crops and apply fertilisers, rather than dose the entire field with fertilisers, which is expensive and harmful to the environment. Data can even be gathered on animals. A fitness-tracker like monitor fitted under a cow's chin provides farmers with data such as temperature and heart rate. This allows farmers to detect illness, stress or even when a cow is going into labour.

▼ **Figure 5.35** A fitness-tracker like monitor for cows, which sends data to farmers

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▲ **Figure 5.36** Drones spraying pesticide on crops

Economic factors

Running an industrialised farm requires more financial input than subsistence farming. So, what are you paying for when you pay for a tomato or a T-shirt?

Transport

Some of the fresh food in your fridge has potentially travelled thousands of kilometres to get to you using refrigerated transport, which uses a large amount of energy and fuel. Places close to cities and towns can yield more perishable foods that can survive the short travel distance to market, while more rural places will grow foods that can afford the cost of transport.

▲ **Figure 5.37** Tomatoes on sale in a Coles Supermarket in the CBD of Melbourne. How far do you think the product has travelled to get from the farmer's vines to your plate?

Labour

Despite technological improvements, agriculture still relies on people to perform much of the physical work. This is known as 'labour'. Agriculture needs skilled workers who can understand the environmental factors that improve crop yield. Wisdom and skill have often been passed down through farming generations. However, an increasing number of Australia's youth are moving to **urban** environments, rather than taking on the family farm. The average age of farm owners has risen from 40 to 55 in 25 years. Ensuring that the next generation consider agriculture as a career option is important to the sustainability of crop yields in the future.

KEY TERMS

urban relating to a city or large town

market forces economic factors that affect the price, demand and availability of a product

Market

The price of produce is often determined by **market forces**. This can put enormous pressure on farmers to sell their produce when it is worth a lot of money on the market, regardless of whether the produce is ready to be harvested. This can impact the yield's quality. For instance, a potato farmer may spray his crop to kill the potato plants, which hardens the potato skin so that it can be harvested at a time when the price is right, rather than waiting for the potato to naturally mature and harden its skin when it is ready.

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KEY TERMS

fossil fuels natural fuel, such as coal or gas, made from the remains of living organisms

input what is brought into a farm or farming system (e.g. water, machinery, chemicals)

Capital

The use of large machinery has dramatically increased the use of **fossil fuels** on farms and made the price of food and fibre interconnected with the price of oil. Such machinery, as well as the constant need to buy fertilisers and pesticides, is very expensive. This is linked to market forces, as a farmer may reduce their crop yield if the price they receive for the crop is too low and the cost of **inputs** is too high to make large-scale planting worthwhile.

CASE STUDY 5.1

The price of milk

Farmers provide the milk made on their farm to milk-processing companies. The processors decide what price they will pay for the milk. The milk is then distributed by the processors to supermarkets before finally being purchased by us, the consumers. Many countries in the world have laws that stop processors from offering farmers a price for milk that is too low. In Australia, these laws were changed in 2000. Now our dairy prices are set by market forces, and different processors are allowed to set different prices for milk. Farmers are sometimes forced to sell their milk to processors very cheaply. This was the case for Shane Hickey, a dairy farmer from Kyogle. Shane posted the following message on social media, which went viral.

> 'I would like to do a personal shout out to our supermarkets Woolworths, Coles, Aldi and IGA. I'm a proud dairy farmer, I work very hard … but I'd like to say I worked for $2.46 an hour last month … My parents, in 1986, were paid 20 per cent more per litre than what I'm getting now.'

Figure 5.38 Nkayla Afshariyan, Triple J Hack, Dairy farmer calls for fairer pay after revealing $.246/hr paycheck for milk supply, 2018

▲ **Figure 5.39** Fridges stocked with milk are seen in a Coles supermarket on 24 May 2016 in Sydney, Australia. Coles shelves were low on branded milk stock as consumers purchased more expensive brands in support of local farmers. This consumer trend arose after the country's largest dairy company, Murray Goulburn, cut the price it pays suppliers by 15 per cent in April 2016.

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MAKING THINKING VISIBLE 5.2

Circle of viewpoints

1. I am thinking of the price of Australian milk from the point of view of … the dairy farmer/environment/producer/consumer/cows.
2. I think … describe the topic from your viewpoint. Be an actor – take on the character of your viewpoint.
3. A question I have from this viewpoint is … ask a question from this viewpoint.

Wrap up: What new ideas do you have about the topic that you didn't have before? What new questions do you have?

END-OF-SECTION REVIEW 5.3

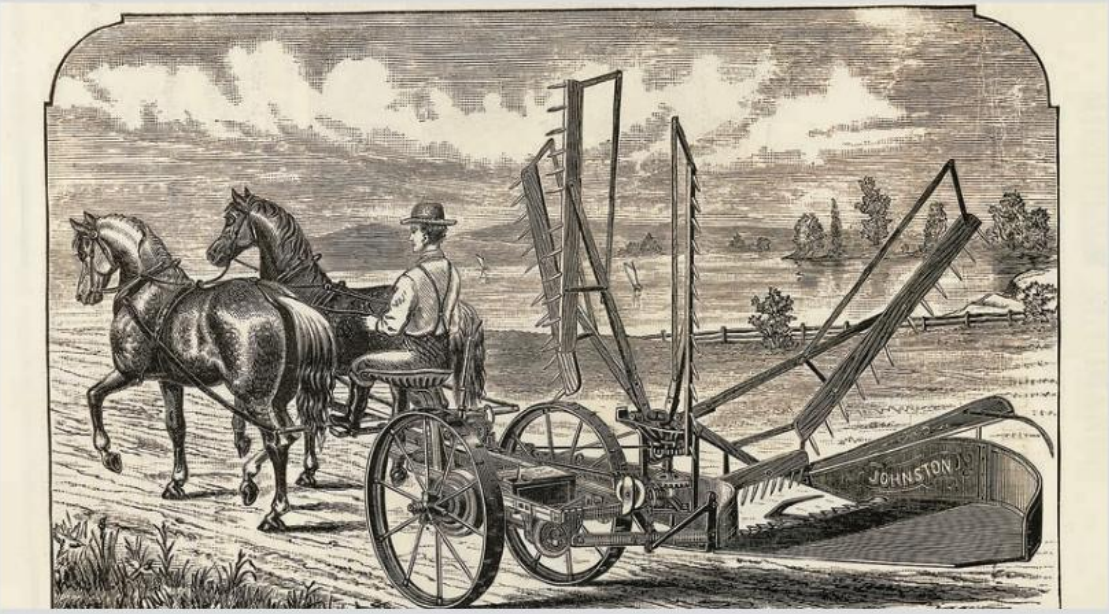
Digital quiz
Please see the Interactive Textbook to access digital activities

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. What is the difference between subsistence agriculture and industrialised agriculture?



▲ **Figure 5.40** The combined automatic mower and harvester was an invention that dramatically increased crop yield in the 1800s

2. Define the terms 'crop yield', 'agriculture', 'fossil fuel', 'soil moisture content' and 'microclimate'.
3. Why is it important for geographers to consider all SHEEPT factors when studying an issue?
4. Why are temperate climates good for growing crops?

Interpret

5. Describe how topography affects soil moisture content and erosion on a steep slope.
6. Describe the spatial association between tropical rainforests and rice-growing regions using the DQE method, using Figures 5.26 and 5.27.
7. How have environmental factors influenced the prosperity of countries?

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Argue

8 If the market price for your potatoes were high, would you spray them to sell them immediately or wait until they were naturally ready? Take on the role of a potato farmer and discuss the pros and cons that could influence your decision.

9 a Suggest reasons why more of Australia's youth are moving to urban regions rather than taking on the family farm. Include at least one push factor and one pull factor.

b What do you think could be done to attract more youth to farm work? **OR** Create a video advertisement campaign encouraging young people to live and work on farms.

10 'Improving crop yield has changed society.' To what extent do you agree with this statement? Justify your answer with examples.

Extension

1 Look up 'SMART Farm Video' (duration 3:54) on the University of New England website.

a List the precision agriculture technologies being trialled at the SMART farm in Kirby.

b Choose one of these technologies to investigate further. Ensure that you:

- Identify and describe the technology
- Explain the job it performs on farms and how it works
- Discuss the strengths and weaknesses of this technology.

2 Create a terraced fields tour on Google Earth. Choose three of the following sites, or choose your own:

- Rani Khet, Uttarakhand, India
- Tournon-sur-Rhône, France
- Blue Terraces, Shengyan Section, Yuanyang, Honghe, Yunnan, China
- Jatiluwih, Tabanan, West Bali.

Locate each site on Google Earth and create a summary box for the site that includes:

a The absolute location (latitude and longitude)

b The highest and lowest elevations of the terraces

c The scale (size) of the terraces. You can calculate the area of the terraces by using the measuring tool on Google Earth.

d The natural characteristics that you observe in this region, including which crop/s are being grown

e The human characteristics of the region (the type of human activity and infrastructure that you can see)

f A photo of the region.

3 Create a 3D topographic map – refer to the 'Guide to working with topographical maps' in the digital version of the textbook.

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5.4 Competing land uses in Australia and other areas of the world

FOCUS QUESTION

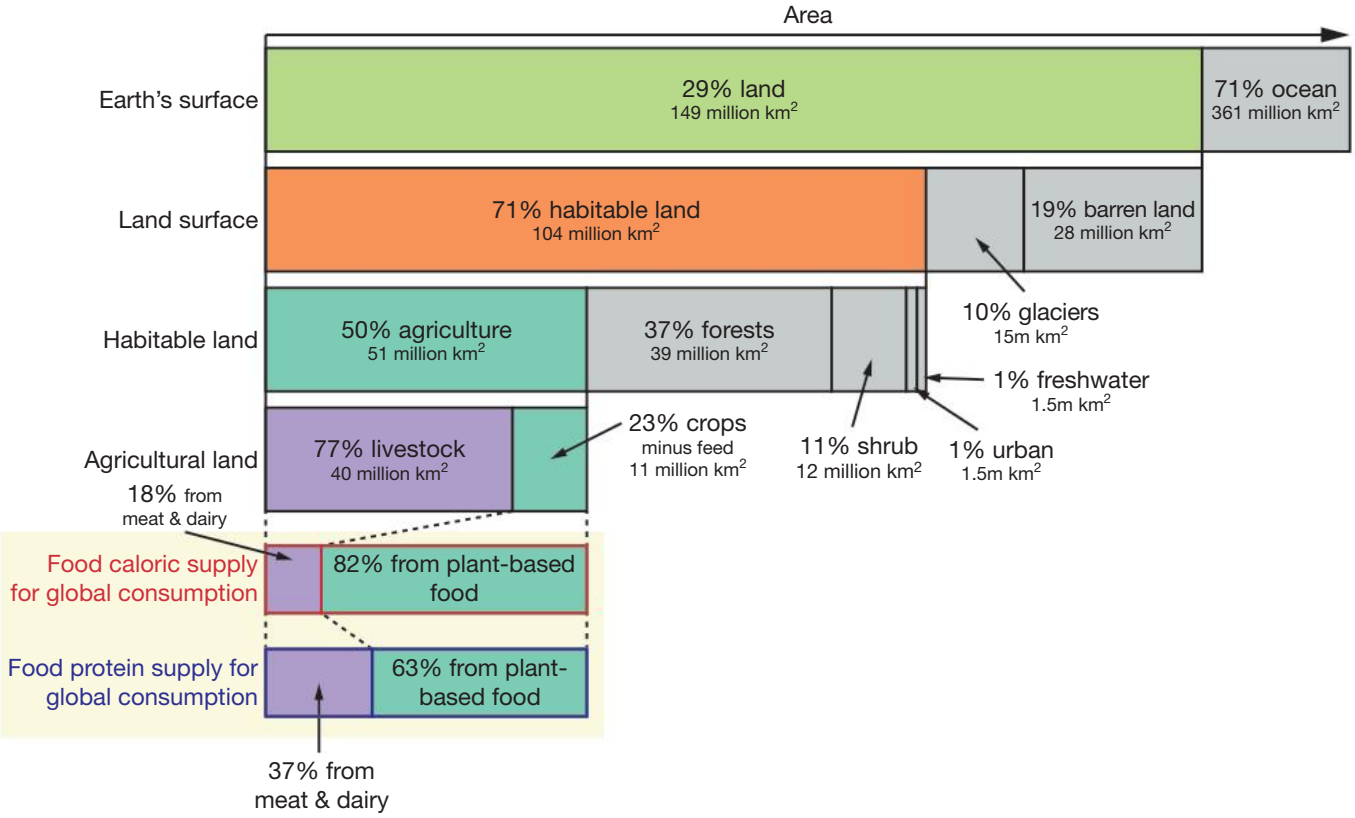
What is land used for in Australia and the world?

We have just one planet, which, along with the sun, provides everything we need to live, work and play. Not all biomes provide the prime conditions required to support all our human needs. However, our social and technological advancements have allowed us to use every continent of Earth in some way. As the human population grows, along with our desire for greater comforts, competition for the limited available land becomes tougher. In this topic, we look at the ways that land is used as well as tensions that can arise between competing land uses. Because geographers are always looking for solutions, we also ask: can we find a sustainable balance between competing land uses?

Competition between types of crops

As we have learned, land can be used to grow food crops, livestock feed, fibre and oil. There is much debate around how to best use the land available to us. Figure 5.41 graphs the current use of agricultural land, while Figure 5.42 shows how much land is required by various food types to produce a gram of protein.

Competition between crops can lead to food insecurity when market forces encourage farmers to grow non-food crops. This was the case in Mexico in 2007, when the price of corn became too expensive for many Mexicans, leading to the 'tortilla riots'. To understand the process that led to these riots, complete the flowchart activity on the next page.



▲ **Figure 5.41** Surface area of land used for food production.

Source: Hannah Ritchie and Maz Roser, 'Land Use', Our World in Data website, 2019

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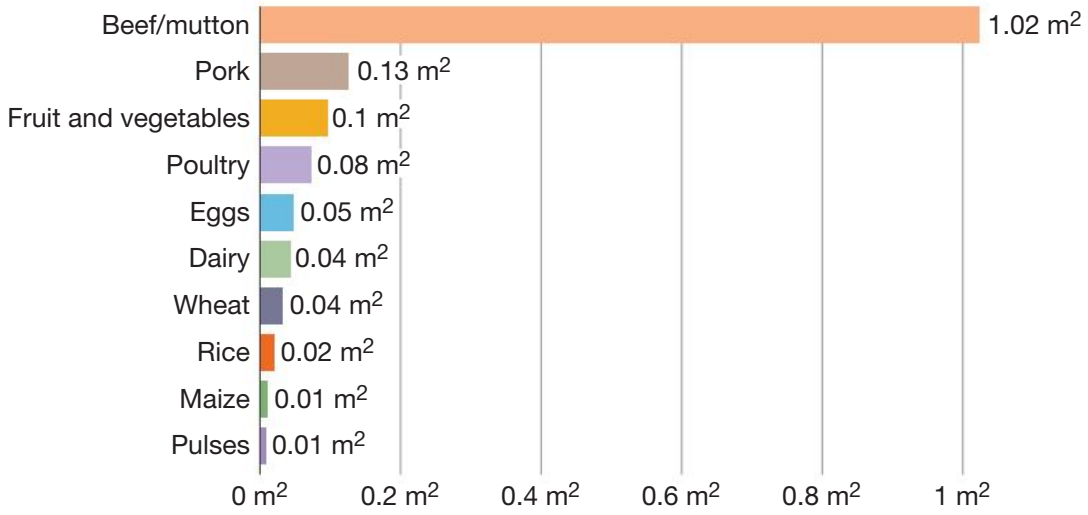

▲ **Figure 5.42** Land use per gram of protein for different food types.

Source: Hannah Ritchie and Maz Roser, 'Land Use', Our World in Data website, 2019

DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 5.4

Applying the concept of process by drawing a flowchart

Watch the video 'The Hidden Costs of Turning Food into Fuel' on the National Geographic website.

Arrange the following facts in order to create a flowchart. Illustrate your flowchart with drawings, symbols or pictures that relate to each step in the process.

- Once this happened, Mexico increased the amount of corn it imported from the United States from 8 per cent to over 30 per cent. This made Mexicans reliant on the United States for their food security. The Mexican Government made this decision as corn imports were cheap.
- The Mexican government was forced to limit prices to 8.5 pesos (77 US cents) per kilogram to ensure that people could afford food. Some suppliers ignored the agreement as it was not legally binding.
- This may not be the end of the story, as biodiesel demand continues to increase.
- In 2007, the United States increased its sales of biodiesel to Europe at a good price for use in cars and trucks.
- In 1994, the North American Free Trade Agreement allowed free trade to occur between Mexico and the United States.
- This drove the prices of US corn up, as the United States could make more money using its corn for biodiesel production.
- Many Mexicans could not afford the rising cost of tortillas, pushing them towards increasing levels of food insecurity.
- Food insecurity can result in political instability, as people become desperate from hunger or the fear of hunger. In this case, Mexicans started riots to protect the price of tortillas.
- In 2007, the increase in corn prices made tortillas expensive, as these are made from corn.

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Competition between tropical rainforest biomes and oil palm plantations

One of the fiercest contests between land use overseas is between tropical rainforest biomes and oil palm plantations. Figure 5.43 shows some of the ways we use the tropical rainforest biome.

This biome is significantly under threat from palm oil. Palm oil is an edible oil that comes from the fruit of oil palms. Forests equal to the size of 300 soccer fields are burned and cleared every hour in Malaysia and Indonesia to make way for oil palm plantations. Table 5.4 outlines some of the impacts that highlight the pros and cons of this contentious crop.

KEY TERMS

drawing down carbon or **carbon sequestration** where carbon dioxide is taken out of the atmosphere and stored in liquids or solids on Earth

transpiration the process of a plant absorbing water through its roots and releasing water vapour through pores in its leaves

Ways in which we use the tropical rainforest biome

- **Draw down carbon** out of the atmosphere. This is also known as **carbon sequestration**.
- Provide oxygen
- Add water to the atmosphere through **transpiration** (think plant sweat), which returns to the surface as rain
- Reduce erosion and landsides as plant roots bind soil together
- Provide habitat for plant and animal species
- As medicine. About 70 per cent of plants used in the treatment of cancer have come from tropical rainforests. Only 1 per cent of plant species have been tested to assess their medicinal value, which means that there is vast potential for more medicinal cures.

▲ **Figure 5.43** The tropical rainforest biome covers about seven per cent of the Earth's surface. It has dense vegetation at three different layers.

▼ **Table 5.4** Impact of oil palm plantations

Positive impact of palm oil	Negative impact of palm oil
• The industry has created some employment in poverty-stricken regions • It has increased the wealth of exporting countries. It contributes approximately 2 per cent of Indonesia's gross domestic product (GDP). • This crop is appealing to growers because it is high-yielding, cheap to grow and in high demand • It is appealing to manufacturers because it is cheap to buy and has a long shelf-life, so it is great to use in products that need to last	• Some locals' livelihoods are lost as they lose their homes, food, natural resources and sources of income in places where subsistence farming is key to survival • Deforestation is a major contributor to climate change, as trees release carbon into the atmosphere when they die • About 75 per cent of our accessible fresh water comes from forests, making these biomes vital to our food security. However, burning forests turn rivers to mud, create landslides and pollute the air.

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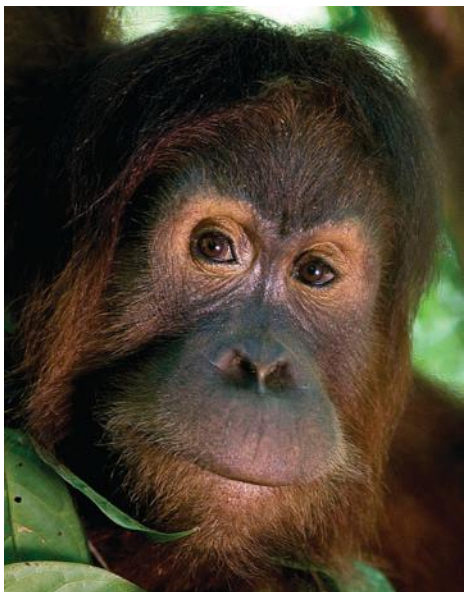
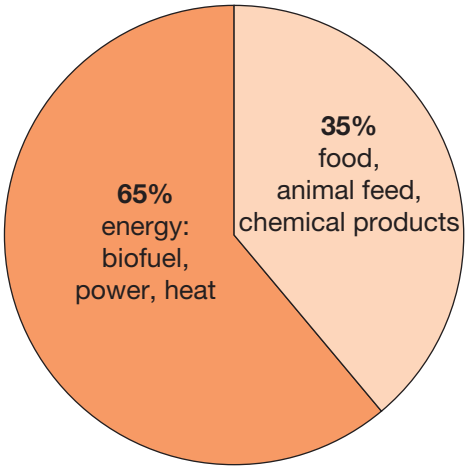
Positive impact of palm oil	Negative impact of palm oil
• It is versatile. There is a high chance that you are interconnected with palm oil through the food you eat and products you use. About half of Australia's packaged foods contain palm oil. • Biofuel is made from the palm shells, fruits and other organic waste that is left over from producing palm oil. In 2018, half of Europe's palm oil imports were used for car and truck fuel.	• Increased droughts. When forests are cut down, less water is released to the atmosphere. • Threatened and endangered species lose vital habitat. About 80 per cent of orangutan habitat has been altered or lost. • Palm oil biofuel releases three times the carbon emissions of fossil fuels.



▲ **Figure 5.44** An orangutan, many of which are losing their homes due to deforestation in Indonesia



▲ **Figure 5.45** What palm oil was used for in Europe in 2018

Responses to the competition between oil palm plantations and tropical rainforests

As Figure 5.46 shows, no other oil crop can yield even a third as much oil per hectare (10 000 m^2) planted. It also requires fewer pesticides and chemical fertilisers than other vegetable oils. However, the clearing of rainforests is unacceptable and unsustainable. Effective responses are therefore necessary. This section will examine three types of responses.

Monitoring the industry

The Roundtable on Sustainable Palm Oil (RSPO) was established in 2004. Its aim was to set global standards to increase sustainable palm oil production.

There has been limited success. People can now purchase products labelled 'certified sustainable palm oil' or CSPO. However, the RSPO has been criticised for not doing enough to ensure that certified companies truly act sustainably. Many companies are still burning forests and peatlands, rather than planting on grasslands or previously destroyed forests. Workers' rights groups have also reported abuses, including forced and child labour.

Campaigning

Greenpeace has mapped the deforestation and peat destruction of CSPO companies and discovered that some companies were not acting sustainably. Greenpeace coordinated a campaign against Wilmar, one of the world's largest oil palm plantation owners.

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The campaign involved: **occupying** Wilmar's palm oil refinery and boarding a tanker ship that was transporting Wilmar's products; blockading the Mondelez factory in Italy, which uses palm oil for the manufacturing of Oreo, Cadbury and Ritz products; and bringing images of the deforestation occurring to Mondelez head offices around the world. Some 1.3 million people signed a Greenpeace petition calling for an end to deforestation for palm oil.

There has been some success, as Wilmar has agreed to map its suppliers' land by 2020 and use high-resolution satellite imagery to monitor deforestation. Wilmar has also stated that it will immediately stop trade with palm oil companies that are caught clearing rainforests. This is promising; however, previous promises by Wilmar were not followed through. The company will continue to be monitored by Greenpeace.

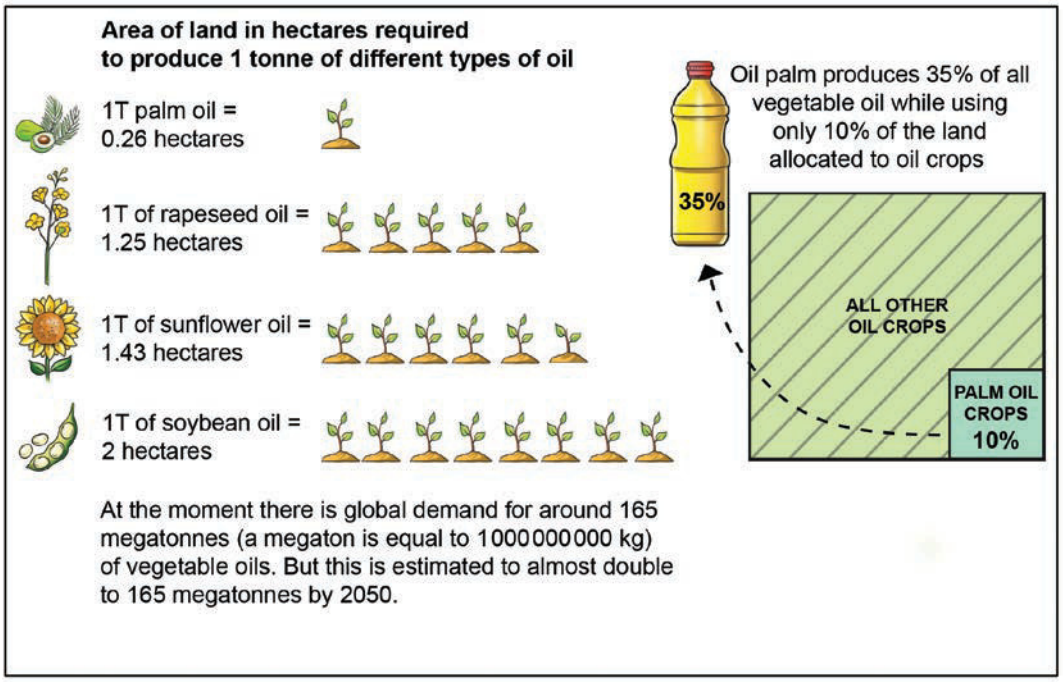
Alternative technologies

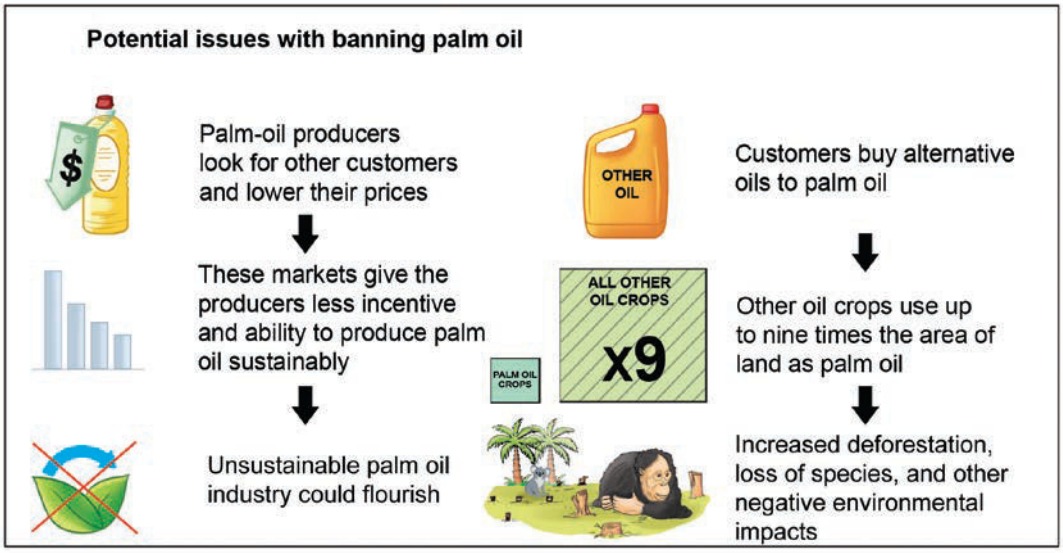
KEY TERM
occupy move into a place and take up room

Scientists in the United Arab Emirates (UAE) have been testing the use of an algae species that grows throughout their country as a possible alternative to palm oil. The species is naturally high in palmitic acid, the same acid that is found in palm oil.

The algae species can grow in freshwater or saltwater, so we don't have to use precious freshwater resources. So long as water is available, the algae can also grow inland – for instance, in a desert – which means that it does not have to compete with other types of productive land use.

Algae oil is currently more expensive to produce than palm oil. However, the cost of algae oil may change as we learn how to grow and harvest it more efficiently. It may even become cheaper than palm oil.





◄ **Figure 5.46** Our complex relationship with the palm oil industry

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Competition between agricultural land and urban settlements

The best cropland is often the same land where people want to live and play. This is not an accident. Civilisations were able to settle permanently in areas that have **fertile** soil and consistent water supplies. Therefore, there is often a strong interconnection between areas of high population and fertile land. While much of this land has already been turned into cities and townships, the best remaining land for crop production is often found in regions that border cities, called peri-urban regions.

KEY TERM

fertile soil that is capable of producing a lot of crops

Urban settlements are human-built environments with large populations such as cities, towns and suburbs. Many people choose to live in urban settlements owing to to easy access to the things they need and enjoy. These include schools, health centres, cultural activities, social services, transportation and jobs. The social and cultural diversity also allows people to enrich their lives by interacting with many types of people, giving them a feeling of belonging to a community.

As urban settlements grow, the surrounding land that was once used for agriculture becomes threatened. For example, Guangzhou was once a small village near the Pearl River Delta in China. The rich soils made it a good place to practise farming for centuries. When the government decided to urbanise the region, the city expanded rapidly to merge with nearby cities to create the Pearl River Delta Economic Zone, which is now home to approximately 70 million people.

'Less than a decade ago, it was just a village. Then the cranes came … They swallowed the farms and villages of our neighbours. We've been offered a new place to live, but it won't replace what we have here.'– A Chinese farmer reflects on the changes happening to his village due to urban expansion.[1]

▲ **Figure 5.47** Algae growing in a petri dish. Is this the sustainable solution to oil production we have been looking for?

1 To find out more about urbanisation and farmland in China, search Citylab for 'Life on the Forgetten Farms of Guangzhou'.

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The enormous population is largely thanks to the economic benefits that this region offers, as there is a high demand for workers and booming industries. However, farmers were forced to leave their homes and their way of life behind.

Closer to home, population growth is expanding rapidly in Melbourne, which is expected to overtake Sydney as the biggest city in Australia by 2026. **Urban sprawl** may impact the city's food security. About 41 per cent of Melbourne's fresh fruit and vegetables are grown in the surrounding regions of the city, known as the Melbourne foodbowl. As a result of urban sprawl, this area is **projected** to reduce to 18 per cent by 2050. The city will then become more reliant on food from farther away, which is more expensive due to transport costs and more unreliable due to threats to the food supply in other parts of the world.

Urban growth responses

One way that Victoria protects the supply of food is through the Urban Growth Boundary, which sets the limits for where the city can physically spread. Outside of the Urban Growth Boundary, 12 designated green wedge areas surrounding Melbourne are used for agriculture and low-density activities. As well as supporting agricultural activity, green wedge zoning protects the culture and unique rural landscapes of these regions. However, some people question how much protection green wedge zoning really provides, as zones have been redrawn over the years to allow for more urban growth.

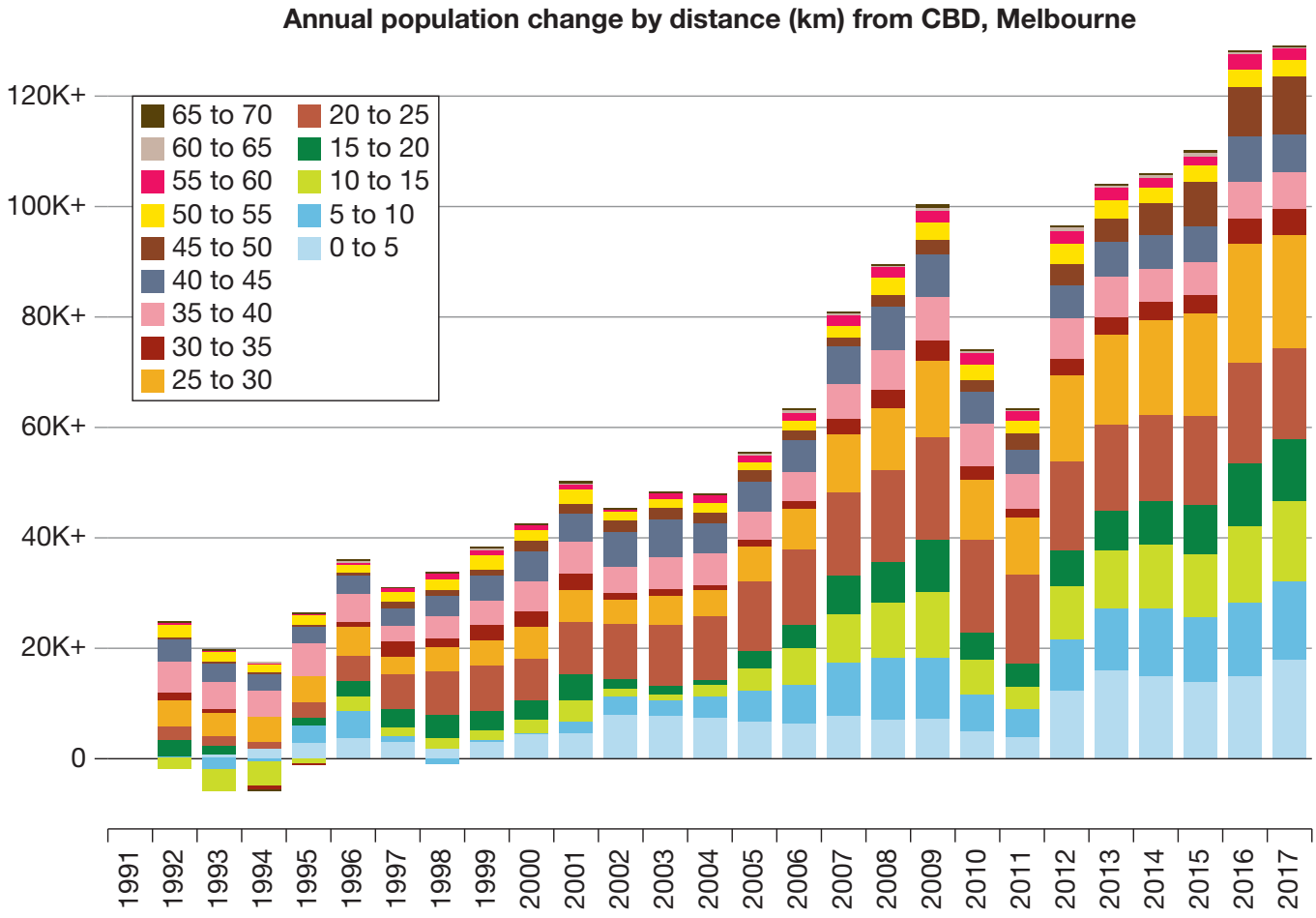
KEY TERMS

urban sprawl the ongoing spread of roads, houses and infrastructure over a vast area

project (verb) estimate what will happen in the future based on what has happened in the past

▼ **Figure 5.48** A stacked bar graph shows different data sets placed on top of each other. For example, in 1997 the largest population increase happened within 20–25 kilometres from the CBD, while the smallest population increase occurred within 65–70 kilometres from the CBD.

Source: Charting Transport website.



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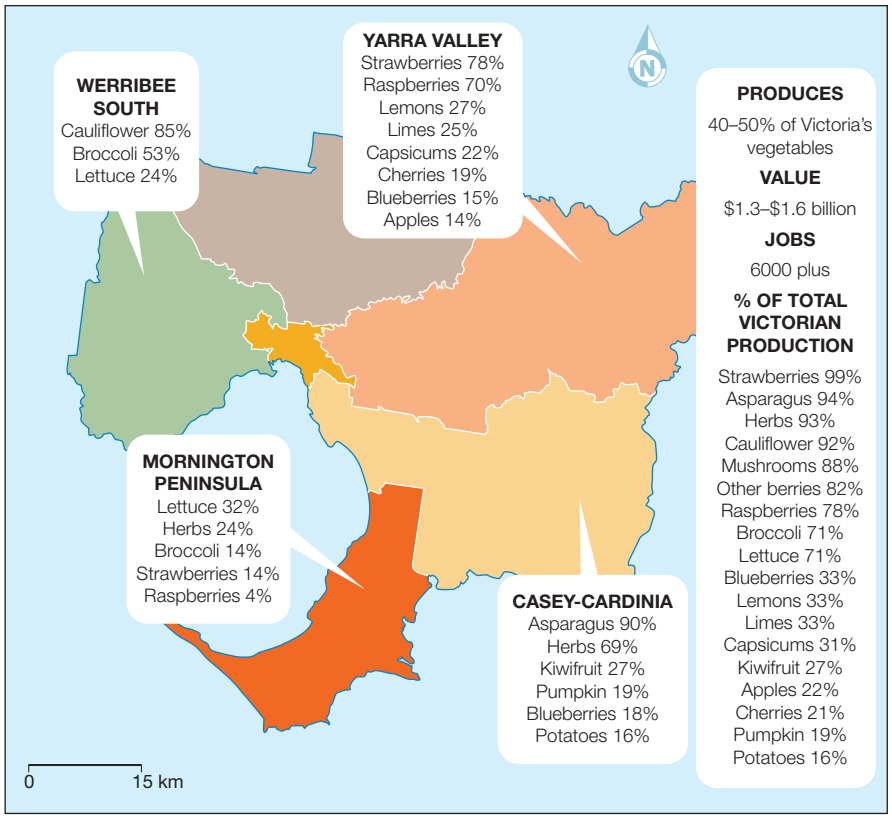

◀ **Figure 5.49** Melbourne's foodbowl

▲ **Figure 5.50** Do you live in a green wedge zone or have you visited one? If so, how would you describe the natural and human characteristics of this region?

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▲ **Figure 5.51** Farms in Clyde produce some of Melbourne's spinach, celery, leeks, spring onions and herbs. In 2012, the City of Casey Council lost its attempt to protect this foodbowl region, which was changed from a farming zone to an urban zone. However, farmer Tom Schreurs (pictured here) was happy with the decision, as rezoning increased his land value by 500 per cent.

DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 5.5

Applying the concept of change

To describe the changes of a phenomenon, it may be useful to use the LQDE (Location, Quantify, Description, Exception) method as a guide. This method can help you describe the changes you see in detail, including not only describing the type of change that you see, but identifying where and how the changes are occurring and the extent of the impact. The following is an example guide to using the LQDE method:

1. **Location** of the change
2. **Quantify**
   - a Include dates and times where possible.
   - b Describe the distribution of change by using distance, area, direction, amount of change.

   Example: How many paddocks, houses or streets have been involved in the change?
3. **Description** of change
   - a What do you see before, during and after the change?
   - b If possible, explain the process of change.
4. **Exception:** For example, is there an area where change has not occurred or has occurred in a different pattern or time frame?

Describe the change you see in the city of Guangzhou in Guangdong province, China, using the LQDE method. Use the Google Earth search bar to find Guangzhou. Click the historical imagery icon at the top of your screen. A slider will appear. Use the slider to see change in Guangzhou over time.

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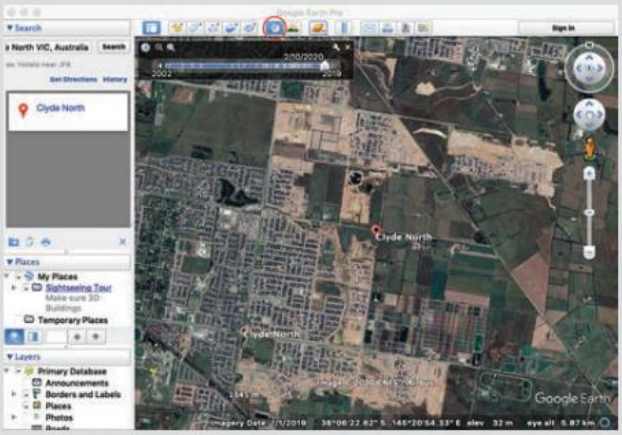
ACTIVITY 5.3

Clyde North

Describe the change you see in Clyde North using the LQDE method. Use the Google Earth Pro (a free program that you can download) search bar to find Clyde North. Click the historical imagery icon at the top of your screen. A slider will appear. Use the slider to see Clyde North from 2002 to today.



► **Figure 5.52** Using the historical imagery feature in the Google Earth Pro program

Can we find a sustainable balance between competing land uses?

In this topic, we have examined some of the ways that land is used. We have seen how tensions can occur between different interest groups as humans struggle to support their needs and the needs of all living beings in a sustainable way. However, there are positive examples around the world where these tensions are overcome by clever thinking, planning and cooperation. A key role for geographers is to examine these positive examples so that they can be used in other places around the world. Case Study 5.2 is one of these examples.

CASE STUDY 5.2

Sole Food Street Farms, Vancouver

Sole Food Street Farm is located in Downtown Vancouver, Canada. It is the poorest part of the city, known for having some of the highest rates of HIV, Hepatitis C, drug-related deaths and prostitution per capita in the North American continent. Sole (Save Our Living Environment) Food Street Farm was started in 2009 by Michael Ableman and Seann Dory.

Its aims were to:

- Provide local people who have drug addictions or ongoing mental health problems the opportunity to earn money by growing something beautiful that others need
- Provide high-quality produce on an agricultural scale
- Prove that such a project could operate sustainably.

Challenges faced by Sole Food Street Farm

- How to grow food safely on land that had been contaminated from past land use. To overcome this, food is grown in containers, which are expensive at $13 per container.
- Land in the city is far more expensive than rural land.
- Getting approval, as the council had never had to deal with urban agriculture before, so the existing rules and regulations didn't fit their type of development.

> *'The ultimate goal of farming is not the growing of crops, but the cultivation of human beings' – Masanobu Fukuoka, quoted in M. Ableman, Street Farm, 2016, p. 31*

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- Employing people with such personal challenges makes the farm less economically competitive than a usual farm. The work took 2–3 times longer to complete than on a typical farm, as sometimes workers would not turn up.
- When the project grew to include more sites, some of the workers who relied on the nurturing of the small team environment left the job.
- Vandalism and pests. In 2013, about $20 000 was lost due to rodents.
- The farm can generate $300 000 in a year; however, costs are approximately $500 000 per year. The remaining money needs to be fundraised annually. While this seems like a lot of debt, approximately $46 million a day of taxpayer's money is used in the United States to support the farming industry to make food affordable.

Benefits of Sole Food Street Farm

- For every $1 spent on an employee, $1.70 is saved from the prison and legal system, healthcare, social assistance networks and the environment through carbon sequestration and energy and transport benefits of local farming.
- It helps to counter the environmental degradation that occurs as 50 acres of prime agricultural land is paved over and developed every hour in North America.
- The model is flexible. Growing in containers means that the farm can be moved elsewhere.
- This project gives wealthy landlords an opportunity to help their city by offering their land for cheap rent ($1 a year in some cases) while also improving their corporate image.

▲ **Figure 5.53** Seann Dory (left) and Michael Ableman (right) from Sole Food Street Farm

- Benefits for landlords include tax relief benefits of up to 90 per cent. The farms make the neighbourhood look more beautiful, which improves the economic value of nearby buildings (which are sometimes owned by the same landlord).
- The project looks good for the city of Vancouver too. Vancouver aims to be one of the greenest cities in the world. Urban agriculture became a part of the city's Greenest City goals and Healthy Cities program.
- The food is sold at farmer's markets, local restaurants and retail outlets, reducing food miles and creating positive connections between people in the community.

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DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 5.6

Evaluating a response using the sustainability concept

We often hear the concept 'sustainability' used with respect to the environment and making sure that our natural resources are available for future generations. However, a broader definition of the concept simply means to be able to continue something for a long time. As geographers aim to create truly sustainable outcomes, we also measure the success of responses based on whether they are economically and socially sustainable. Economic sustainability means that a response has the financial support it needs well into the future. Social sustainability means that the response is supported by the people affected, many people benefit, and there are people who can keep the project going well into the future.

▲ **Figure 5.54** Kenny, the first employee of Sole Food Street Farm

He's been stabbed, held up at gunpoint, wanted by police; he's known most drugs. He's suffered bicycle accidents, illnesses, imprisonment. He's faced years of rehab.

Kenny says 'I come to work feeling miserable and leave feeling relief and hope. If it wasn't for my job, I would be sitting in a basement not caring about anything.'

– M. Ableman, *Street Farm*, 2016, p. 15

▲ **Figure 5.55** Rob: 'It was 4 a.m. and I was standing on the farm in the middle of the city and I looked around and I felt like I was communing in church.'

▲ **Figure 5.56** Seven: 'The farm is where I come to make choices. It's the right environment. It's safe, a getaway from the hood, where there are drunks and addicts everywhere.'

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MAKING THINKING VISIBLE 5.3

See, think, wonder

Watch the video 'Village in the City' on DocumentaryTube and answer the following questions:

1 What do you see?
2 What do you think about that?
3 What does it make you wonder?

END-OF-SECTION REVIEW 5.4

Digital quiz
Please see the Interactive Textbook to access digital activities

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Define the term 'urban settlement' and give two reasons why people choose to live in urban environments.
2 Define the terms 'carbon sequestration' and 'carbon reservoir'. Conduct some quick online research to identify two types of carbon reservoirs other than the atmosphere.
3 List the different types of crops and explain what they are used for.
4 What are two benefits of rainforests?
5 Outline two of the benefits and two negatives of palm oil use.
6 What is meant by the term 'sustainability'?

Interpret

7 Refer to the graph in Figure 5.48. At what distance from the city are the top three regions for population growth in 2017? Has population growth between 45 and 50 kilometres from the CBD increased or decreased between the years 1992 and 2017? Overall, has the population of Melbourne grown or decreased?
8 Considering the pie graph in Figure 5.45, what may be an effective way of reducing the use of palm oil in society?
9 Describe the interconnection between fertile land and urban settlements.
10 Explain how competition for land use between crops can lead to food insecurity.

Argue

11 A vegetarian diet supports a more sustainable use of land than an omnivore diet. To what extent do you agree? Use the evidence in Figures 5.41 and 5.42 to support your answer.
12 Looking at Figure 5.46, explain in a few sentences why phasing out palm oil entirely may not be a sustainable solution.
13 Which of the three responses to palm oil do you believe is the most successful so far? Explain your decision.

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14 What do you think Masanobu Fukuoka means when he says: 'The ultimate goal of farming is not the growing of crops, but the cultivation of human beings'?

Extension

1 Conduct online research to investigate what you can do to reduce the environmental impact of palm oil crops. Present this information in a format of your choice.

▲ **Figure 5.57** A digger destroying rainforest to make way for an oil palm plantation in Kalimantan, the Indonesian part of the island of Borneo

2 Look up 'CBC News Interviews Street Farm Co-founder and Author Michael Ableman' on Vimeo. Using the information provided in the text and in the video, discuss in groups the ways that Sole Food Street Farm is or is not sustainable. Then copy and complete the table below (or fill it in within the Interactive Textbook). Use these factors to evalute how successful you think the Sole Food Street Farm is as a sustainable farm.

Evaluate the success of Sole Food Street Farm using the criterion of sustainability.

Introduction: Provide an overview of Sole Food Street Farm and explain its aims.		
	Yes	**No**
Socially sustainable?		
Environmentally sustainable?		
Economically sustainable?		
Conclusion/evaluation: Explain whether you believe that the farm is sustainable on the whole, having weighed up the benefits and challenges. Then state whether you believe the farm is successful or not.		

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5.5 The human alteration of biomes and the environmental effects

FOCUS QUESTION

In what ways does the production of food and fibres affect the environment?

Humans have been altering biomes for thousands of years. We have changed the course of rivers and the spread of forests to grow crops; mined the earth to harvest coal and gold; and drilled the deep waters of oceans for oil. Most extremely, the cumulative effect of these actions is causing important changes to our climate. Human-induced climate change is happening at a rate that is too quick for most species to adapt to. Climate change is therefore affecting biomes by changing the types of plants and animals that can inhabit each region.

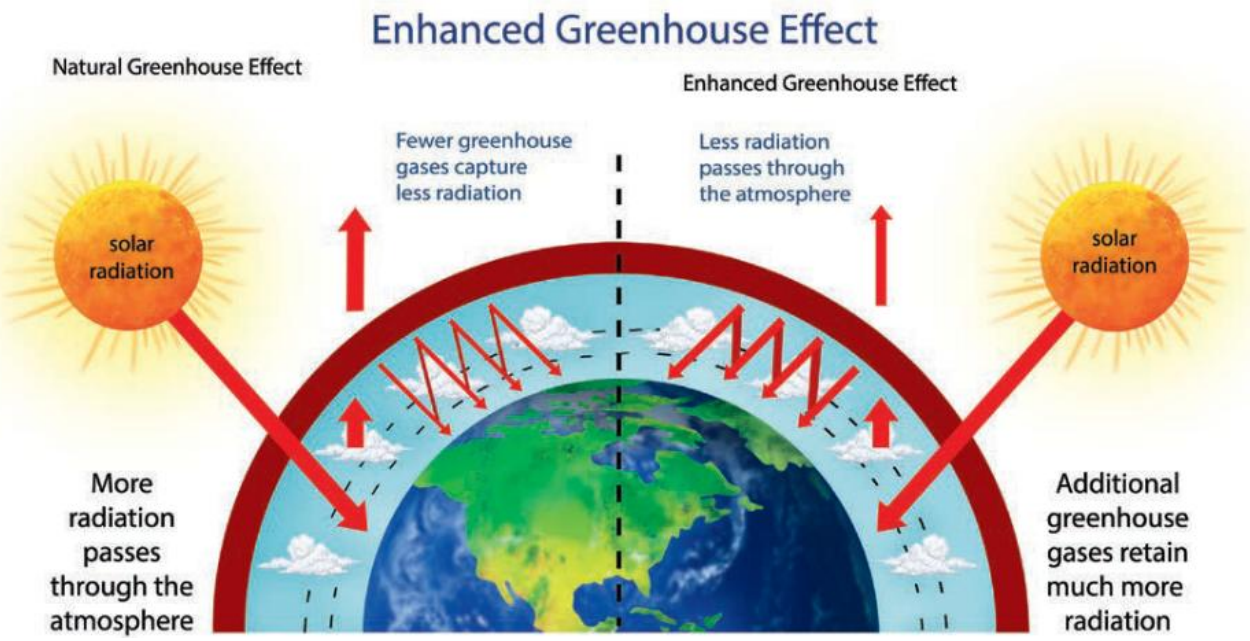
Our alteration of biomes has provided us with many benefits. It has allowed civilisations to grow and allowed us to live longer lives, making humans the most dominant species in the world today.

However, these activities have come with significant environmental impacts, not only for the biomes themselves, which have lost an estimated 60 per cent of species, but also for humankind. When the fine balance of life is disrupted too much, the environment can no longer support us effectively.

Environmental impact of food and fibre production

Fossil fuel farming

Greenhouse gases exist in our atmosphere. Without greenhouse gases, Earth would have an average temperature of −18°C. These gases keep our planet warm by trapping some of the heat that



▲ **Figure 5.58** The difference between the natural greenhouse effect and the enhanced greenhouse effect

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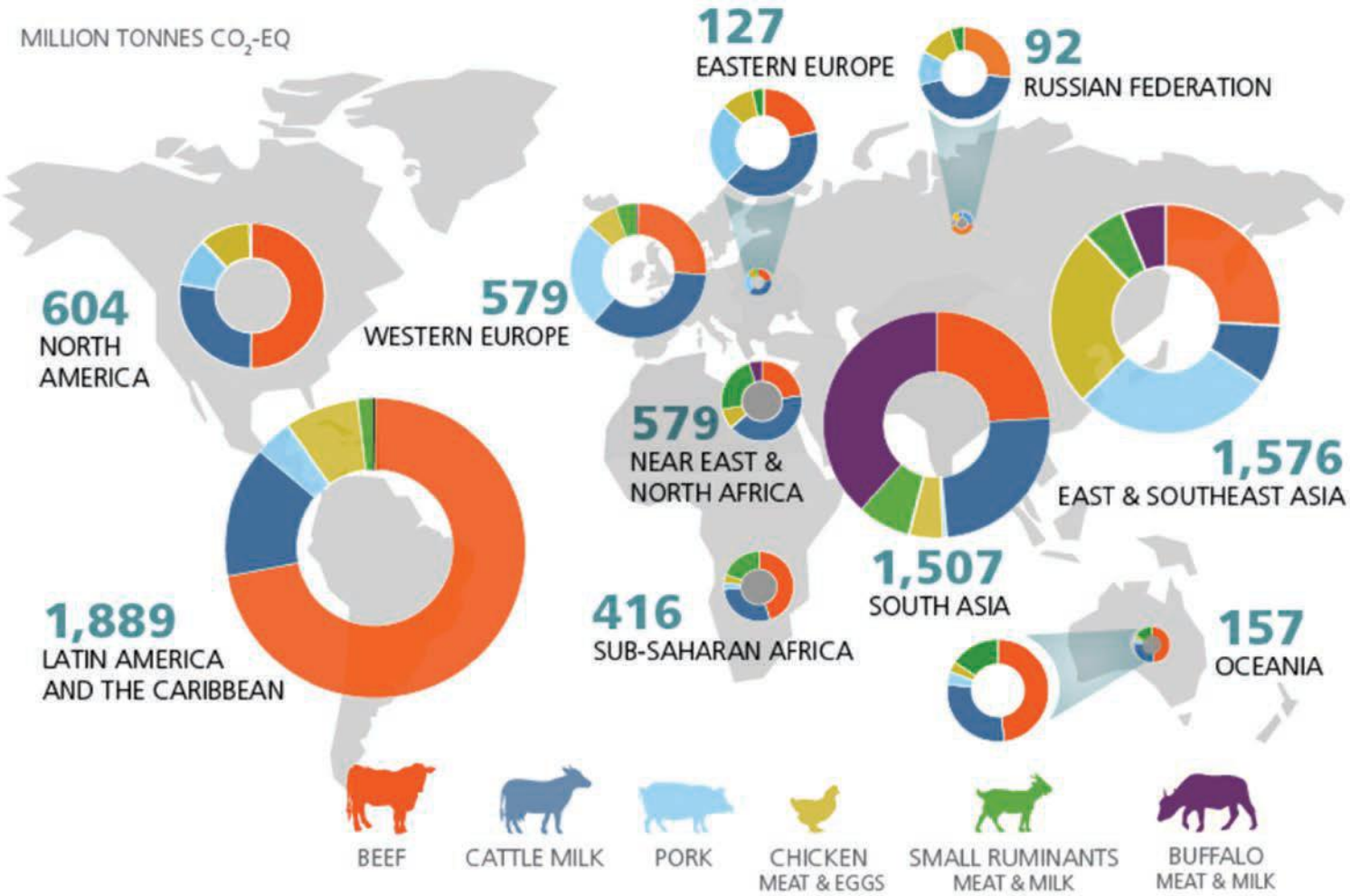
is released from Earth to space in our atmosphere. As seen in Figure 5.58, extra greenhouse gases, particularly carbon dioxide and methane, are being released into the atmosphere due to human activities. These extra gases trap more heat than we need in our atmosphere. This warms Earth excessively and changes climate patterns such as ocean currents, rainfall and the timing of seasons.

The farming of food and fibres is linked to climate change in many ways. Carbon dioxide is released into our atmosphere from the use of fossil fuels. Fossil fuels such as oil, coal and gas are used to power large agricultural machinery, transport and refrigerate food and fibre, and make pesticides. Moreover, high amounts of carbon are safely stored in carbon reserves such as forests and peatlands. When these are destroyed for the expansion of crops, this carbon is released from the plants and soil into the atmosphere.

Methane is also released into our atmosphere during the production of food and fibre. Cows often get the blame for this, as one cow releases 100 kg of methane a year, mostly through burping. Although farming livestock creates approximately 40 per cent of annual methane emissions, other activities also play a role. When oil is extracted and transported to be used for farming, methane leaks from pumps, pipelines and wells. The way we package our food and fibres influences emission rates too, as plastic shopping bags also emit methane.



▲ **Figure 5.59** Carbon dioxide equivalent emissions from livestock farming in 2010.

Source: Data from the Food and Agriculture Organization of the United Nation's website.

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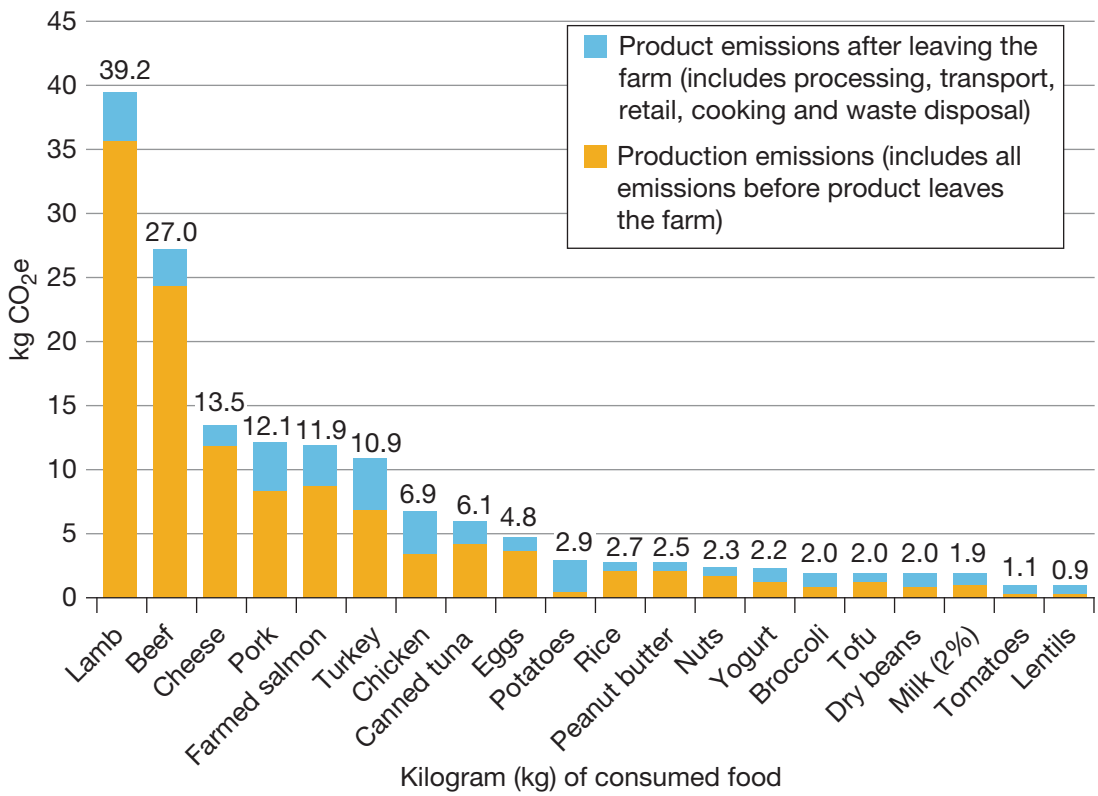

▲ **Figure 5.60** Carbon dioxide emissions due to the food industry. Are most emissions occurring at the farm or after the product has left the farm? Is there an exception to this pattern?

Irrigated agriculture

Large-scale irrigation involves channelling fresh water away from its natural path to be stored and used on farms. Fresh water is naturally found above ground as rivers or lakes, or underground as **aquifers**. Irrigation has played an important role in our food and fibre security as we can improve crop yield by adding irrigated water to regions that don't receive much rainwater.

This is clear when we consider the large role that irrigation plays in the Murray–Darling Basin, where 70 per cent of all of Australia's irrigated water is used. Although the Murray–Darling Basin only receives 6 per cent of Australia's annual rainfall, it produces 40 per cent of our food and 93 per cent of our cotton (refer to the map in Figure 5.61). However, there is concern that irrigation is not sustainable in the long term because it can cause salinity and reduce the flow of water to places downstream of the irrigated diversions.

Salinity

Salinity occurs when salts that naturally exist deep underground rise to Earth's surface, polluting the soil and killing the vegetation. Australia is an ancient land. Over time, Australia's soils have accumulated salts from natural processes such as the **weathering** of rocks, the movement of ocean salt to the land through wind and the **evaporation** of inland seas that once were a part of the landscape.

This salt is harmless when trapped deep in the soil, above the underground water table. However, when irrigation is used on farms, not all the water is absorbed by plants. Some of it seeps into the water table that lies beneath. This water table then rises as it receives more water. As it rises, the underground salts rise up with the water towards the surface. Salinity is expensive and threatens our food security. The Australian Government estimates that salinity costs us $130 million worth of agricultural production each year.

KEY TERMS

aquifer an underground layer of rock that holds and stores water

weathering the process of breaking down or dissolving rocks and minerals

evaporation the process of a liquid becoming a gas when heated

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▲ **Figure 5.61** The Murray–Darling Basin

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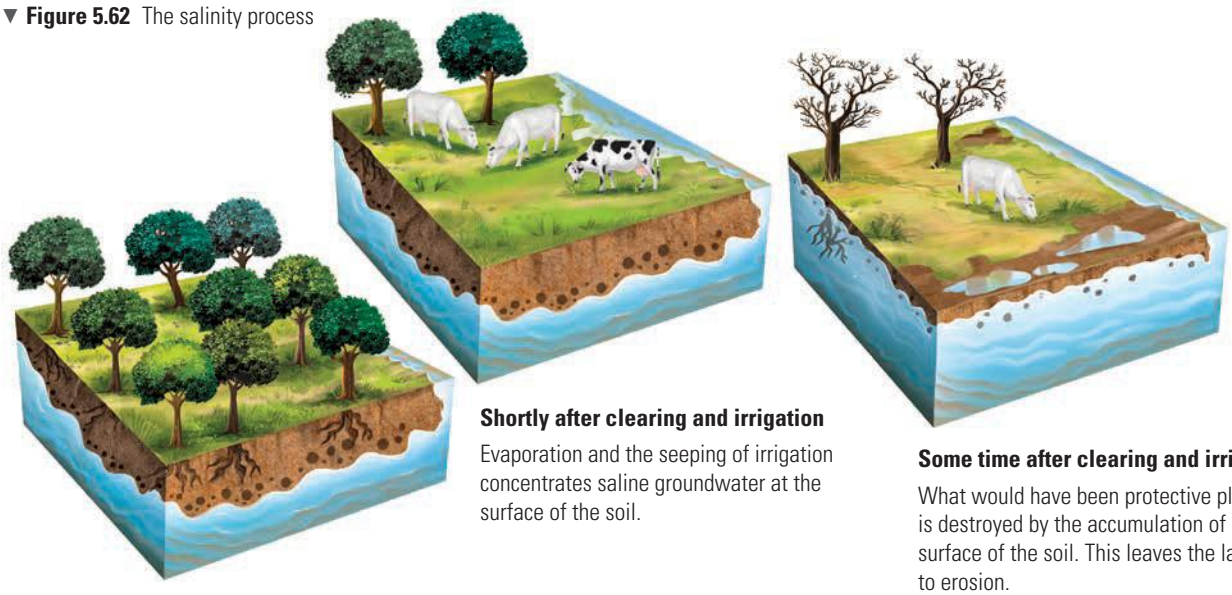
▼ **Figure 5.62** The salinity process



Before clearing

The system is balanced and most of rainwater is used in the spot where it falls.

Shortly after clearing and irrigation

Evaporation and the seeping of irrigation concentrates saline groundwater at the surface of the soil.

Some time after clearing and irrigation

What would have been protective plant cover is destroyed by the accumulation of salt at the surface of the soil. This leaves the land open to erosion.

Reduced environmental flows

When water is diverted from rivers and lakes to farms, it reduces the flow of water to areas downstream, as well as the outward flow of water to floodplains and wetlands. Reducing natural flows can dramatically change river, wetland and **riparian** biomes by changing their nature as less fresh water makes it to the ocean and more saltwater moves inwards into estuaries from the ocean. This has the flow-on effects of changing the distribution of plants and animals in the biome and causing coastal erosion.

Monoculture farming

Humans have drastically altered biomes through the use of monoculture farming. As seen in Figure 5.63, monoculture farms grow a single type of crop, rather than a variety of crops (polyculture farming). The reasons farmers choose to monocrop come down to simplicity; it is easier to take care of just one type of plant. The farm's input requirements are more consistent, as the entire crop is likely to require similar amounts of water, growing conditions, methods of planting and harvesting, and pest control. However, negative impacts for the environment include a reduction in species diversity, an increased susceptibility to pests and diseases, and pollution of soils and water due to the use of chemicals.

KEY TERM

riparian the area where the land and river meet

▼ **Figure 5.63** Working a maize field with a vibro-cultivator. Crops grow in perfectly straight rows, reflective of the machinery used on monoculture farms.

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Reduction in biodiversity

There are over 15 000 varieties of tomatoes and 7 500 varieties of apples grown worldwide. However, you would be lucky to find five varieties of these fruits at a supermarket. This is because monoculture farms tend to grow crop varieties that are selectively bred for their size and shape (to look appealing to customers), as well as their ability to handle long travel distances, chemical fertilisers and pesticides. Varieties that are delicious, but delicate, risk extinction as they are being increasingly replaced by tougher varieties. This is also the case for animals. Approximately 200 livestock breeds face extinction as we have come to rely heavily on just a few select animal breeds.

Increased susceptibility to pests and diseases

This lack of diversity creates more problems in the form of pest and disease resistance. Polyculture farms that grow many different plant species benefit from attracting a large diversity of insects and birds. The numbers of pests on these farms is kept low as they are eaten by other insects and birds in a process known as biological pest control.

Because monoculture farms lack plant diversity, they do not attract a diversity of life. In fact, they may only attract a large number of one pest species due to the fact that they are so obvious in the landscape. For example, hectares of corn are much easier for locusts to find compared to a few corn grown among beans, flowers and zucchini.

▲ **Figure 5.64** Biological pest control in action. Aphids are a pest insect that can destroy cereal and vegetable crops. This wasp is laying her egg in an aphid. When the egg hatches, the aphid is eaten from the inside out.

Disease can also spread rapidly in a monoculture farm because the plants are genetically so similar that they have similar weaknesses. The banana variety Gros Michel was a tastier, creamier version of the banana we eat today. However, it was wiped out by the Panama fungus and was replaced by Cavendish bananas, which were thought to be resistant to the fungus. Unfortunately, this was not the case. Figure 5.65 shows a crop of Cavendish banana trees in Queensland that were killed by a different strain of the Panama fungus called TR4.

Cavendish banana trees are clones of one another, so if one is affected on a farm, they are all at risk. Researchers are currently searching through jungles for wild banana species that can resist the Panama fungus as well as ripen in a suitable amount of time, travel long distances, be mass-produced and taste good.

▲ **Figure 5.65** Cavendish banana trees in Queensland, killed off by a fungus called TR4

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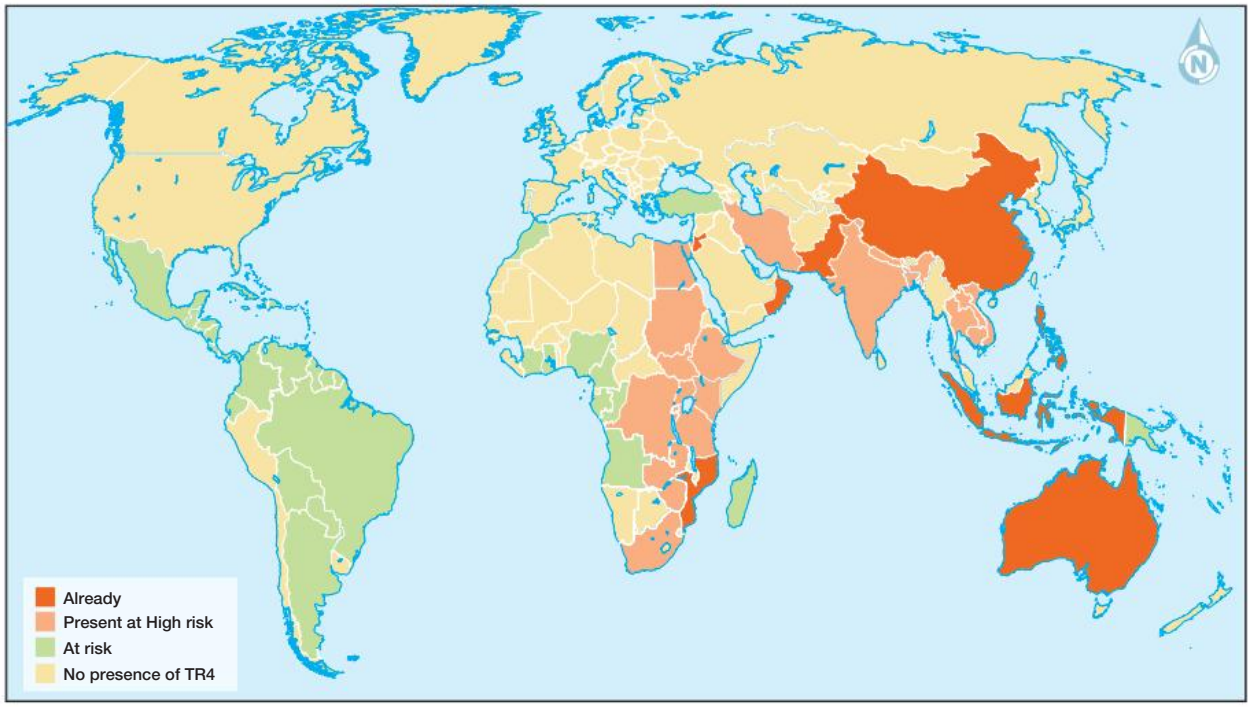
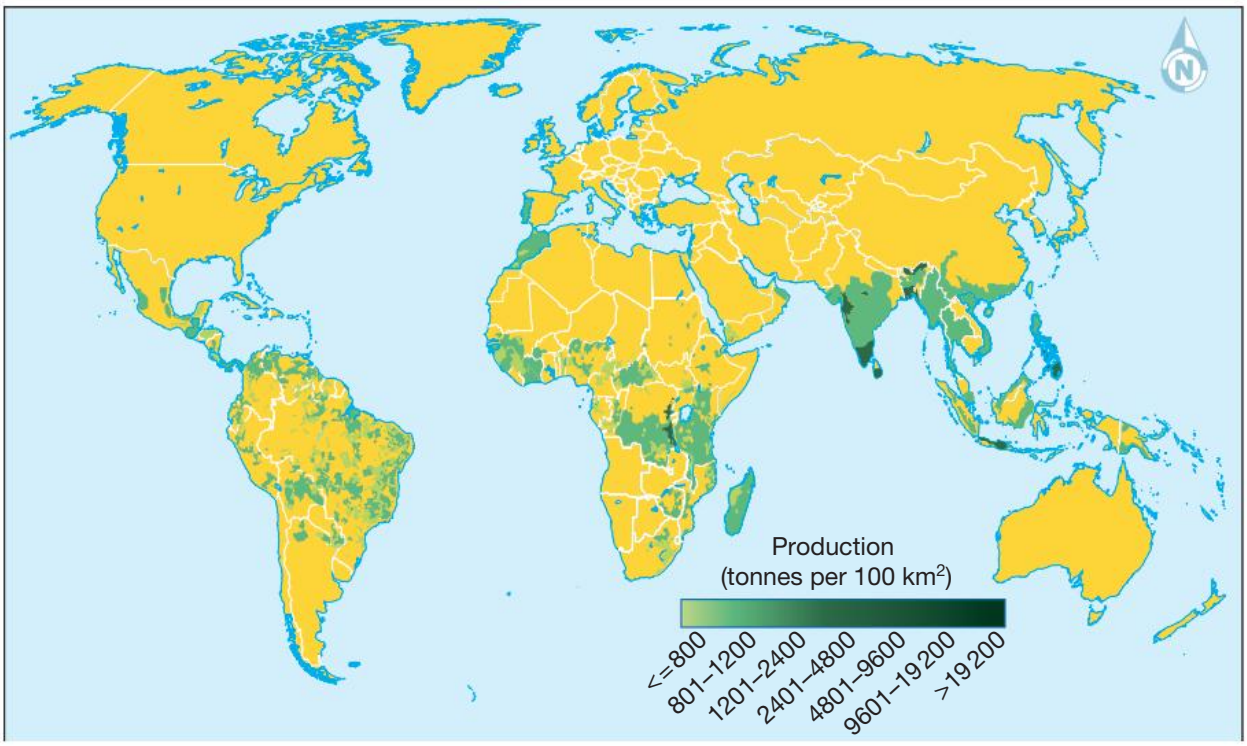


▲ **Figure 5.66** Global risk levels of TR4



▲ **Figure 5.67** Global banana and plantain production

Amazing but true …

A study in China involved planting different varieties of rice in the same field. Some varieties were usually very prone to diseases when grown on a monoculture farm; however, these experienced 94 per cent less disease in this mixed-crop farm. This allowed the yield of these varieties in the mixed-crop farm to increase by 89 per cent.

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Pesticides

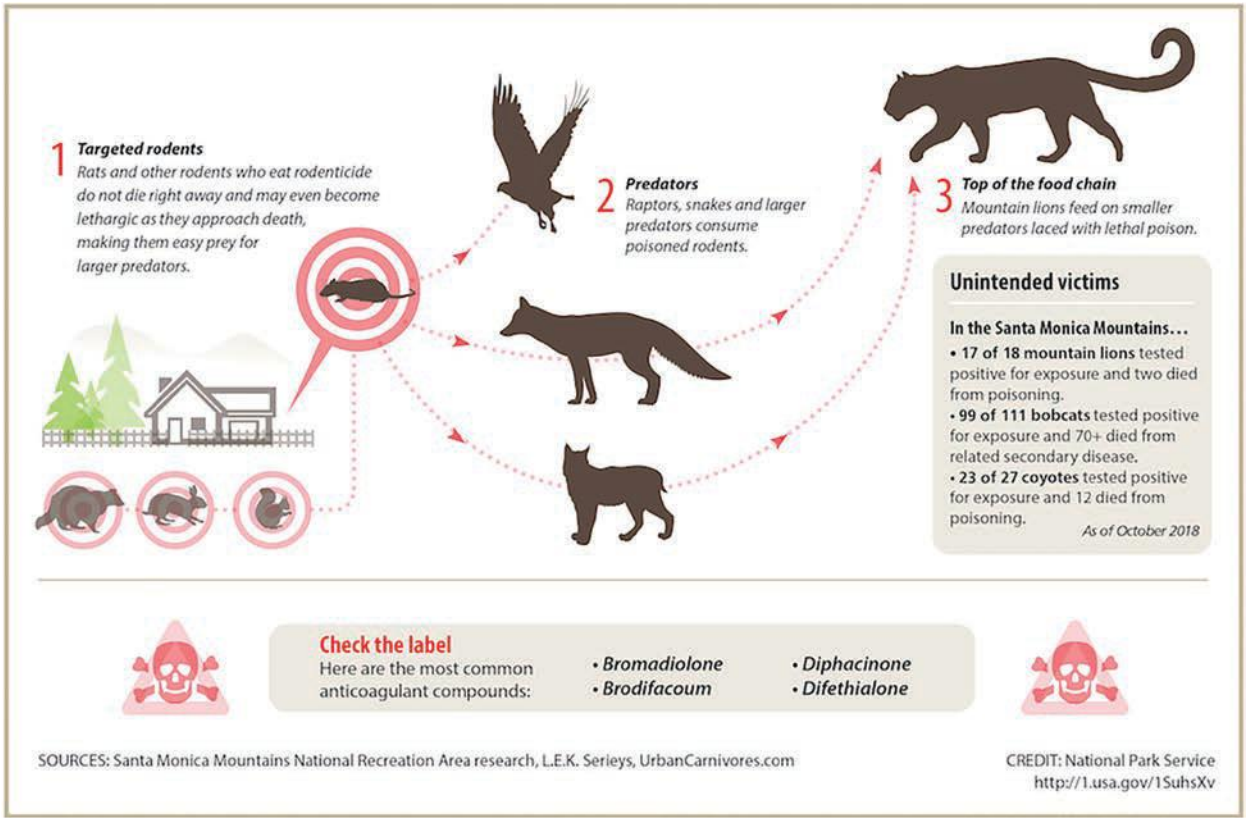
Artificial pesticides are used to protect our food supply by reducing the impact of pests and diseases. Because they are applied over entire fields, rather than targeting specific weeds and pests, only 5 per cent of pesticide use is effective. The repeated use of pesticides can reduce crop yield in the long term because pollinators, such as bees and hoverflies, are also killed. One-third of our food supply requires bees for pollination. The global cost of losing pollinators is estimated to be between AU$350 billion and AU$850 billion.

Pesticides can be toxic to people and other species. In 2018, a Californian man was awarded US$289 million in damages for cancer caused by his use of Roundup, a weed killer used widely across the world, including in Australia. Farmers in the Punjab region of India are also turning away from pesticides. This region accounts for 20 per cent of India's use of pesticides. The drinking water was found to be contaminated, and one-third of farmers that were tested in the region were found to have resulting DNA damage. Nearby, in the north-west Indian village of Gandaman, 23 children aged 5–10 years old died after eating the government-funded school lunch, which contained 52 times the safe level of pesticide.

The pesticide monocrotophos is considered to be one of the most dangerous and is not sold in Australia. However, it is popular in India as it is cheap. For many poor farmers in rural India, this is the pesticide that they can afford.

Animals can be poisoned directly or indirectly, as Figures 5.68 and 5.69 show.

▲ **Figure 5.68** This three-year-old male Californian mountain lion was exposed to six different rodenticide (pesticides for rodents) compounds before dying



▲ **Figure 5.69** An infographic aimed to educate Californian locals about the impact of using rat poison around the home

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Pesticides can also eliminate some animals' essential food sources, causing the animals to relocate, change their diet or starve.

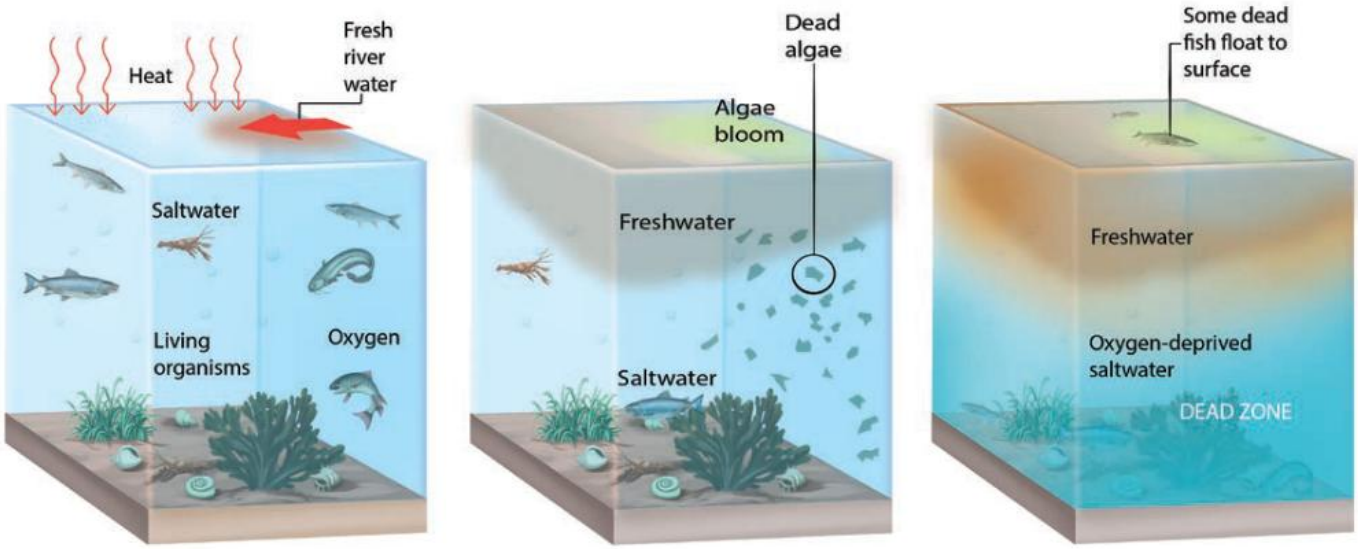
Fertilisers

Soil gets its nutrients when organic matter, such as falling leaves, is decomposed by microbes. However, there is little life in the soil, as microbes are often killed by the repeated spraying of pesticides.

Monoculture farms strip the soil of particular nutrients more quickly, as each crop has specific nutrients that it needs most. For example, a polyculture farm might choose to grow corn and beans together. Corn will strip the soil of nitrogen, while beans will create nitrogen in the soil, thus helping to establish a balance of soil nutrients.

KEY TERM

marine dead zone an area that has a reduced level of oxygen in the water that can cause organisms to die



1 Most monoculture farms use chemical fertilisers, which are manufactured liquids consisting of nutrients that are sprayed on plants to increase their yield. Not all of the nutrients provided by fertilisers are absorbed by plants. The remaining nutrients leach into the soil or run off into rivers, eventually making their way into the ocean.

2 The excess nutrients in the water can cause algae blooms on the ocean's surface. These blooms block sunlight from penetrating the water and block the organisms in the ocean from absorbing oxygen. When these algae die, they fall to the bottom of the ocean and decompose.

3 The decomposition process uses large amounts of oxygen, leaving very little for other organisms. When this happens on a large scale, **marine dead zones** are formed as very few organisms can live in places with no oxygen.

▲ **Figure 5.70** The process causing marine dead zones

END-OF-SECTION REVIEW 5.5

Review questions

Answer these questions on paper or in the Interactive Textbook.

Digital quiz
Please see the Interactive Textbook to access digital activities

Recall

1. Define the terms 'biological pest control', 'input' and 'riparian zone'.
2. Describe the difference between the natural greenhouse effect and the enhanced greenhouse effect.
3. Describe two ways that farming emits carbon dioxide and methane into the atmosphere.
4. List three natural processes that have caused Australia's soils to be salty.
5. Describe the difference between monoculture farming and polyculture farming. List some of the benefits and challenges of each.

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Interpret

6 Using Figure 5.59, identify which global region emits the greatest amount of carbon dioxide from:
   a buffalo farming
   b pork farming
   c chicken farming.

7 Latin America and the Caribbean produce the largest amount of carbon dioxide from beef farming.
   a Do you think that this is because this region consumes more beef than other regions?
   b What other reason may contribute to their large beef industries?

8 Examine Figure 5.61.
   a Identify two towns that you think may suffer from reduced flow of water.
   b Explain why you think these towns may have reduced flows.

9 Examine Figure 5.66. Name three countries that already have TR4, three that are at high risk of TR4 and three that are at risk, but not high risk, of TR4.

10 Describe the processes that create marine dead zones or salinity.

11 Explain in one paragraph how using rodenticide on a farm can kill mountain lions in California.

12 Compare Figures 5.66 and 5.67. What percentage of the banana industry is at threat from the TR4 fungus? What potential impact would a spread of the TR4 fungus have on consumers?

Argue

13 Imagine that you are an agricultural consultant to the country of Madagascar. Write a letter of advice to farmers, explaining the TR4 fungus and how to defend their banana crops from the spread of TR4 to their country.

Extension

1 In what ways does the production of food and fibres affect the environment? Use the information in this book and some further research to copy and complete the table below (or fill it within the Interactive Textbook).

Farming technique	Example of a food or fibre that is grown by using this technique	Effect on environment (can be positive or negative)
Irrigation		
Pesticide use		
Monoculture farming		
Fertiliser use		

2 Create a tour brochure for a trip through the Murray–Darling Basin, including four different towns. For each town provide: the location; the natural characteristics, such as its landforms, water bodies and wildlife; and human characteristics of the region, such as its industries (including what type of farming occurs there and what farming methods are used) and activities you can do in the region.

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5.6 Strategies used by Aboriginal peoples to achieve food security over time

FOCUS QUESTION

How did the First Australians live off the land for so long?

Do you know that Australia has the longest known history of agriculture in the world? In fact, there's evidence to suggest that Aboriginal Australians were baking bread 65 000 years ago; that's 50 000 years before the Egyptians! Our history is a remarkable tale of adaptability, ingenuity and sustainable land management based on an intelligent understanding of the environment.

Australia's biomes were first altered to grow tubers and cereals as well as harvest meat, fruit and vegetables. Moreover, the farming and storage methods used by Aboriginal Australians allowed the landscape to sustain them for thousands of years. They even survived the last glacial maximum period, a time when Earth was so cold that many forests disappeared, animal species became extinct and vast volumes of surface water disappeared.

Unfortunately, much of our agricultural history remains unknown. However, thanks to the ground-breaking work of historian Bruce Pascoe, new light is being shed on this topic. In his book *Dark Emu*, Pascoe revisits historical sources from early European settlers and finds many references to thriving societies and economies based around agricultural systems. There is clearly a great potential to learn more about Aboriginal agricultural practices and use this knowledge in our current quest for food security during this new period of great change.

▲ **Figure 5.71** A yam tuber

▲ **Figure 5.72** Yam digging at Indented Head. Who do you think may have drawn this sketch?

Tubers

Some plant species have edible tubers, which is a thick-skinned structure made of stems or roots that grow underground. The most familiar tubers in people's diets today are potatoes, introduced by European settlers in the 1 700s. However, well before the introduction of potatoes, another tuber was commonly used. The native murnong (or yam daisy) grew in southern and eastern Australia,

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▲ **Figure 5.73** Fire was used in some regions to clear land for farming.

including Tasmania. It was a staple for many people in these regions and is said to be eight times as nutritious as potatoes.

Tubers such as the murnong and nodding greenhood were so valued by Aboriginal Australians that biomes were altered to increase their yield and distribution. This was achieved through methods such as fire-stick farming and terracing. Fire-stick farming involved choosing the areas with the best soil and burning the vegetation in those areas in order to clear the space for planting. Specific tools were then used to **till** (turn or dig) the soil. This improved the soil, as the ash from the burned vegetation provided valuable nutrients. Terracing was used on sloping clay soils, allowing Aboriginal Australians to extend their crops to steeper land.

KEY TERMS

till dig or loosen the soil to prepare it for planting

domestication growing and adapting wild plants for human use

Fire-stick farming, terracing and tilling were sustainable farming techniques. They returned nutrients to the soil, reduced erosion and helped the soil and plants absorb rainwater. The result was a soil that was rich, fertile and so soft that it was described by one early European settler as being sponge-like.

Cereals

Cereals such as panicum (wild millet) and kangaroo grass were another vital part of the Aboriginal Australian diet and economy. As Figure 5.74 illustrates, Australia's grain belt distribution was much larger under the management of Aboriginal Australians and covered land that we today regard as being unfit for crops. Above this grain belt, cereal such as wild rice was grown in crocodile-infested waters.

Seed **domestication**, irrigation, storage and trade ensured a nutritious and reliable cereal supply. Seeds become domesticated when humans get involved in the growing process by continuously choosing seeds to save and replant the following year. Over time, due to this process of human selection, the seeds change their structure and the plant becomes dependent on humans to grow. Usually, the seeds chosen are ones that show desirable traits, such as good size, taste and yield.

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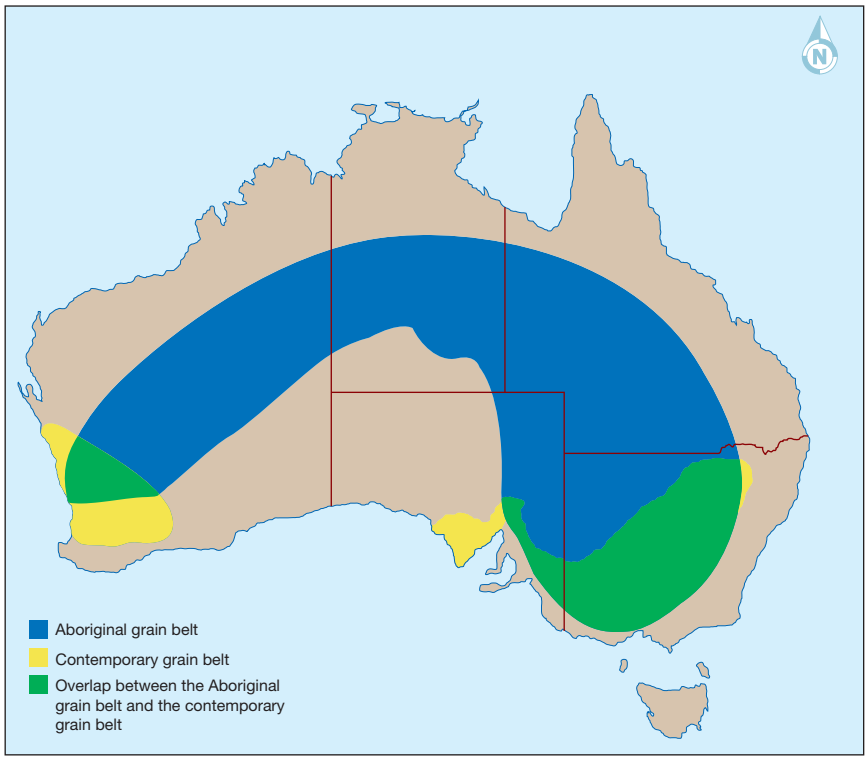

▲ **Figure 5.74** The Aboriginal grain belt of Australia compared to the contemporary grain belt.

Source: Bruce Pascoe, *Dark Emu*, 2018, p. 28.

Large dams and wells were built, and the course of some rivers were diverted (changed) to provide irrigated water to crops to increase their yield and assist their growth. There is evidence of huge dams made of clay and pebbles that could store 700 000 litres of water in Queensland and many more examples of similar constructions are to be found on public and private land today.

As a result of these efforts, **surplus** seeds were harvested and stored. This was significant in terms of food and economic security, as it allowed people to remain in one area, build permanent houses to live in, increase their population and engage in more non-agricultural activities. Surplus seeds were also traded or gifted. This led to further distribution of the seeds in areas where they had not naturally grown and diversified existing products.

Meat

Animal (game) farming provided a great supply of protein. Herding and harvesting were common approaches to secure this type of food. For instance, brush fences channelled kangaroo and emus into a limited area, where a net was stretched across to catch the animals. Similar nets were cast from one riverbank to another to catch birds as they swam by. This was sustainable because, once the animals were trapped, people could select which ones to kill, releasing the young and female animals.

KEY TERM
surplus more than you immediately need

Fish were an additional source of protein. They were farmed and caught due to some impressive feats of river engineering resulting in structures that were built so sturdily that they still exist today.

It is possible that the enormous fish traps used along the Darling River in Brewarrina, seen in Figure 5.75, are the oldest human-made structures on Earth. The process involved herding fish into human-made rock pools. These pools had openings that allowed fish to swim through. However, when fish were needed, people would block the pool openings with rocks. The pools are set at various heights so that they could be used no matter how high the water level.

This farming provided such a secure supply of food that communities flourished. At Lake Condah, the remains of houses as well as a network of channels are suggested by some to be evidence of a township of about 10 000 people. Cultural activities and gatherings were also supported by the large amount of food provided

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by using these fishing techniques. When many groups came together, the traps were set in place prior to the meetings to ensure there was enough fish to provide for the increased population over that time.

This method of farming was sustainable, as it allowed smaller fish through, trapping only the adult fish and only when needed. Particular traps in a system were managed by specific families who each had a responsibility to make sure that other families upstream or downstream in the river had enough fish supply too.

Perhaps the most remarkable example of herding involved a partnership between the Yuin people of southern New South Wales and orcas. As Pascoe describes in *Dark Emu*, the herding would begin with a ritual. The Yuin would set alight two fires on the beach, and one man would limp between the two fires in order to make the orcas feel sorry for what looked like an old, frail man. Orcas would then herd larger whales into the harbour of shallower water, where the Yuin would choose one whale to kill. As a reward and out of respect for the work of the orcas, the orcas would be given the whale's tongue to eat. In Geelong, and other regions, similar working relationships occurred between people and dolphins.

▲ **Figure 5.75** Fish traps used along the Darling River in Brewarrina in NSW are thought by some to be the oldest known human-made structures on Earth, though archaeologists have had trouble dating them. The Brewarrina fish traps were added to Australia's national heritage list in 2005.

Concept: interconnection and sustainability

Aboriginal Australians were practising the geographic concepts of interconnection and sustainability long before these words existed. Things that Europeans would consider living and non-living things are all alive, interconnected and nourished by a spirit. People, information and resources were further interconnected across the country through songlines.

Today

The Australian agricultural landscape as we know it today looks quite different from how it must have been. When the first Europeans arrived in the 1 700s, their intention was to grow the European crops and meat that were familiar to them. Therefore, there was not much interest in native food varieties.

The distribution of these native varieties quickly diminished in size, largely due to the introduction

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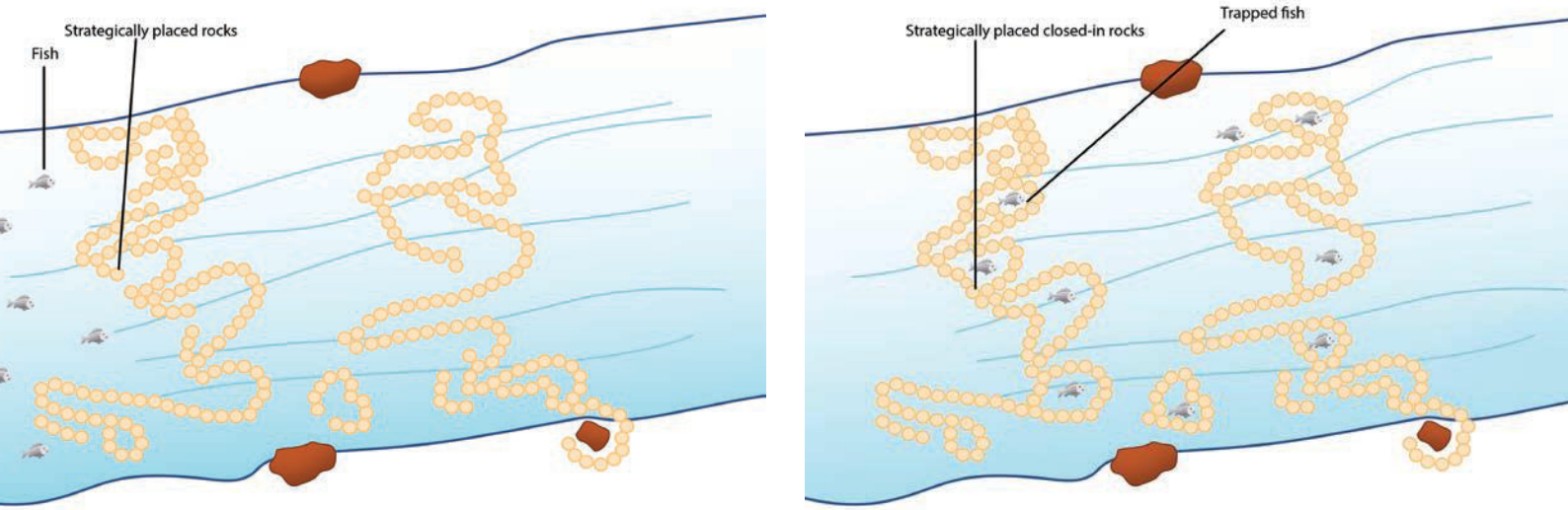

▲ **Figure 5.76** A diagram illustrating how the fish traps worked. In the image on the left, fish are able to swim back out of the traps. However, when food was required, the traps would be closed off with rocks (as seen in the image on the right) to stop the fish from swimming through.

of heavy-hoofed animals such as sheep, cattle and horses. These animals not only ate a lot of the native plants, but also compacted the soil, making it difficult for native plants to grow, causing erosion and reducing the soil moisture content.

Spatial limits have been introduced due to land ownership and the laws of trespass. In the past, Aboriginal peoples were able to move more fluidly between regions. There were also cases where, in hard times, Aboriginal communities would move into neighbouring regions and were allowed to hunt there until conditions improved in their own region. Today, these lands are severely fragmented (divided), overrun by private farms, cities and other infrastructure.

This significant reduction in native food varieties is not only a loss to Aboriginal peoples, it is a loss to us all. We are missing out on foods that are not only tasty but adapted to our land, requiring fewer artificial and expensive inputs (things that are put in) such as fertilisers and pesticides.

However, there is some evidence to suggest that we are waking up to the potential benefits of

▲ **Figure 5.77 A** Finger lime

▲ **Figure 5.77 B** Lemon myrtle

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▲ **Figure 5.77 C** Wild rice

▲ **Figure 5.77 D** Murnong (yam daisy)

exploring Aboriginal agriculture further. Some native foods, such as wild rice, murnong, lemon myrtle and finger lime, are finding a place in the gourmet food market. As the climate changes, there is growing interest in cereals such as panicum and wild rice. Wild rice, for instance, does not degrade the environment or require additional inputs such as fertilisers or irrigated water. Not only could the rice be grown in its current state, but the genes found in this rice could help create new commercial varieties that are better able to withstand the diseases that are currently harming Asian rice varieties.

Today the grain belt is significantly smaller than it once was. Could a deeper understanding of Aboriginal Australians' farming practices and use of native varieties help us expand the distribution and types of food growing once again? There is so much still to learn and explore, and the potential benefits to be gained from this knowledge go far beyond feeding ourselves. They extend to understanding ourselves and the history and culture of the land we live on.

MAKING THINKING VISIBLE 5.4

I used to think … but now, I think …

When beginning this study of land and resource management strategies used by Aboriginal peoples, you most likely had some initial ideas about what the topic was about.

1. In a few sentences, write what it is that you used to think about land and resource management strategies used by Aboriginal peoples. Begin each sentence with the phrase 'I used to think …'
2. Consider how your ideas have changed as a result of your studies. In a few sentences, write down what you now think about land and resource management strategies used by Aboriginal peoples. Begin each sentence with the phrase 'But now, I think …'

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END-OF-SECTION REVIEW 5.6

Digital quiz
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Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. What are possibly the oldest known human-made structures on Earth?
2. Outline the changes that occurred during the last glacial maximum period.
3. What was the most popular tuber eaten in southern and eastern Australia?
4. List the agricultural methods that were used to extend the distribution and yield of the murnong.
5. Choose one agricultural or hunting method (e.g. firestick farming, fish traps) and explain how this was a sustainable method of farming.
6. Explain the process of seed domestication.
7. How did the arrival of Europeans change the environment? Explain the changes that occurred and the processes that brought about the change.
8. List some of the benefits of having a surplus amount of seeds.

Interpret

9. Refer to Figure 5.75. Describe the environment by highlighting the natural and human characteristics that you can see.
10. Describe the herding ritual between orcas and the Yuin people.

Argue

11. Suggest reasons why the distribution of the Aboriginal grain belt and contemporary grain belt look so different.
12. Why do you think we know so little about Aboriginal agriculture?
13. How can wild rice play a role in our current quest for food security?

Extension

1. Create a three-course menu using native food. If possible, explain which region each ingredient is from.
2. Read Bruce Pascoe's book *Young Dark Emu* to learn more about our country's past.

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5.7 Challenges in feeding the population in Australia and other areas of the world

FOCUS QUESTIONS

- Can agriculture improve the environment?
- What land and resource management strategies are being used to try to achieve food security on a range of scales?

It's the year 2050 and the population has reached 9.8 billion people, an increase of two billion since 2020. More people are wealthier than ever before. They expect tasty food, and lots of it. As a consequence, the demand for food has increased by 60–100 per cent since 2020. On the other hand, the land available to grow food has declined. This is due to competition for land use, environmental degradation and changes to our climate. With the odds seemingly against us, can we possibly meet this ever-growing demand? One thing is certain; the challenge has been set!

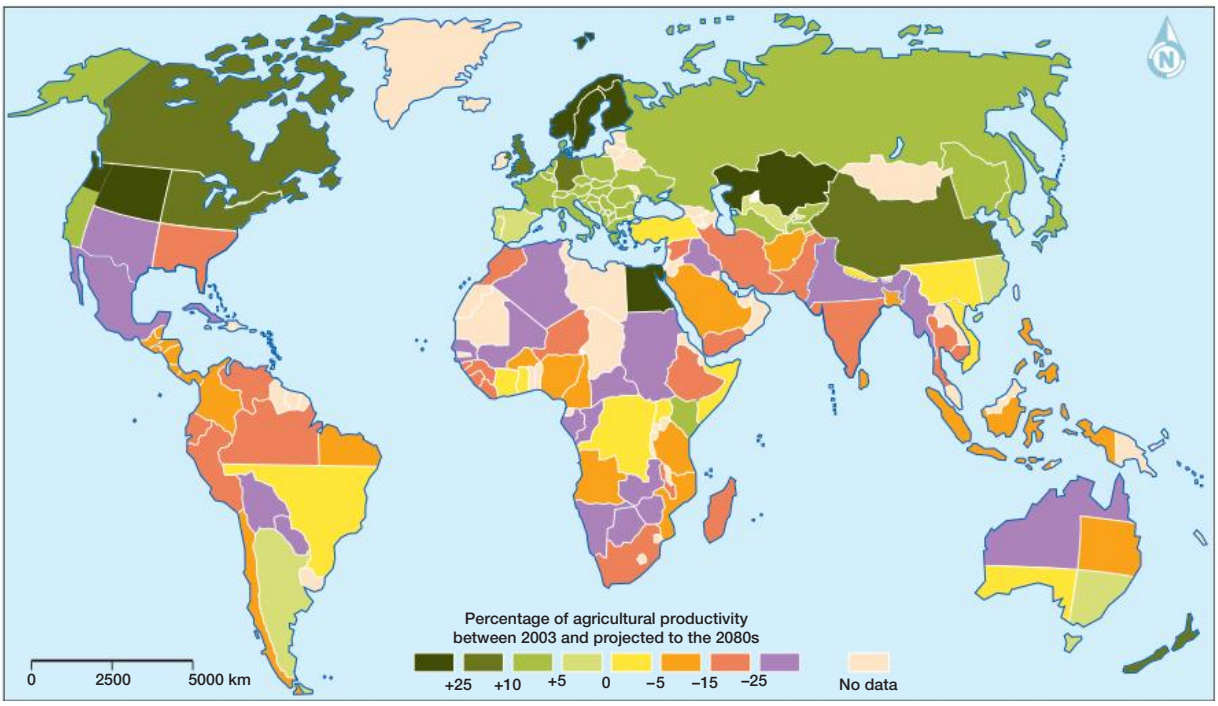
As we have learned, the agricultural industry has an enormous impact on the environment. This also makes farmers one of the biggest solutions to improving the environment and fighting challenges such as climate change and species diversity loss. However, farmers cannot face this challenge alone. They need consumers (that's us) to encourage funding for sustainable farming policies and support farmers who are practising sustainable methods.

Climate change and extreme weather events

Climate change affects various elements of the climate system, such as rainfall, the timing of seasons, sea levels, and the movement of wind and currents. These changes impact our economy and society.

Distribution of impact

As Figure 5.78 demonstrates, climate change will not impact regions equally. Nor will all the short-term impacts be negative. For instance, a 1°C to 3°C temperature rise might benefit some crop yields in temperate regions but will create too much stress for cereal crops in tropical and seasonally dry regions. Despite some potential



▲ **Figure 5.78** Projected impact of climate change on agricultural yields

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benefits, it is largely agreed that the threats to food security from a 1°C to 3°C increase outweigh the benefits – for example, through increases in bushfire risks that can harm crops and livestock. Any temperature increase above 3°C is expected to cause widespread negative consequences across the globe.

How does climate change challenge food security?

Temperature increases

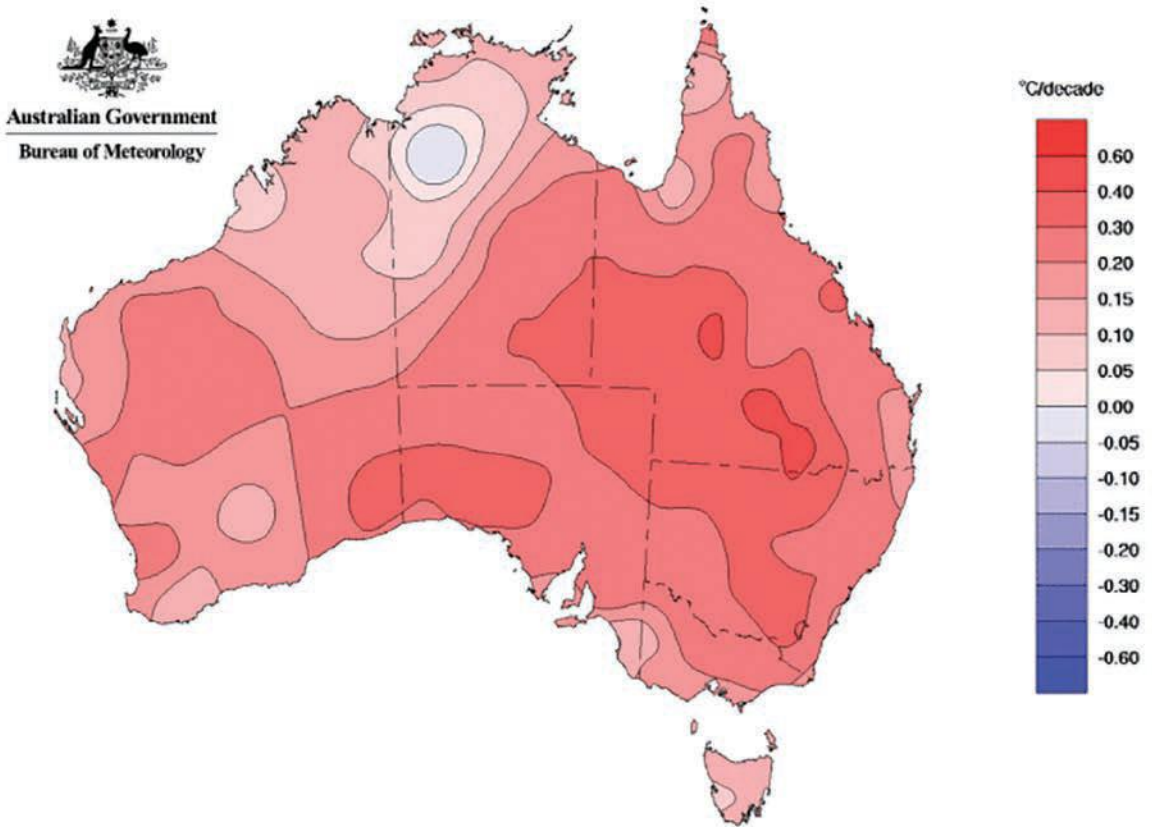
Plants and animals can cope with small changes in climate conditions such as rainfall, soil moisture and temperature. However, each species has its own tolerance levels, and when these are exceeded, quality and yield decline, and diseases spread. Yield reduction was seen during the European heatwave of 2018, which created the worst crop losses since World War II. Wheat crops were reduced by 75 per cent in the Ukraine, a place formerly known as the Soviet Union's breadbasket. Animals too, feel the stress. The milk yield of a dairy cow can be reduced by up to 40 per cent in extreme heatwave conditions.

In addition to declining yield, food quality is compromised. Approximately 70 per cent of Australia's wine regions may experience a diminished quality of red wines in warm areas due to earlier ripening. Both yield and quality can be further reduced through the spread of disease. For example, in our waters, heat decreases oxygen levels and increases algae blooms, leading to diseases among aquatic life such as bass and salmon.

Precipitation and soil moisture

Rising temperatures affect the water cycle and lead to more extreme weather events. More water evaporates from the land to be stored in the atmosphere. The air therefore becomes wetter while land surfaces become drier for longer periods, causing more bushfires and drought. When it does finally rain, storms and floods are more common.

In regions reliant on irrigated farming, such as the rice-growing fields along the Murrumbidgee River, increased evaporation threatens the irrigated water supply as there is less surface water available to divert to farms. Rain-fed agricultural regions, such as sub-Saharan Africa, are also at a high risk of food insecurity due to less rainfall in those regions.



▲ **Figure 5.79** The changes in mean temperature from 1970 to 2018. Predict the temperature change that the region will experience by 2100. Justify your prediction by referring to the map.

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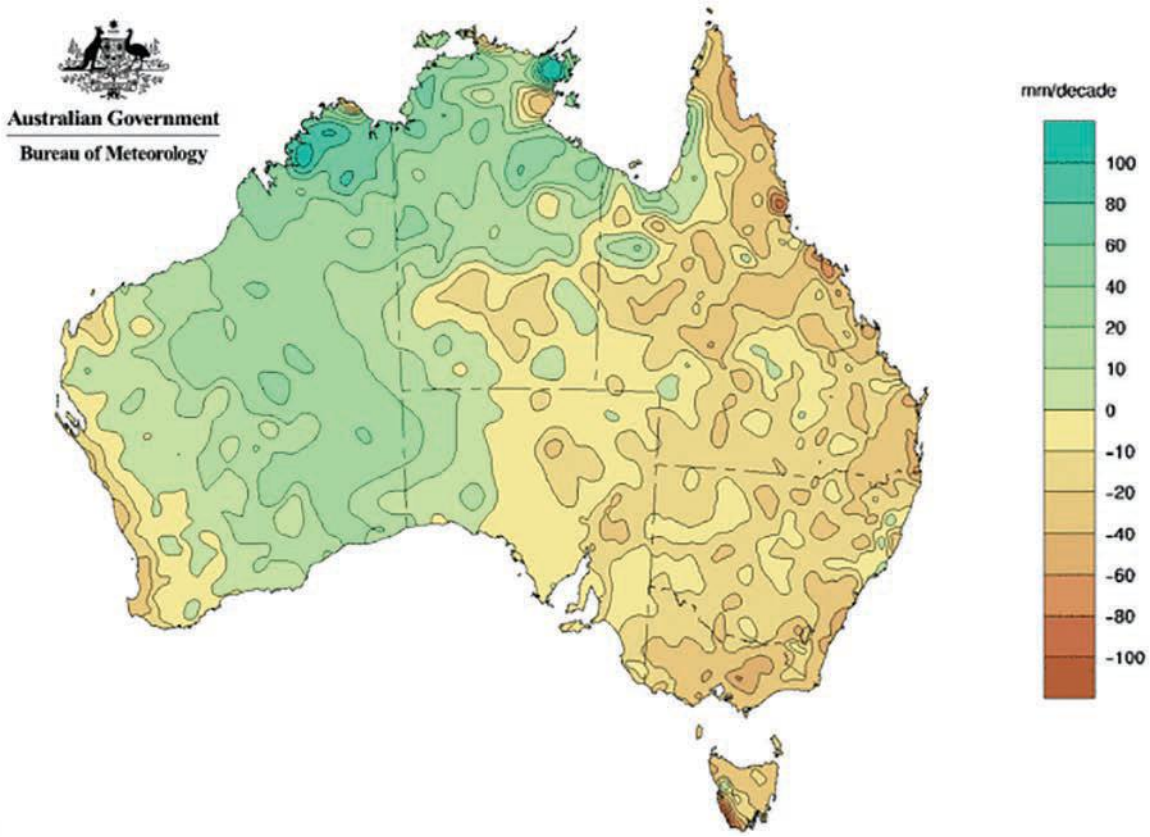
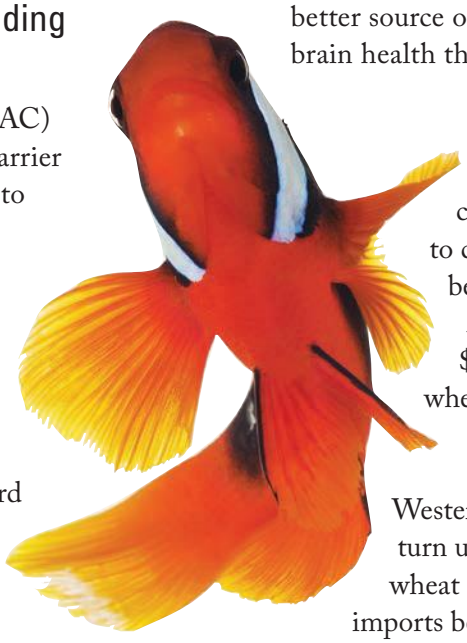


▲ **Figure 5.80** The changes in total rainfall from 1970 to 2018. Predict the rainfall change that you believe we will experience by 2100. Justify your prediction by referring to the map.

Movement of currents: finding Nemo – in Tasmania!

The East Australian Current (EAC) typically runs from the Great Barrier Reef along the Australian coast to Sydney. However, an increase in atmospheric carbon dioxide has strengthened a climate system known as the Antarctic Oscillation. This has changed wind patterns to push the EAC 350 kilometres southward over the last 50 years. These southward bursts of warm waters benefit some Tasmanian fishermen, who now have a longer season to fish tuna and striped marlin. However, the warming of cold-water biomes can come at a cost to the food chain, which includes us. Cold-water fish from the Tasman Sea provide a better source of Omega-3 fatty acids for our brain health than warm-water fish.



▲ **Figure 5.81** A clownfish

Economic impact

The uneven distribution of climate change has the potential to change trading relationships between countries. For example, Australia currently earns $3.4 billion a year from exporting wheat. However, the predicted reduction in rainfall in cereal regions in South Australia, Western Australia and Victoria may turn us into a country reliant on wheat imports. Regions that rely on imports become economically vulnerable as they are forced to pay what other countries charge for their produce. Prices are expected to increase as water, land and fuel become scarcer and more valuable.

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Almost a third of the world's workers work in agriculture. Some regions, such as sub-Saharan Africa, have a far greater percentage of workers who rely on agriculture for their jobs and livelihood. Climate change not only limits their access to food but also limits their ability to make a living. The rural poor in these regions will therefore become particularly vulnerable to climate change.

Social impact

There is concern that the current divide between rich and poor may increase. People who are already poor will be unable to afford the increasing cost of food. They are then forced to reduce the amount or quality of food they eat and will not get the nutrition that they need to live a healthy and active life. Even those who are not poor will still suffer from reduced nutrition. This is because many plants that are grown in an atmosphere with high carbon dioxide levels have less protein and minerals. Hunger and lack of nutrition can affect society in many ways, from increasing poor health, decreasing ability to learn and concentrate, and conflict.

CASE STUDY 5.3

Extreme weather events and our food supply chains

The average household has about 3–5 days' worth of food, while our supermarkets store hold just a few weeks of food. This is because Australia's **food supply chains** are mostly supplied on a just-in-time basis. This allows us to have fresh food, but also means that we only have about 30 days' worth of non-perishable food and 3–5 days of perishable food in the supply chain.

KEY TERM

food supply chain the process of getting food from the farm to the plate

Extreme weather events are predicted to increase due to climate change. This will increase the number and degree of food emergencies. Though our food supply systems can handle some emergencies, Australia is underprepared for major emergencies.

This fact was sadly realised during the 2010–11 Queensland floods. Towns such as Rockhampton were cut off by road, rail and air for two weeks. People flocked to food outlets to stock up on food and Brisbane was just one day away from running out of bread. Fortunately, food was eventually brought into towns via Sydney and Melbourne through west Queensland. However, if a second disaster were to have occurred during that time, such as a bushfire anywhere between Melbourne and Queensland, there would not have been an opportunity to restock.

Land and resource management responses

Adaptation

On a local scale, individual farms are adapting to climate change by changing crop varieties or moving location. Winemaking company Brown Brothers has purchased land in Tasmania for its business to avoid the growing temperature and bushfire risks in Victoria. Livestock farmers have been breeding or replacing European cattle breeds with Bos Indicus, an Asian cattle breed that is more tolerant of high temperatures.

Regenerative agriculture

Regenerative agriculture is an old approach to farming that is regaining popularity because of its potential to improve crop yield while at the same time tackle the challenges of climate change, soil degradation and biodiversity loss.

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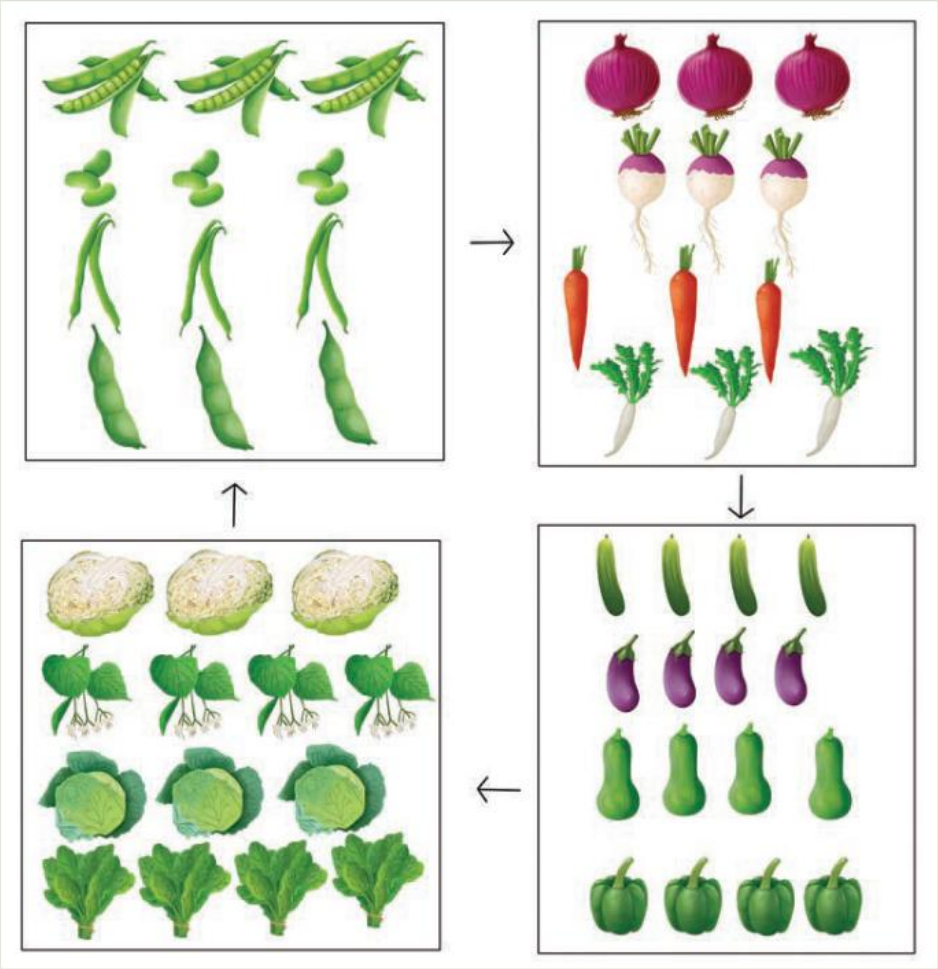
Some methods used in regenerative agriculture are listed in Table 5.5.

▼ **Table 5.5** Various methods used in regenerative agriculture

Method	Description	Benefits
Crop rotation	• Rotating crops between fields	• Stops the soil from becoming depleted in a particular nutrient from overuse by a single crop
Green manure	• Crops are grown just to be cut down and returned back into the soil where they grew. These are grown during the off-season to improve the soil in between growing cash crops or as part of a crop rotation system	• Farmers choose crops that improve the soil • Provides land cover, which draws down carbon, reduces erosion and increases soil moisture • Provides food for microbes that turn crops into humus
Polyculture	• Planting a variety of crops together	• Increases soil and plant health, makes the farm more resistant to disease and pests, and increases biological pest control
Native windbreaks	• Planting native trees around fields	• Reduces evaporation and damage caused by wind • Increases biodiversity by creating habitat for predator birds and other animals that control pests • Draws down carbon from the atmosphere to combat climate change



◄ **Figure 5.82** This is a diagram of crop rotation. From the top left, this example of crop rotation shows that the garden bed is first planted with pods, such as peas and broad beans. These are grown to improve the soil and enrich it with nutrients.

The bed is then planted with root vegetables, such as carrots and beetroot. These are light feeders that do not take too many nutrients from the soil.

Next in this sequence come the fruiting plants, such as capsicum and cucumbers, followed by greens, such as cabbage and lettuce. Both these types of plant are heavy feeders and can deplete the soil of nutrients.

Finally, the pods are planted in the garden bed again to restore the soil quality, and the cycle can restart.

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▲ **Figure 5.83** A pea crop (left) and an oat crop (right). Combining pea and oat crops within one field helps to reduce the spread of weeds, and their roots break up soil to let air, moisture and nutrients in. Peas take nitrogen from the air and bring it into the soil. Peas and oats may be grown before or after farmers have grown nitrogen-hungry crops such as corn.

▲ **Figure 5.84** Mustard plants are soil fumigators. They kill soil pathogens and parasites, such as root-knot nematode, which can infect and kill up to 2000 types of plants.

▲ **Figure 5.85** This polyculture farm grows a variety of crops, as well as flowers, to attract beneficial insects

Amazing but true …

Organic farms do not use synthetic chemical fertilisers or pesticides. However, some organic farms use fertilisers and pesticides made from natural ingredients. Though this is good news if you are concerned about chemicals in your food, these fertilisers and pesticides can still contribute to environmental pollution through the excessive nutrients and salts they leach into the soil and waterways.

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Previous crop	Crop planted								
	Spring wheat	Oat	Barley	Canola	Flax	Field pea	Soybean	Sunflower	Grain corn
Sp wheat	85	94	95	102	104	103	102	103	96
Oat	91	79	78	95	92	93	100	102	99
Barley	88	90	82	100	102	91	100	96	92
Canola	100	101	103	87	86	98	100	92	99
Flax	96	90	107	103	83	91	98	88	85
Field pea	102	110	106	104	148	–	95	–	98
Soybean	107	108	107	103	107	90	93	103	103
Sunflower	102	102	106	90	99	85	93	82	97
Grain corn	98	110	94	110	–	90	101	115	88
Yield/ac	***50 bu***	***101 bu***	***65 bu***	***36 bu***	***21 bu***	***38 bu***	***35 bu***	***1607 lb***	***121 bu***

▲ **Figure 5.86** Results showing yield differences for different crop rotations (ac means acre, and bu stands for bushel – a measurement used to judge crop yields).

A response on a national scale: the Emissions Reduction Fund – Soil Carbon Project

In 2014, the federal government created the Emissions Reduction Fund. One part of this fund is the Soil Carbon Project, which encourages farmers to reduce their emissions by drawing down carbon into the soil. Farmers who practise regenerative agriculture can earn carbon credit units for drawing down carbon. One unit is earned for each tonne of carbon dioxide equivalent stored or avoided by a project. Farmers can earn extra income by selling their units to the government through a Carbon Abatement Contract or on the market.

ACTIVITY 5.4

Impacts of climate change on food security

Create a table showing the impacts of climate change on food security.

Environmental changes	Impacts
Temperature increase	
Reduced precipitation and soil moisture	
Movement of currents	

OR

Create a table summarising two economic, social and environmental impacts of climate change.

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Population growth, nutrition and access

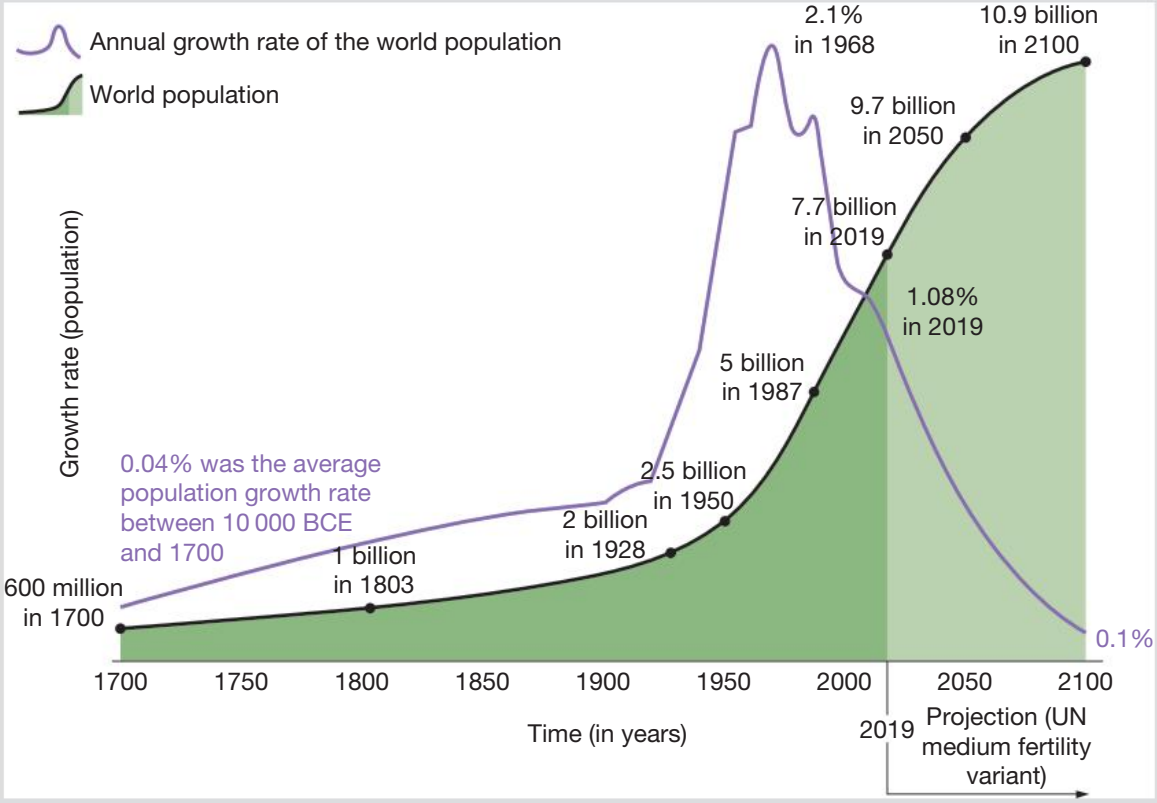
There are varying predictions as to whether the world population will continue to grow to 11 billion (as stated by the United Nations) or reach a peak and begin to decline by 2055 (as calculated by Deutsche Bank). To accommodate the growing number of mouths to feed, we cannot simply continue with the current farming methods. That would require more land, which is under threat by competing land uses, and more fossil fuels, which would accelerate climate change. The business-as-usual method is unsustainable.

DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 5.7

Describing the trend of a line graph

Line graphs are used in Geography to show change over time. The horizontal axis represents time and the vertical axis represents the variables that are changing. When describing the trend of a line graph, include the following information:

- A summary of what the graph is representing. What are the variables on the horizontal line and vertical line?
- A description of the overall trend, including the shape of the graph. Is the graph showing an increase, decrease or stable trend?
- Quantify by using the data in the graph. How much has it increased or decreased by, and over what time period? Make sure you read axis labels carefully and take note of units.
- Time periods that stand out. Do values rise or fall more steeply during a particular time period?
- Are there any significant peaks or troughs? What are the maximum or minimum values, and when do they occur?



▲ **Figure 5.87** The growth rate here shows the percentage of population increase in a given time period

Source: Our World in Data website

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However, more mouths to feed is not the immediate issue. We actually already produce enough food for everyone, yet one in nine people go hungry and one-third of all people suffer malnutrition. An enormous hindrance to food security for many is access to nutritious food. Most famines have happened at times where there is enough food for the population.

When people cannot access nutritious food, they are more likely to experience a decline in health, which can affect their ability to participate in society and break out of the **poverty cycle**. In extreme cases, a lack of access to food can lead to conflict. Conflict is both a result and a cause of food insecurity. When people lack access to food, they may resort to conflict in an attempt to secure resources. On the other hand, when conflict occurs, they have difficulty getting food. In the Syrian War, starvation was used as a war tactic by government forces blocking humanitarian aid organisations from providing food and medical care.

KEY TERM

poverty cycle the continuation of poverty, often from one generation to another due to the impact of certain factors

While some cannot access food, others are feeding their rubbish bins. One-third of the world's food is thrown out – four times the amount of food needed to wipe out global hunger.

Clothing is also thrown out at an alarming rate of 600 kilograms of clothes every 10 minutes in Australia alone. While this may not seem like a threat to food security, it is. The land and irrigated water that are used to grow fibres for clothing are in competition for the land and water necessary to grow food crops. Approximately 10 000 litres of water are used to make one pair of jeans. Chemicals leaching from textile waste also pollute our land and waters.

▲ **Figure 5.88** The clothing industry contributes 10 per cent of greenhouse gas emissions and 20 per cent of wastewater globally

▼ **Figure 5.89** Christy Dawn is a clothing company that uses only deadstock fabric. Deadstock fabric is fabric left over from fashion houses that would otherwise go to landfill.

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A global response to hunger: ShareTheMeal

Eradicate global hunger? There's an app for that! ShareTheMeal.com was initiated by the United Nations World Food Program (WFP), offering an easy way for people to donate money to World Food Program's projects. In-app features include joining a team of like-minded people who combine their donations to achieve a chosen goal. Another feature titled The Table allows you to be matched with a specific family in need and receive personalised updates on the impact of your donations. The app also provides education through a news feed that shows updates on projects and information on global hunger.

This app helps establish personal connections between donors and those experiencing hunger thereby encouraging donors to provide ongoing support. There are little administrative costs as the money can be directly donated over the app. In fact, 90 per cent of donations go directly to WFP projects. As WFP is 100 per cent voluntarily funded, donations are important.

Can eating insects be the solution?

In places such as Thailand and Cambodia in the region of South-East Asia, insects are commonly eaten. Insects contain high-quality protein, vitamins and amino acids. They require far less than other protein sources such as cattle for beef (they can be fed using our food waste) and space. They also emit less greenhouse gases and ammonia than livestock. The United Nations Food and Agriculture Organisation is working with countries worldwide to learn more about insects and how they can be farmed in the future, not only for consumption by people around the world but also as an added source of protein for livestock feed.

▼ **Figure 5.90** Could insects such as crickets become a stable source of protein?

Can we eat greenhouse gases?

A company in Finland called Solar Foods has recently created a protein powder made from air. It looks like flour and contains 50 per cent protein, 5–10 per cent fat and 20–25 per cent carbohydrates. Solein is made by extracting carbon dioxide from air using carbon-capture technology and combining it with water, nutrients and vitamins. Solein is currently manufactured using 100 per cent renewable solar energy.

▲ **Figure 5.91** A family selling crickets at Angkor, Cambodia

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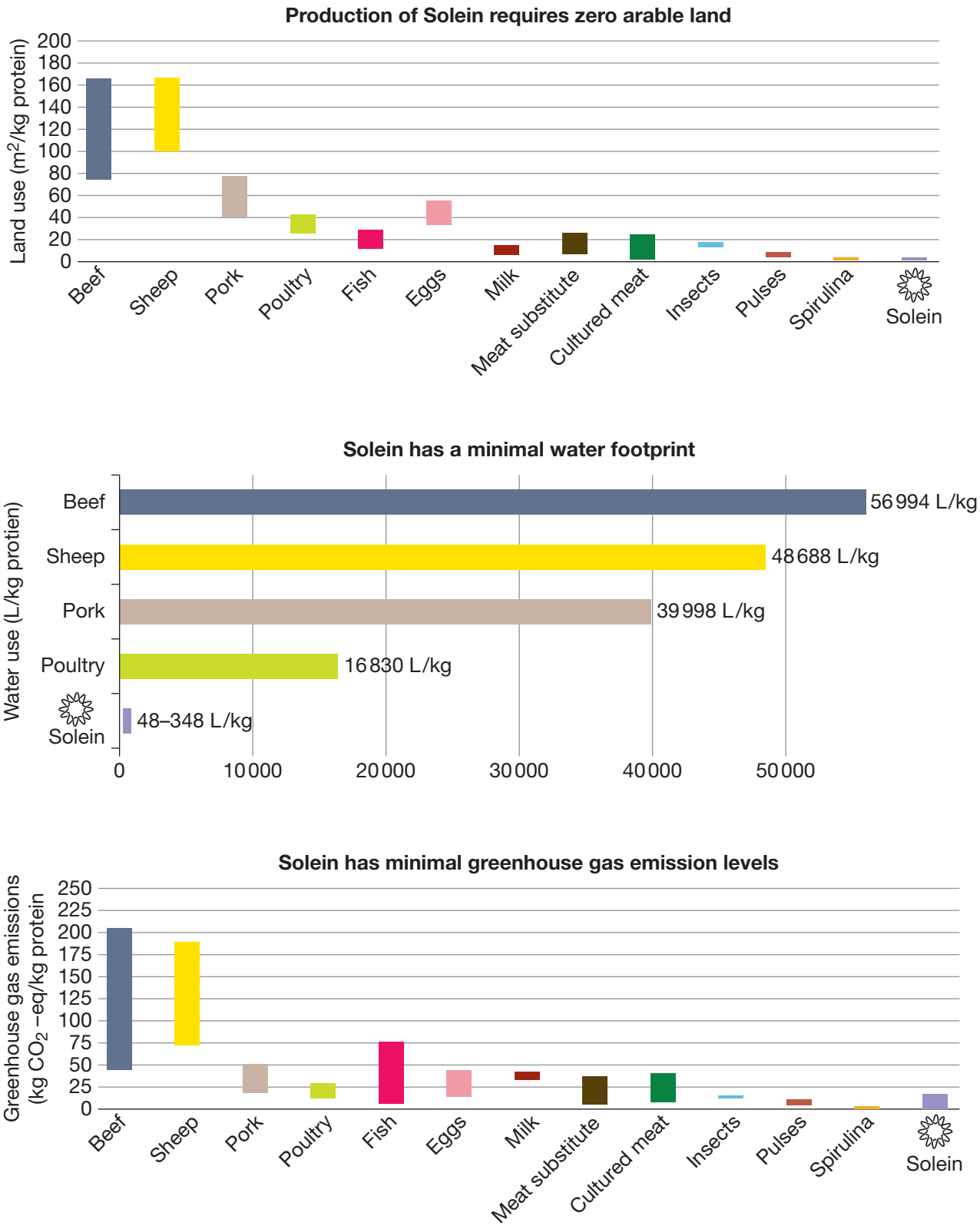
The company's short-term goal is to sell Solein globally and produce two million meals each year, which could result in revenue (income) of US$1.2 billion for the company by 2023. The longer term goal is to provide nourishment to nine billion people by 2050, with an estimated revenue of US$500 billion.



▲ **Figure 5.92** How Solein's environmental impact compares to other crops.

Source: based on Hanna Tuomisto, 'Global Food Production Emissions Find Remedy in Solein – the World's Purest Protein', Solar Foods website, 10/5/2019

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END-OF-SECTION REVIEW 5.7

Digital quiz
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Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. Why may the gap between rich and poor increase in the short term due to climate change?
2. Identify one potential benefit and one potential negative effect of organic farming.
3. Why are the rural poor particularly economically vulnerable to climate change?
4. How will irrigated and rain-fed regions of the world be affected by temperature increases?
5. How many people still go hungry today? What is the main reason for this?
6. How is throwing out clothing a threat to food security?

Interpret

7. Refer to Figure 5.86. Imagine that you are an oat farmer trying to increase yield through crop rotation.
   - a How much is your yield if you grow oats two years straight?
   - b How much is your yield in the second year following a year of growing peas?
8. In pairs, study Figure 5.87 and answer the following questions.
   - a Describe the trend of the overall world population from 1700 to 2100.
   - b Describe the trend of the annual growth rate of world population from 1700 to 2100.
   - c Why do you think the overall world population continues to grow even when the growth rate decreases?
9. Refer to Figure 5.78. In a best-case scenario, which regions may experience an increase in crop yield in the short term?
10. Refer to Figure 5.78. Describe the distribution of the projected impact of climate change on agricultural yields.

Argue

11. Which land and resource management strategy do you believe is better: adaptation or regenerative agriculture? Justify your decision.
12. How is conflict both a cause and a result of food insecurity?
13. Explain the benefits of Solein by using the information provided in the graphs in Figure 5.92 in your answer.

Extension

1. Consider the Queensland floods case study. Imagine that a bushfire had occurred during this time, cutting off Brisbane's food supply. Write your prediction of what would happen next.
2. Brainstorm and research 10 things that individuals can do to reduce their food and clothing waste.
3. Draw a landscape design for a farm using regenerative agriculture techniques. Annotate your design.
4. Visit the Redmap website. Use the information on this site to create your own map of unusual marine sightings around Australia. Map at least two species for each state. Annotate each sighting by mentioning where the species is normally found or draw lines indicating the movement of a species from its usual region/s to where it has recently been found.

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5.8 Conducting a fieldwork investigation

FOCUS QUESTION

What does the fieldwork process involve?

Fieldwork lies at the heart of Geography studies. It allows you to investigate many of the concepts studied in the classroom while in the real world. Fieldwork is a fun process that involves:

- Developing a background understanding of an issue
- Creating a research question to explore the issue in the real world
- Hypothesising an answer to your question
- Conducting research
- Analysing the results of your research to test your hypothesis
- Evaluating what you have learned, what worked and didn't work during the fieldwork process, and considering any further questions that you now have.

To investigate the ideas studied in this chapter, you may wish to conduct fieldwork at a farm in your local or regional area. The following is an example of the fieldwork process.

Please see the Interactive Textbook to download a fieldwork template

FIELDWORK 5.1

Definition of topic

This includes providing an introduction to the topic and creating a research question and hypothesis.

Introduction

Introduce your study by providing some context. Write a 100-word paragraph introducing your chosen farm. Ensure that your paragraph addresses the following:

1. Name and locate your chosen farm using absolute and relative location, and include a map.
2. Describe its regional context. What region is it in? Use Google Earth and further research to explore the surrounding region. Are there many other farms in this region? What food is typically grown in this region?
3. In which biome is your chosen farm located?
4. Is this biome suitable for food production? Justify your answer.
5. Research your chosen farm using Google Earth, the farm website or social media posts. Describe the type of produce that is grown or raised on your chosen farm.

Research question

Write a research question that you intend to answer by using the data that you collect. For example: What are the present and future challenges to food-producing farms, and how are these challenges being met and prepared for on your chosen farm? More specific sub-questions could include:

1. How is the issue of species diversity loss being addressed at this farm?
2. What is this farm doing to reduce the impacts of climate change?
3. How is climate change impacting this farm?
4. How is this farm addressing the issue of soil degradation?
5. How has soil degradation impacted this farm?
6. What methods is this farm using to increase its yield?

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Hypothesis

Write a clear and concise hypothesis that you can test by collecting primary data. It should relate to your research question. The following is an outline of potential challenges that you could investigate based on the research questions on the previous page. Using the background knowledge that you have gained throughout the course of this chapter, create a hypothesis relating to your chosen challenge that you could test at the farm.

Collecting secondary data

Secondary data refers to information that can be found from sources such as satellite imagery from Google Earth, council documents and websites. Secondary data is not specifically created to answer your fieldwork question; however, the information can still help you answer your question and provide valuable knowledge about the geographic characteristics of your chosen location.

Farming challenge	Hypothesis	What background information (secondary data) can I use to help me research this question?	How can I test this hypothesis at the farm? That is, what primary data collection methods can I use?
Species diversity			
Climate change			
Soil degradation			
Crop yield			

Primary data collection

Primary data is collected first-hand, during fieldwork. Unlike secondary data, primary data is aimed to specifically help answer your fieldwork question. Consider the types of primary data and equipment that you will need to test your hypothesis and answer your research question. Examples include field sketches, photographs, tallying information such as how many types of crops are grown, testing soil structure/moisture/microbial life, and interviews with the farmer.

Presenting and analysing your data

1. Describe the nature of the challenge you are researching and outline your hypothesis.
2. Summarise your data using tables and graphs where possible.
3. Explain how your chosen farm is meeting or preparing for this challenge by analysing your research results (that is, explaining what your data is showing).
4. State to what extent your hypothesis has been supported or disproved.

Conclusion and evaluation

Summarise your findings and evaluate the success of the field trip. What were the strengths and weaknesses of your data collection methods? What could be done differently next time? What additional data could be collected to gain a better understanding of the issue?

Reflecting on the fieldwork

1. I really liked …
2. I would have preferred it if …
3. The most interesting discovery I made was …
4. Something else I would like to mention (or a question I have) is …

References

Ensure that you include all the sources that you used in a bibliography.

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Making thinking visible

Generate, sort, connect, elaborate

In groups, consider all that you have learned throughout the course of this chapter.

1 **Generate** a list of ideas and initial thoughts that come to mind when you think about biomes and food security.

2 **Sort** your ideas according to how central to the topic they are. Place central ideas near the centre and less direct or tangential ideas towards the outside of the page.

3 **Connect** your ideas by drawing connecting lines between ideas that have something in common. Explain and write in a short sentence how the ideas are connected.

4 **Elaborate** on any of the ideas you have written so far by adding new ideas that expand, extend or add to your initial ideas.

3 Research task

1 Choose one biome to research further. Use a variety of sources and this chapter to research and complete the following:

   a Describe the global distribution of this biome using PQE.

   b Describe the characteristics from Section 5.1 that have influenced the distribution of this biome. For example, what type of soil, elevation, latitude and climate apply to this biome? Include and refer to data such as a climate graph or elevation map to support your description.

   c List some of the plants and animals that live in this biome.

   d Choose at least two plants or animals from your list and explain how they have adapted to live in this biome.

   e How does this biome contribute to global food security? For example, identify the food that is grown in this biome and identify who eats this food. Is it eaten locally or exported? If exported, where is it exported to?

   f What type or types of agriculture and agricultural methods are used in this biome (e.g. subsistence agriculture, terracing, livestock farming, intensive industrial agriculture)?

   g Explain how climate change is impacting this biome.

2 Investigate the social, environmental and economic impacts of the fast-fashion industry. Present your findings in a report that includes relevant maps, data and statistics.

3 Investigate the impact of climate change on Australian agriculture. Present this information in an annotated map of Australia that shows the impacts in each state. Complete your map by including your mapping conventions (BOLTSS). Refer to the Interactive Textbook for more information on BOLTSS.

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4 Extended-response questions

Evaluate the effectiveness of the Green Revolution as a response to food security.

1. Provide a brief history and overview of the Green Revolution, including its aims and methods.
2. Describe the positive and negative impacts of the Green Revolution socially, environmentally and economically. Include data, statistics and case studies from this chapter or other sources to support your evaluation.
3. Conclude with a statement of the short-term and long-term effectiveness of the response.

5 Problem-solving task

Choose one of the challenges outlined in Section 5.7 and design your own response to the challenge. Consider whether your response will:

- assess and monitor the change
- reverse or adapt to the change
- involve an Indigenous perspective
- indirectly respond to the impact by raising awareness.

Swap your response with a classmate and use the following compass points activity to assess your partner's response.

MAKING THINKING VISIBLE 5.5

Compass points: a routine for examining propositions

1. **E = Excited**

   What excites you about this idea or proposition? What's the upside?

2. **W = Worrisome**

   What do you find worrisome about this idea or proposition? What's the downside?

3. **N = Need to know**

   What else do you need to know or find out about this idea or proposition? What additional information would help you to evaluate things?

4. **S = Stance or suggestion for moving forward**

   What is your current stance or opinion on the idea or proposition? How might you move forward in your evaluation of this idea or proposition?

6 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about Australia's biomes

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Unit 2

Geographies of interconnection

Overview

In 2018, over 55 per cent of the world's population had access to the internet. Over 2.3 billion of these people actively used Facebook and each of these users had an average of 155 Facebook friends. In the same year, 21 per cent of Australia's population purchased a product online from an international seller and over 7 per cent of all retail sales occurred online.

In this unit, you will investigate changes in the ways people interact with one another and with places. You will analyse the role of technology in connecting people and the positive and negative impacts this is having on trade, production and sustainability. By exploring the interconnections between consumers and producers, you will consider how choices made on a local scale can have global consequences.

Learning goals

After completing this unit, you should be able to answer these questions:

- How do different people perceive and interact with local places based on their age, gender and cultural background?
- In what ways do transportation and information and communication technologies connect people to information and services around the world?
- How does trade in goods and services connect people in different places on different scales?
- What impact does the production and consumption of goods have on places?
- In what way do the choices of consumers affect the sustainability of places?

Video
Unit overview

Geographical concepts and skills: *place, scale* and *interconnection*

Throughout this unit, there will be focus on developing your understanding of **place**, **scale** and **interconnection**. Geographers distinguish places based on their unique geographic characteristics. Physical characteristics might include landforms, vegetation, roads and buildings. Intangible characteristics are more difficult to observe and relate to how different people experience and value a place.

Interconnection involves the links between places and the influences that people have on the characteristics of places. People are interconnected with places in the ways that they create, change and manage them. Advancements in technology have enabled people to connect with places on a variety of **scales**. For example, a raw material might be harvested in a local area, transported to a different country to be processed and turned into a product and then sold online all over the world.

Although this unit has a specific focus on **place**, **scale** and **interconnection**, these concepts are part of a group of seven interrelated key ideas that help us to think geographically.

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Geography concepts

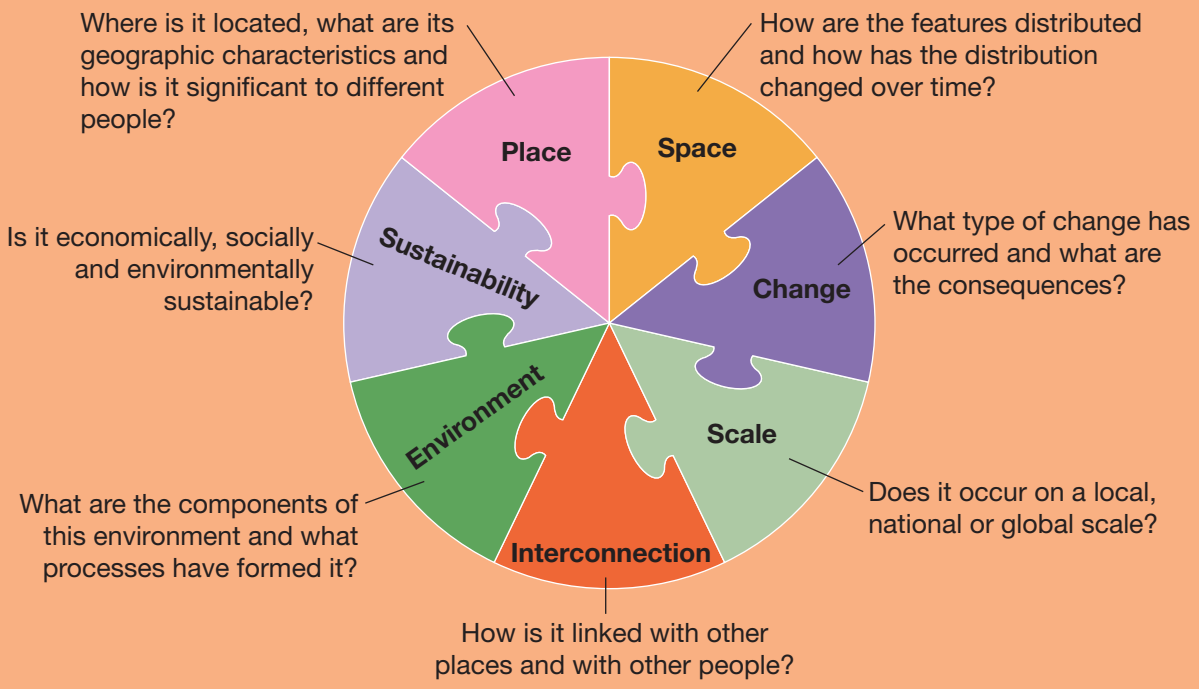

Figure A

Figure B

▲ Many people from around the world are interconnected with the city of Venice in Italy through tourism, as seen in Figure A. In fact, Venice usually receives about 30 million tourists each year. The COVID-19 pandemic of 2020 significantly affected interconnections between people and places. Trade and tourism were impacted, as can be seen in Figure B, which shows the empty streets of Venice during the coronavirus outbreak.

Please note at the time of writing in early 2020, the global COVID-19 pandemic was unfolding, and having a major effect on the world. The consequences were still largely unknown at the time of publication.

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CHAPTER 6

Aboriginal or Torres Strait Islander peoples should be aware that this chapter contains images and names of people who have passed away.

Geographies of interconnection

Setting the scene: devil's gold and a selfie stick

In the early hours of the morning, an Indonesian man from Banyuwangi, East Java, prepares for work. Dressed in torn clothing, he wraps a wet rag across his mouth and places a long piece of cane that connects two baskets across his deformed back. As the cane nestles into the open wounds on his shoulders, he begins the 3200-metre hike to the top of the Kawah Ijen volcano, which at this time of night illuminates the sky with blue vapour – the result of combusting sulphuric gases. Then he begins his 800-metre descent into the volcano. He will make one or two trips tonight, working long hours in a place so hot it can dissolve teeth. He will earn approximately A$5 in exchange for his harvest: sulphite rock, otherwise known as 'devil's gold'.

Whether we know it or not, there is an *interconnection* between us and this man, who is one of the 300 sulphur miners of East Java. Once the rock is mined, it is mostly traded to China and South-East Asia, where the sulphur is used to make many different products, including fertilisers, pesticides, paper, make-up and shampoo. It is even used to bleach sugar to give it its white colour. These products are then traded globally, including to Australia.

Interconnections can occur between people and places not only through trade, but also through transportation, communication technology and travel. Trade is not the only way that we can be interconnected with the sulphur miner in Banyuwangi. In the last 10 years, the volcano itself has become a tourist destination for people who are curious to see the miners at work and experience the volcano's natural beauty.

Interconnections have impacts that can change places and people. In this instance, tourism can be more lucrative than mining, and some savvy miners have become tour guides, coffee store owners and homestay operators. The newly established tourism industry fills miners with the hope that their children will not have to work in the mines – a job that reduces one's lifespan to an average of 50 years. The place itself has become a tourist region, with festivals and a cycling competition called Tour de Banyuwangi Ijen. In 2018, 4.8 million tourists visited the region, compared to fewer than one million in 2010.

For those who cannot transition into the tourism industry, mining continues to remain a dangerous job. This danger has been increased by the thousands of tourists who, holding selfie sticks, swarm miners to get a photo. They create a new hazard for the exhausted workers. Tourists also

◄ **Figure 6.1** Sulphur miners working in the Kawah Ijen volcano

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suffer from hazards, such as passing out from the volcanic heat, and trauma from gas explosions, some of which have hospitalised tourists.

It is clear that the interconnections between people and the Kawah Ijen volcano provide benefits from a local to a global scale. It is also clear that these interconnections need to be better managed to remain sustainable into the future.

KEY TERM

subduction a process where one tectonic plate moves under another tectonic plate and sinks into the mantle

▲ **Figure 6.2** An important natural characteristic of Indonesia is its volcanoes, which are formed due to the **subduction** zones between the Eurasian plate and the Indo-Australian plate. This map shows the location of 10 volcanoes that also serve as tourist attractions for hikers, including Mt Ijen, where sulphur is mined.

MAKING THINKING VISIBLE 6.1

Think, pair, share

Should tourism be banned in the Kawah Ijen volcano? Consider both positive and negative impacts in your answer. Share your thoughts with a partner and justify your opinion.

Compass points

Propose one idea that could make the interconnections between tourists, miners and the volcano more sustainable. Swap your idea with a partner and evaluate the idea using the following criteria:

1. **E = Excited**
   What excites you about this idea or proposition? What's the upside?
2. **W = Worrisome**
   What do you find worrisome about this idea or proposition? What's the downside?
3. **N = Need to know**
   What else do you need to know or find out about this idea or proposition? What additional information would help you to evaluate things?
4. **S = Stance or suggestion for moving forward**
   What is your current stance or opinion on the idea or proposition? How might you move forward in your evaluation of this idea or proposition?

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Chapter overview

Introduction

People throughout the world are connected to places and each other in many ways. The networks that interconnect us are growing rapidly through the constant development of technologies in transportation, and in information and communication technologies. This chapter introduces the phenomenon of globalisation. It explores how and why we are connected to people and places from a local to a global scale and the impacts of these connections on environments and societies in different places.

Learning goals

After completing this chapter, you should be able to answer these questions:

- In what ways are people connected to different places?
- How do transportation and information technologies connect people to services, places and other people?
- How are people connected to each other and other places through trade?
- What are the effects of the production and consumption of goods?

Geography skills

After completing this chapter, you should be able to:

- Predict changes in the characteristics of places over time and identify the possible implications of change for the future
- Identify, analyse and explain significant spatial distributions and patterns, and identify and evaluate their implications over time and at different scales
- Identify, analyse and explain significant interconnections within places and between places over time and at different scales, and evaluate the resulting changes and further consequences
- Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources
- Select, organise and represent data and information in different forms, including by constructing special purpose maps that conform to cartographic conventions, using digital and spatial technologies as appropriate
- Analyse and evaluate data, maps and other geographical information using digital and spatial technologies and Geographical Information Systems as appropriate, to develop identifications, descriptions, explanations and conclusions that use geographical terminology.

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6.1 How perceptions influence our connections to place

FOCUS QUESTIONS

- What is globalisation?
- How does globalisation interconnect people, places and spaces?
- How do our perceptions of places and use of spaces change over time?
- How are people in other countries connected to places?

The role of globalisation in the interconnections of people, places and spaces

The first **circumnavigation** of Earth occurred when a fleet of ships sailed west from Spain in 1519, and arrived back from the east in 1522, after crossing the Atlantic, Pacific and Indian oceans. The departing fleet consisted of 270 men on 5 ships. However, after munity, murders, illness and shipwrecks, only 19 men on 1 ship returned.

Today, circumnavigating Earth is simpler and much less dangerous. Moreover, the rapid changes in technology mean that we continue to push the boundaries of travel. In 2019, the first non-stop flight from New York to Sydney, called 'Project Sunrise', carried 40 passengers across 15 time zones in just 19 hours, to become the longest commercial flight ever. Meanwhile, in Texas, the Starship spacecraft (which is designed to take people as far as Mars) began its orbital test flights.

Advancements in transportation and information and communication technologies have fuelled globalisation. Globalisation refers to the movement of people, money, **goods**, information and values across the world. It is one of the most fundamental areas of study for human geographers.

Globalisation has had an enormous impact on how and why we are connected to places, goods and each other. It has also influenced the scale of interconnections. While people have always travelled and traded, there has never been so much trade and travel over such long distances. Figure 6.4 highlights the large scale of movement occurring in the air.

Not only has technology allowed the greater movement of people and goods, it has also allowed ideas, cultures and knowledge to cross countries, without the need for physical travel. While nothing (yet) can replace the full immersive experience of travelling to a different place, there are ways, such as using Google Earth, to really see what a place is like, either from above, using satellite images, or from street view.

KEY TERMS

circumnavigation sailing or travelling all the way around something

goods items for sale that can be moved

People are also closer than ever before. When the First Fleet arrived in Australia, the letters sent to loved ones would have taken over eight months to be received. Today, we can catch up with family and friends on the other side of the world using video chat or messaging tools such as Skype and Snapchat.

In this topic, we will consider the concepts of place and space, and examine how our perceptions of places and use of spaces are changing as a result of these new technologies and global interconnections.

What are the geographic concepts of place and space?

Places are physical locations. They can range in scale from a booth at a cafe to a whole country. However, from a geographic perspective, places are also locations that hold some meaning for people. The meaning that a place has is different for everybody, depending on the type of interconnections a person has with that place.

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▲ **Figure 6.3** Tourists relaxing in La Plancha Beach Club, Seminyak, Bali

ACTIVITY 6.1

Interpretation task

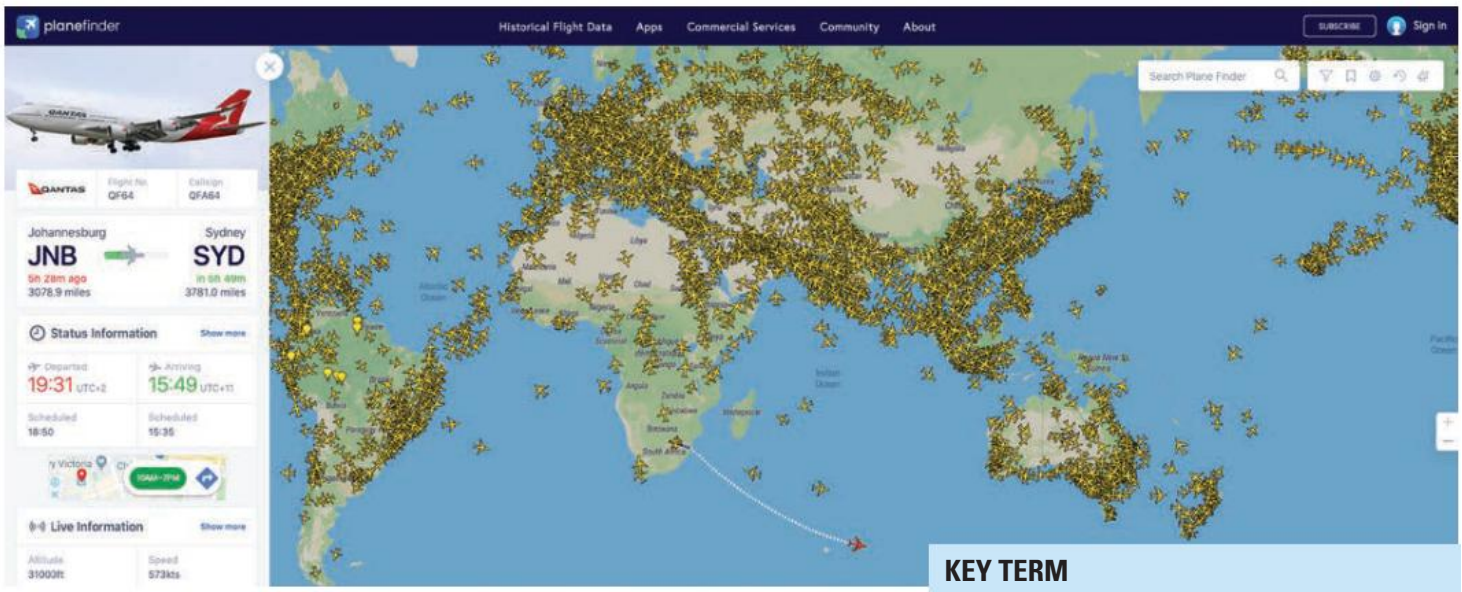
Consider the tourists and the waiters in Figure 6.3.

1. How is each group of people interconnecting with this place?
2. What meaning might Seminyak have for both these groups of people?

The concept of space relates to how human-made and natural features are distributed on Earth's surface. To understand spaces, geographers:

- Identify the distribution patterns of certain features on Earth's surface
- Investigate why these patterns have occurred
- Explore how these patterns have changed and are changing
- Understand how these spaces are used and the impacts of these patterns and changes for people and the environment.

▼ **Figure 6.4** The website Plane Finder shows the location of every plane in the air in real time



KEY TERM

gross domestic product (GDP) the total value of goods and services produced by a country in one year

▼ **Table 6.1** Ranking of countries by **gross domestic product (GDP)**

Rank	Country/ economy	GDP (nominal) (billions of $)					Growth (%)	GDP per capital (nominal) ($)		Continent
		2019	% share	diff	2024	Rank		2019	Rank	
1	United States	21 439.45	24.8	-	25 793	1	2.35	65 112	8	North America
2	China	14 140.16	16.3	7299	20 979	2	6.14	10 099	70	Asia
3	Japan	5 154.48	5.95	8986	6 260	3	0.89	40 847	24	Asia
4	Germany	3 863.34	4.46	1291	4 675	4	0.54	46 564	18	Europe
5	India	2 935.57	3.39	928	4 632	5	6.12	2 172	145	Asia

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Rank	Country/ economy	GDP (nominal) (billions of $)					Growth (%)	GDP per capital (nominal) ($)		Continent
		2019	% share	diff	2024	Rank		2019	Rank	
6	United Kingdom	2743.59	3.17	192	3150	7	1.24	41030	23	Europe
7	France	2707.07	3.13	36.5	3215	6	1.25	41761	22	Europe
8	Italy	1988.64	2.3	718	2246	9	0.01	32947	28	Europe
9	Brazil	1847.02	2.13	142	2296	8	0.88	8797	77	South America
10	Canada	1730.91	2	116	2238	10	1.55	46213	19	North America
11	Russia	1637.89	1.89	93	1940	12	1.08	11163	66	Europe
12	Korea	1629.53	1.88	8.36	1988	11	1.95	31431	30	Asia
13	Spain	1397.87	1.61	232	1695	13	2.18	29961	32	Europe
14	Australia	1376.26	1.59	21.6	1670	14	1.71	53825	11	Oceania
15	Mexico	1274.18	1.47	102	1579	16	0.4	10118	69	North America

ACTIVITY 6.2

Research task

Go to 'Mapping the Flow of International Trade' on the Metrocosm website to see trade in goods occurring in real time across the world.

1. Identify the three main places of trade activity.
2. Identify the main type of good that is being traded.
3. Is there a strong, moderate or weak degree of spatial association between levels of trade activity and gross domestic product (GDP)? Refer to Table 6.1. Identify three countries that help support your answer.

How our perceptions of places and use of spaces change over time

As we age, the spaces that we use and the way that we perceive certain places can change as our needs and interests change. For example, the spaces where you played as a young child (such as the local playground) may not be the spaces where you socialise today. Moreover, the ways that people connect with each other have been changing over time as technology plays an increasing role in our lives.

CASE STUDY 6.1

Online gaming

The fact that more teens and young adults are connecting to each other online can also change the way people feel about places and how they use spaces. Whereas for teenagers in the past, the bedroom was a place to retreat from the world, a teenager's bedroom today may have a vastly different meaning. It can be a portal to an online community, where people interconnect on an international scale via platforms such as YouTube, Twitch and Mixer. The change over time is highlighted by Figure 6.5, which shows the different usage of online gaming between two different age groups.

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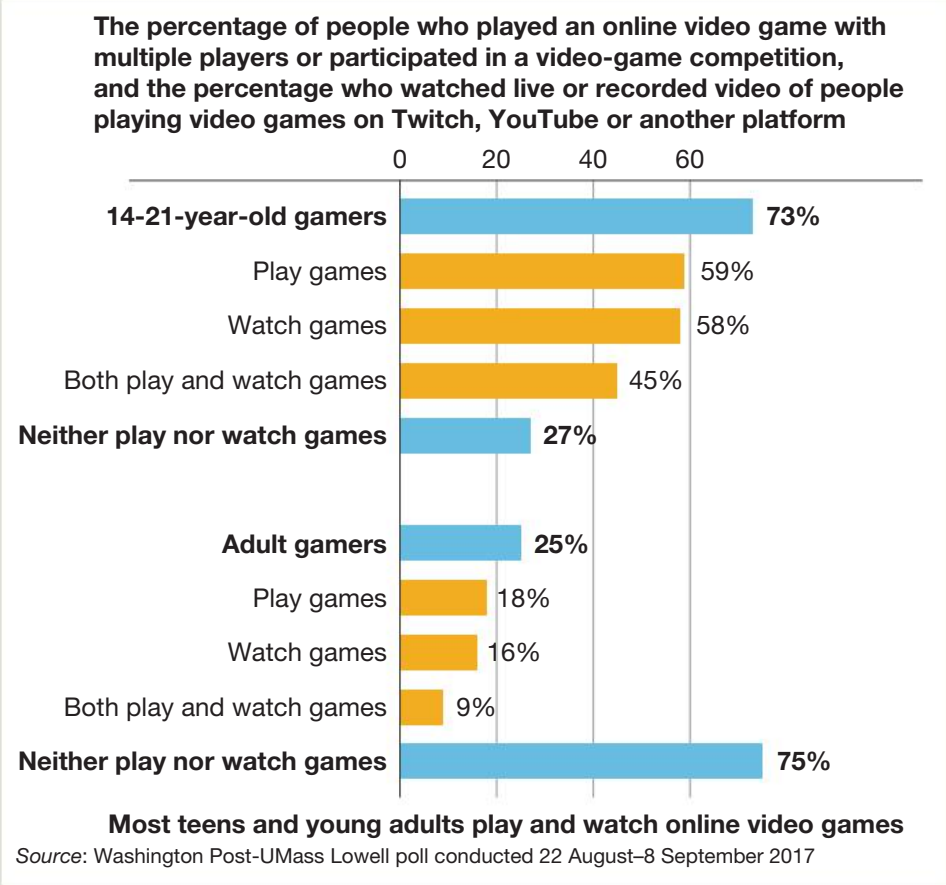

▲ **Figure 6.5** The percentage of teens, young adults and adults who play and/or watch online video games

▲ **Figure 6.6** A teenager listening to records in her bedroom in 1971

▲ **Figure 6.7** In 2019, 16-year-old American Jordan Hergoz, screen name Crimz, spent an average of at least 8 to 10 hours a day playing Fortnite to become one of the best competitive gamers in the world. His father has spent over $40 000 on state-of-the-art equipment to train with.

Analysis question

'The way that people use spaces can change over time.' To what extent do you agree or disagree with this statement? Use the statistics in Figure 6.5 and the images in Figures 6.6 and 6.7 to support your argument.

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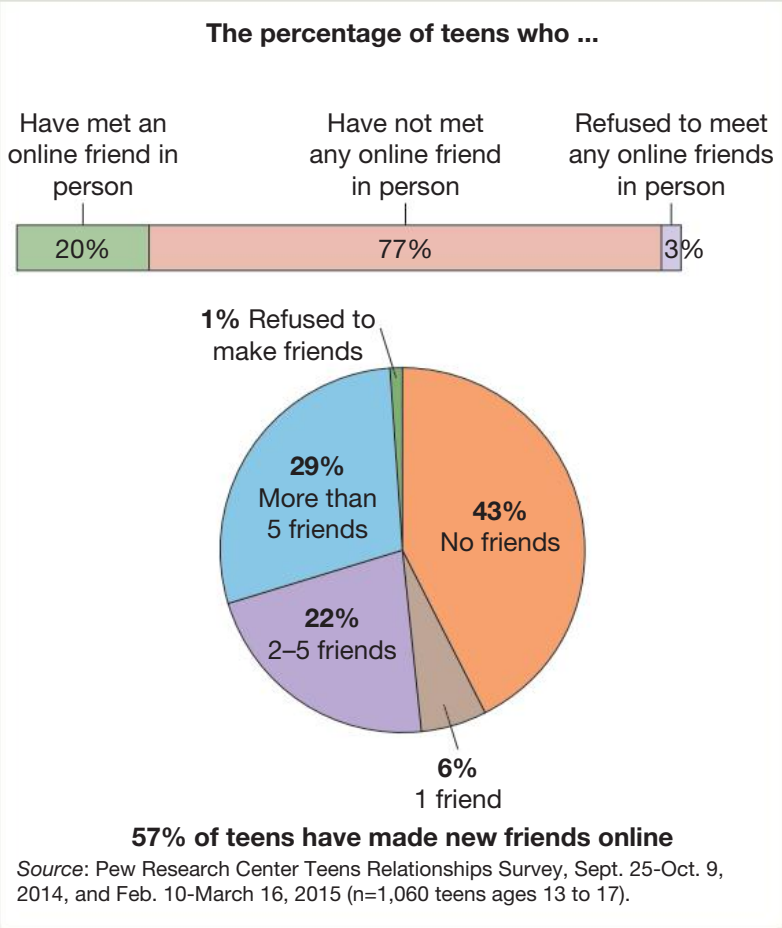
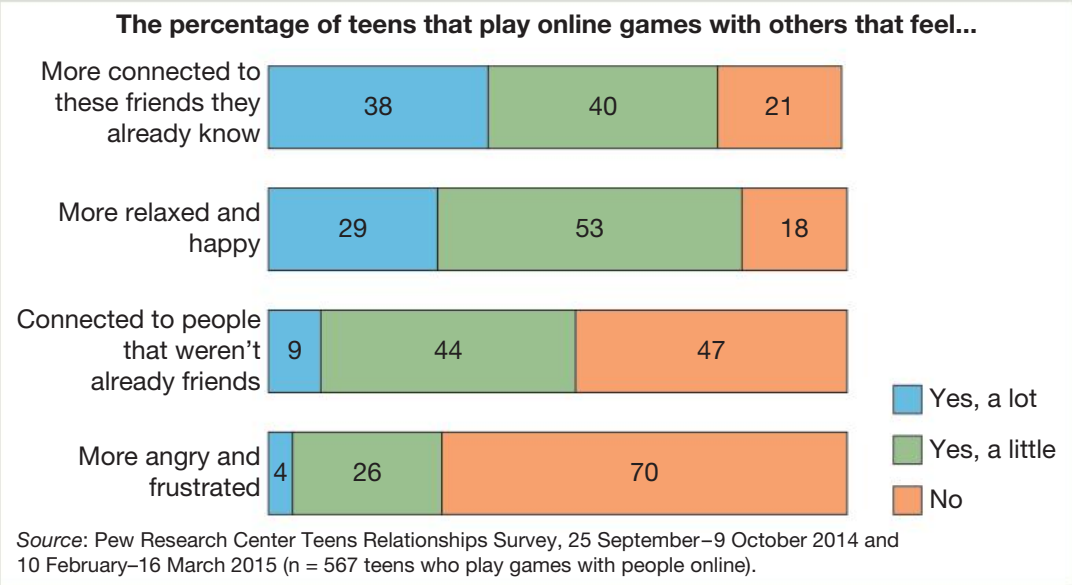


▲ **Figure 6.8** Percentage of teens who have made new friends online



▲ **Figure 6.9** How gaming influences connections between friends

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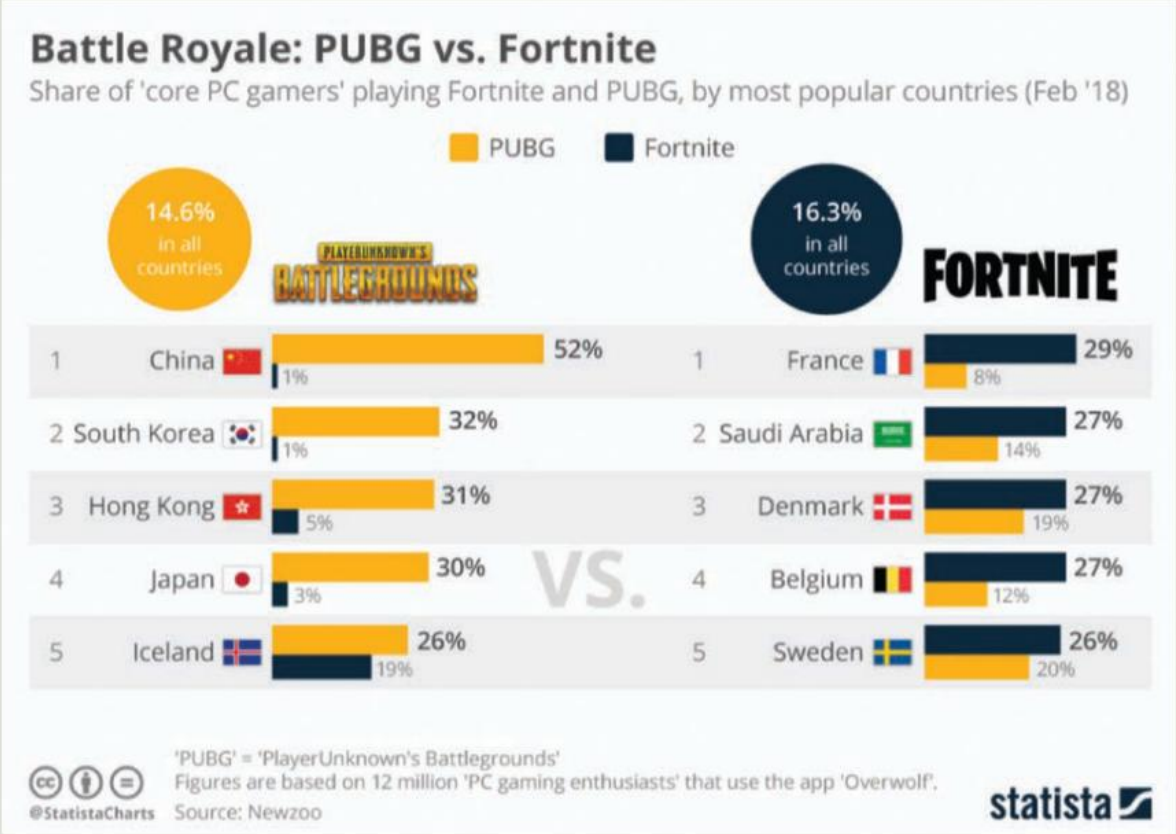
Impacts of online gaming on interconnections between people

Figure 6.8 shows that most teens have made new friends online. 57 per cent of boys and 13 per cent of girls made these friends playing video games. Figure 6.9 shows that playing online games with friends can strengthen friendships. On the other hand, surveys have also shown that 50 per cent of online gamers have been bullied at some point, and 22 per cent of these people have stopped gaming because of this.



▲ **Figure 6.10** Popularity of PUBG and Fortnite. Is there anything that surprises you about these statistics?

Creating a survey

Conduct a survey to measure the use of online gaming and/or use of social media between different age groups and the impact of these activities on people's sense of connectedness and community.

You may want to interview people from your class and people from another age group, such as your parents. Your survey may investigate different aspects of online gaming and/or use of social media, such as daily usage, how connected or disconnected to your peers it makes you feel, what types of games or social media you use, or where you play online games or use social media. Summarise your results and discuss these as a class.

How people in other countries are connected to places

People connect to places in a variety of ways. For some, including subsistence farmers, their place provides them with the resources needed to survive. Many people have a spiritual connection to their place that connects back through thousands of years of ancestry. We can also connect to places through work, travel, leisure and recreational activities. In this era of globalisation, trade connects us to many places that we have never visited.

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CASE STUDY 6.2

The Surui

The Surui are a tribe of Indigenous people who live in the Rondônia region of the Amazon rainforest. They have a long, ongoing connection to the place, both physical and spiritual, and only made contact with the outside world in 1969. They know every tree in their area and continue to hunt with bows and arrows. However, their livelihoods have been at risk due to illegal logging and mining.

When Surui leader Chief Almir discovered Google Earth, he knew he was on to something. The new chief has helped his tribe use detailed satellite imagery from Google Earth Outreach to monitor and report illegal behaviour. This has been successful, as their home is the only remaining piece of intact rainforest in the region. They also use smartphones to monitor the animals they kill, to ensure they are hunting sustainably, and have worked with Google Earth to create an interactive cultural map that provides outsiders with a deeper understanding of a place that means so much to the Surui.

▲ **Figure 6.11** Satellite image of the Surui tribe's region and the surrounding region

Analysis questions

1 Describe the distribution of deforestation in Figure 6.11.

2 What does this suggest about the effectiveness of the Surui's environmental monitoring and reporting methods?

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Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 6.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Define the terms 'globalisation' and 'gross domestic product'.
2 Explain the geographic concepts of 'place' and 'space'.
3 Advancements in which two areas have fuelled globalisation?

Interpret

4 What meaning do you think the place Rondônia has to the Surui?
5 How do the Surui use the space in Rondônia?
6 Describe how the Surui use spatial technology to protect the Amazon rainforest.
7 Identify three different ways that people are connected to places.
8 How does globalisation connect people to places that they have never visited before?

Argue

9 Discuss the positive and negative impacts of online gaming and/or social media. Refer to the data in this section and your own experiences in your answer.

Extension

1 Watch the video 'Trading Bows and Arrows for Laptops' on YouTube and explain how spatial technology is helping outsiders learn about the Surui.
2 Look up 'Surui Cultural Map' on YouTube and download the Surui Cultural Map KMZ file through the link that is in the video description. Explore the map to answer the following questions about the Surui.
   a What is considered to be a spiritual animal that cannot be eaten?
   b Name and locate three villages using their absolute location.
   c What do the Surui eat when they have the flu?
   d What plant is used by the Surui to build houses?
   e What fibre is used to make handicrafts?
   f What fruit are children not allowed to eat and why?
   g What spiritual significance does the jaguar have to the Surui?

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6.2 Connecting people with services, information and technology

FOCUS QUESTIONS

- How are information and communication technologies used to connect people to information, services and people in other places?
- How have information and communication technologies made it possible for places to provide global business services?
- Do people have equal access to the internet around the world?
- How do transport networks connect people to services?

How are information and communication technologies used to connect people to information, services and people in other places?

Information and communication technologies connect us to a variety of services, information and people. They operate from a local to a global scale. Today these connections can begin at a very young age – from using educational apps at home, to connecting with relatives using social media and to having your medical records stored on government databases.

Historically, the physical geography of a place played a significant role in what information and communication people could access. For instance, China's impressive mountain ranges, which include the Himalayas, and the cold and unforgiving Taklamakan and Gobi deserts, ensured that China was economically and culturally isolated from Western civilisation until the Silk Road began to create a trade passage out of China in 130 BC. Even today, Australia's physical isolation from other countries has contributed to the fact that we are less likely to know a second language than Europeans, who live much closer to foreign countries where different languages are spoken.

Technology has provided people with opportunities to connect and work together to face challenges in a way that overcomes borders, making learning accessible to people in places all over the world. In this section, we will explore some of these connections through a variety of case studies.

CASE STUDY 6.3

Connecting information and people: Alice Springs School of the Air

Alice Springs School of the Air (ASSOA) was established in 1951 to provide education to students living in **remote** regions of central Australia. For decades, ASSOA relied on two-way radio broadcasts. Students received instruction by pedal-powered radio and schoolwork by mail. Completed schoolwork was also sent by mail, which was a particularly lengthy process in the remote regions of central Australia.

KEY TERM

remote an isolated area very far away from urban centres

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A significant change occurred in 2006 when satellite technology was introduced and satellite dishes were installed at student sites. This allowed a learning platform called REACT (Remote Education and Conferencing Tool) to be used to support video communication. Some of the features, benefits and limitations of REACT are shown in Table 6.2.

◄ **Figure 6.12** Pedal-powered radio was used by early School of the Air students

▼ **Table 6.2** Benefits and limitations of the Remote Education and Conferencing Tool

Students	Teachers
• Can see and talk to their teachers and other students • Can resize the video image of the teacher, so they can receive communication while working on their computer • Can quickly share materials with their teacher and other students • Can have learning conferences with overseas students	• Can demonstrate skills and include media such as video and music • Cannot see the students • Can quickly share materials and feedback with students

This technology, in addition to email, Google apps for education, Edmodo and other tools, has enhanced the communication between teachers and students, as well as the sense of community and belonging that is so important to the purpose of ASSOA.

◄ **Figure 6.13** Anna Jackson, a School of the Air student, completes her schoolwork at home, three hours from Broken Hill, New South Wales, with her dog alongside her

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Learning Indigenous languages online

Being able to speak your the language of your culture is a human right. However, a third of the world's indigenous languages are now under threat of extinction. Researchers believe that up to 700 languages were spoken in Australia prior to British invasion. Today, only 100 Indigenous Australian languages remain. This is due to many factors, including the limited resources available to share these languages with younger generations. Information and communication technologies are playing a role in preserving Indigenous languages around the world.

Amazing but true ...

Indigenous people make up less than 6 per cent of the world's population yet speak more than 4000 of the world's 6700 languages.

For example, researchers have recently created Opie, a little robot consisting of two tablets in a wooden frame. One tablet consists of eyes that follow the student, and the other stores memory games, stories and pronunciation guides in Indigenous languages. Opie aims to help Indigenous children learn their ancestors' language, and keep alive the 100 languages that we have left.

▲ **Figure 6.14** It is important to keep traditional languages alive. Pictured is a sign at Springbrook National Park, Queensland, which lists local words from the Yugambeh peoples' language and the equivalent meaning in English.

By using and sharing their languages, Indigenous people create stronger connections to their culture. One person involved in this is yutustanaat, a member of the Snuneymuxw First Nation and a language teacher in British Columbia, Canada. She was one of many indigenous people from around the world who participated in recording their language for Google Earth.

> *'Our language is very healing ... It brings out caring in our people and helps our students be strong, because the language comes from the heart' – yutustanaat, quoted in Raleigh Seamster, Indigenous Speakers Share Their Languages on Google Earth, 2019*

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Learning languages for trade relations

Websites and apps, such as Duolingo and Babbel, are also helping people learn new languages, and communicate with people from other countries. In business, learning the language of trade partners is proving to be an important skill. Benefits for business include:

- helping employees communicate with international customers, which increases the chance of making a sale
- saving money by reducing the need to hire translators
- retaining customers – because employees who can speak to customers in their own language can build relationships and trust and increase customer loyalty
- language training for staff helps them feel rewarded and motivated to learn.

▲ **Figure 6.15** Learning the language of trade partners has been found to increase trade confidence in businesses around the world.

Connecting services and people

Consider the apps on your phone. Which of these help you to connect to services and people? Today, there are apps for food delivery, transport, dating, listening to music from across the world, shopping and, of course, socialising with friends. This section gives some examples of technologies that are changing the way we connect to services in a significant way.

Rapid changes are occurring to the way medical and emergency services are provided. The use of the artificial intelligence (AI) system known as Babylon is growing at a rapid rate in the United Kingdom. The app allows people to have a video conference with a virtual GP for free. Bookings can be made 24/7 and the consultation can usually take place within two hours of booking. Prescriptions can be ordered and home-delivered. Health history is securely stored and referred to in follow-up appointments. The app also provides health checks where people include their family history and health details and it assesses their health. It is stated to be approximately 80 per cent accurate (which is greater than the general human average of approximately 72 per cent accurate).

However, the app does have its flaws. For instance, a 48-year-old smoker presenting with sudden sweating and chest pain was advised to see their GP rather than calling emergency services. These are symptoms that could indicate a heart attack and so could have cost the patient their life. The other flaw stems from its popularity. So many people in London are turning to this app that it is placing strain on the healthcare system, which had not prepared for such a scale of change.

In Australia, the GoodSAM app is connecting people who have First Aid qualifications to people having cardiac arrest. When an ambulance is notified of a cardiac arrest, first-aiders in the area are also notified and may be able to attend to the person to perform CPR while the paramedics are on their way. Similarly, Facebook Crisis Response helps connect people who can offer help in a crisis to those in need, as well as receiving updates and communicating with concerned loved ones.

How information and communication technologies have made it possible for places to provide global business services

Since it went global in the 1980s, the internet has experienced rapid improvements in speed and reliability. Moreover, telecommunications such as telephone lines and wireless signals have also been integrated with more sophisticated technology and software. These developments have made it possible for some people to work more locally (even from home) and for businesses to operate more globally. For example, businesses can outsource their customer service to overseas call centres.

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CASE STUDY 6.4

Call centres in India

Offshore outsourcing is when a company hires another company to operate one part of its business overseas. Some Australian businesses outsource their customer service and telemarketing services to organisations within other countries.

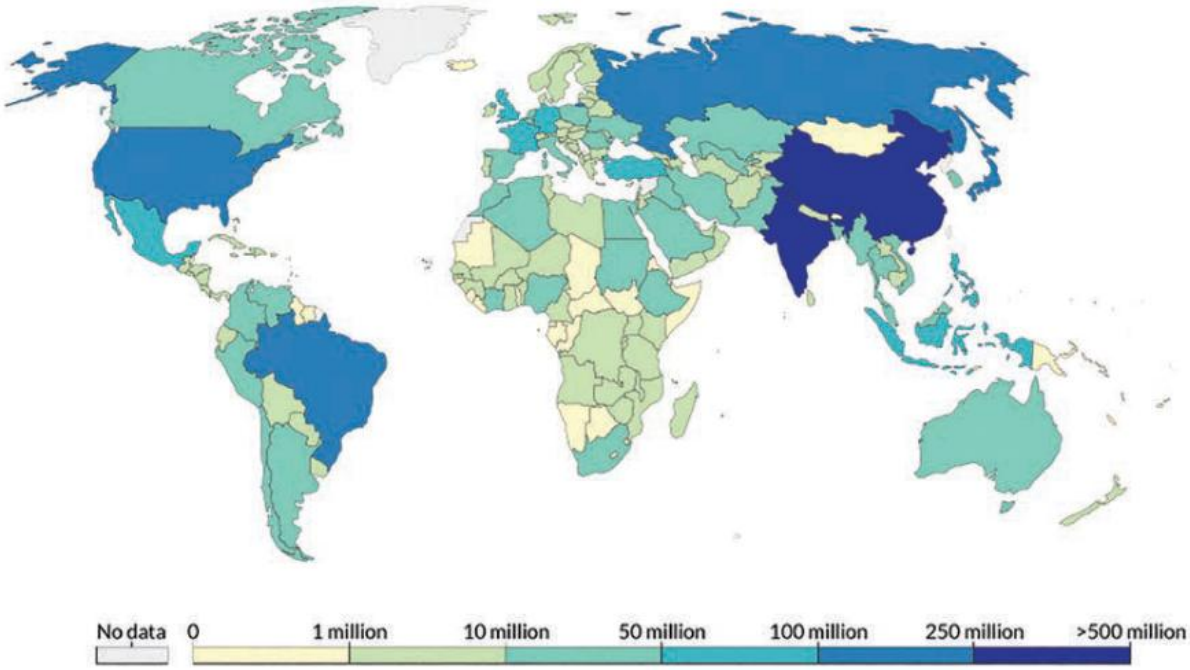
India has been a popular choice for Australian businesses because of its time zone (or willingness of workers to work through the night), its cheap labour, and because of its large English-speaking population. India is currently investing in the largest rural fibre-optic roll-out ever seen worldwide. This will connect 600 000 rural villages to broadband internet. The enormous enterprise could lead to customer service and telemarketing work moving to rural regions in the future.

▲ **Figure 6.16** Inside a call centre in India

Inequality in connectivity

Information and communication technology is a resource that has transformed our interconnections with services, information and each other. However, not everyone experiences the same ability to use this resource. For some people, there are barriers to connections. These barriers can be economic on a household scale (for example, the internet may be too expensive for a family or individual to access) or they may be economic on a national scale (for example, the cost of building the internet infrastructure for remote areas may be considered too expensive to implement). However, internet access is growing in all regions of the world, and many more people are being connected.

▼ **Figure 6.17** This map highlights the unequal use of the internet between different countries



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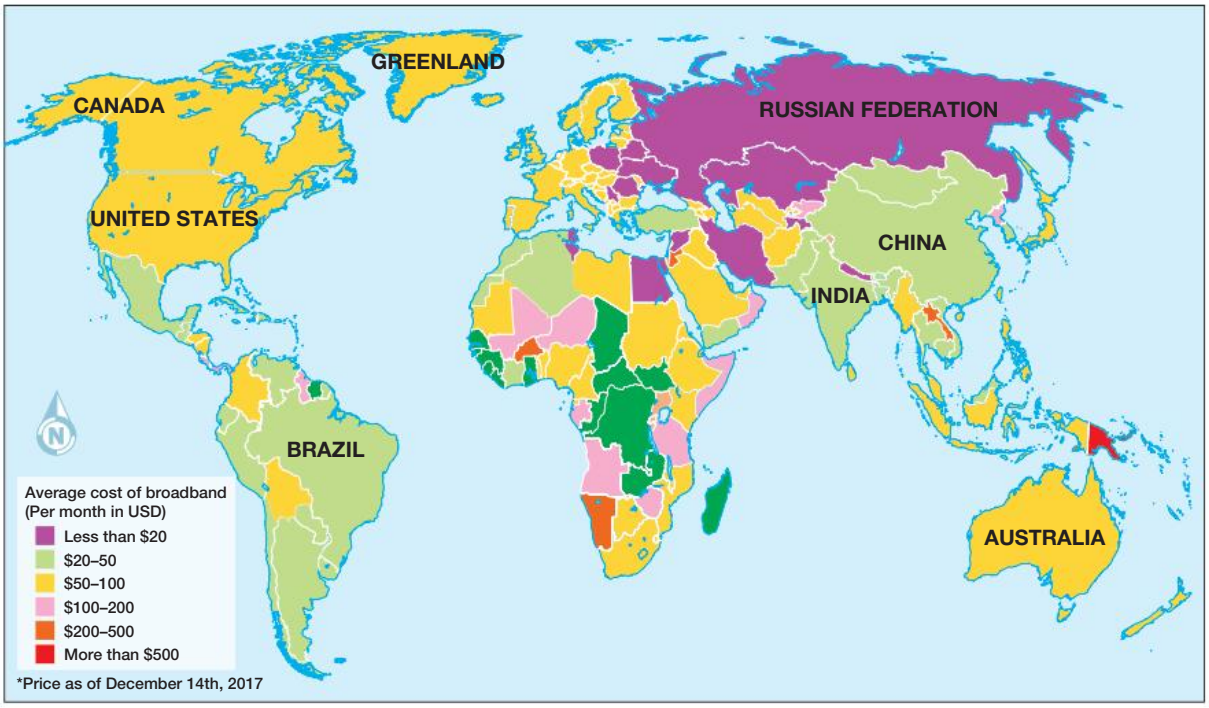


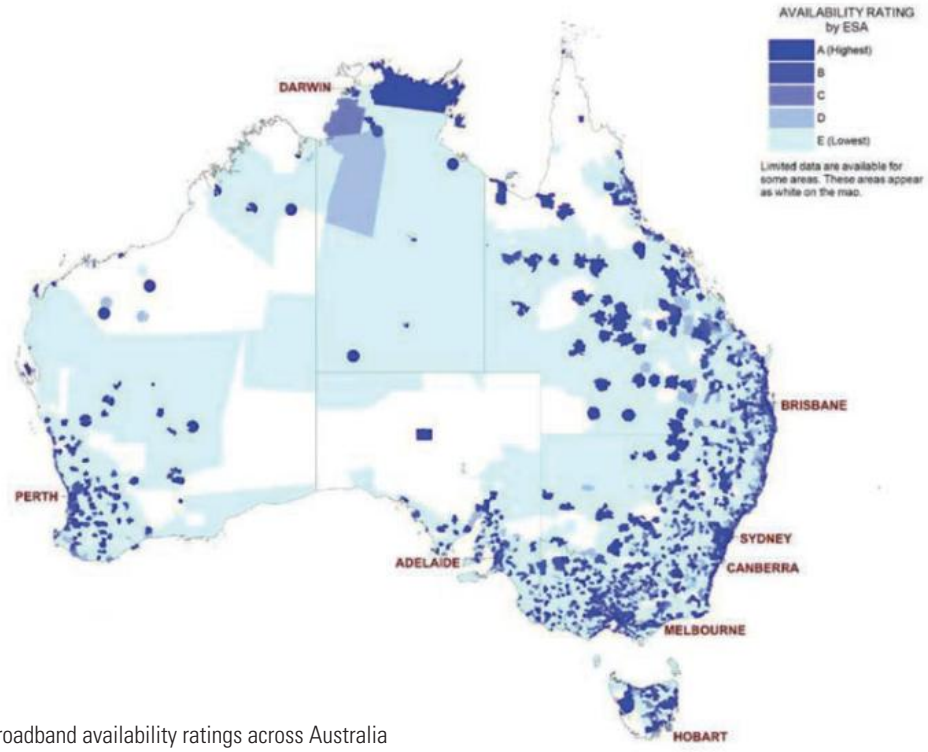
▲ **Figure 6.18** Average cost of broadband internet (based on December 2017 figures)

Source: HowMuch.net

ACTIVITY 6.3

Interpretation activity

1. Describe the spatial association between Figures 6.17 and 6.18 using the DQE method (see Chapter 5, Section 5.1).
2. What other factors might account for the distribution of internet use as seen in Figure 6.17?
3. With a partner or as a class, discuss what may be the consequences for countries that have low internet use.



▲ **Figure 6.19** Broadband availability ratings across Australia

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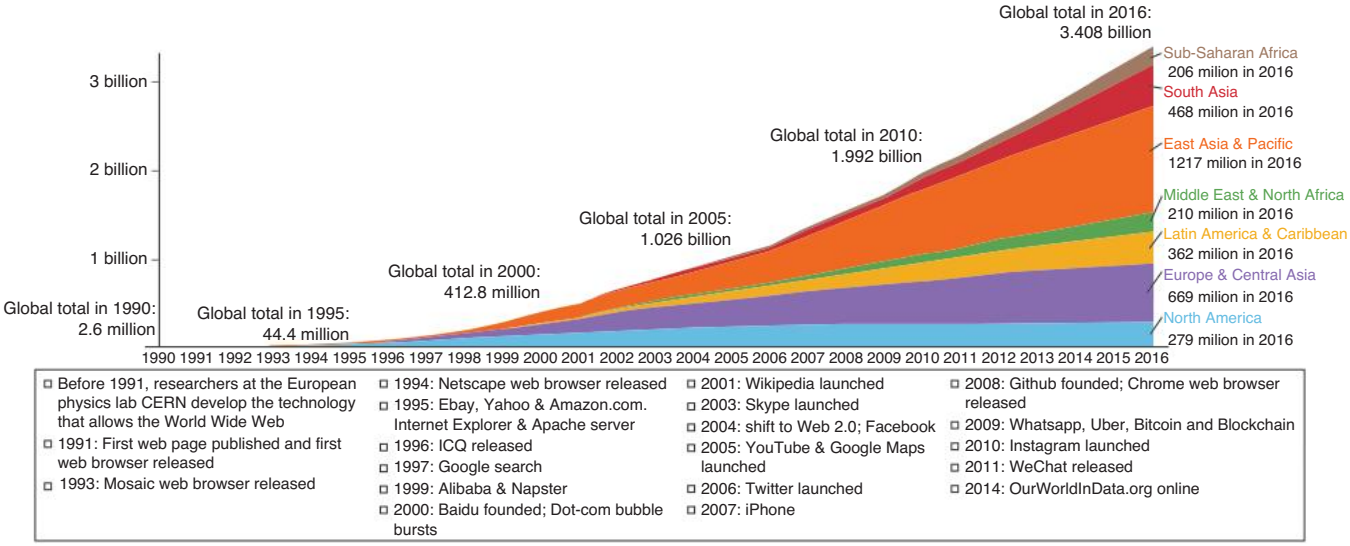
ACTIVITY 6.4

Interpretation activity

Study Figure 6.19. Describe the distribution of broadband availability in Australia using the PQE method (see Chapter 5, Section 5.1).



▲ **Figure 6.20** Total amount of people using the internet per region

ACTIVITY 6.5

Interpretation activity

Study Figure 6.20.

1. Describe the overall trend of global internet use.
2. How many people in the world have access to the internet?
3. Rank the regions from highest to lowest internet use.

How transport networks connect people to services

Transport networks are vital to connecting people to basic services such as food, water and healthcare to ensure a quality standard of living. However, transport networks can be frustrated by the physical geography of a region. For example, Papua New Guinea is located in the south-western Pacific region. Its physical geography consists of beaches and coral reefs on the coast, while inland there are active volcanoes, dense rainforests (including the Kokoda Trail) and steep topography. There are only 22 000 kilometres of roads, and half of these are not sealed. People in the highlands region are cut off from the rest of the country – and the world – for six months of the year due to the risk of landslides. This prevents access to services, jobs and trade. Sixty-one per cent of the population have no access to safe water and 55 per cent have no access to improved sanitation. This results in poor health and diseases, malnutrition and stunting, and low business and tourism opportunities. It also makes disasters such as landslides difficult to recover from.

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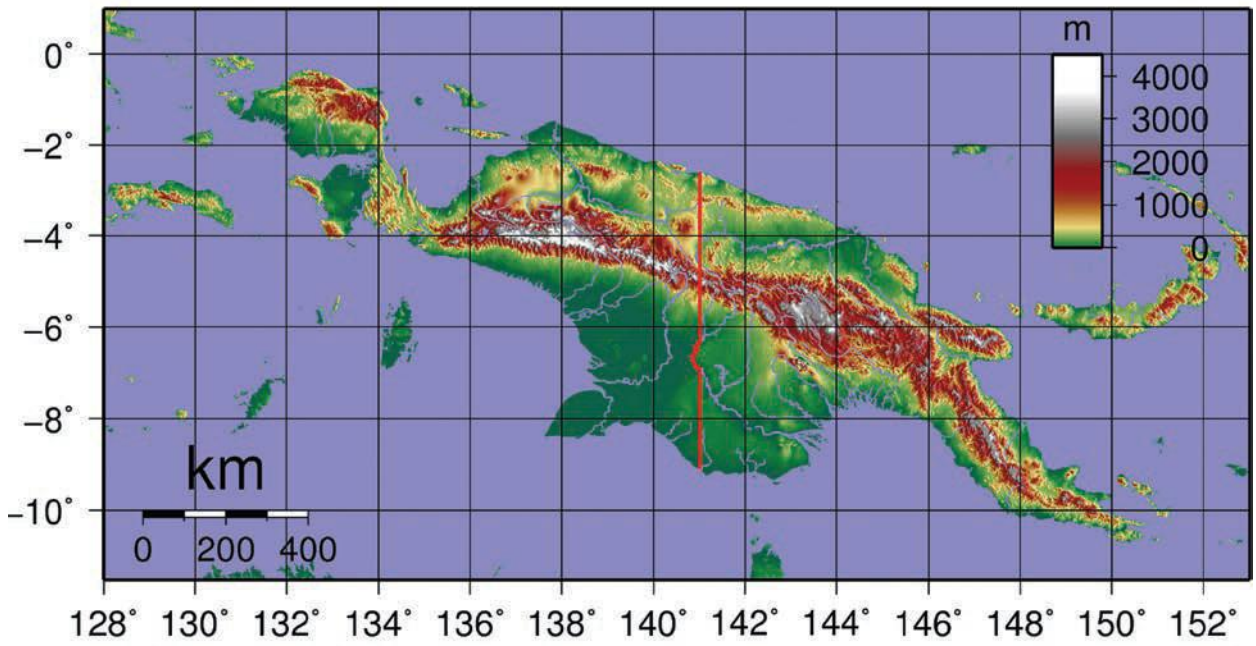
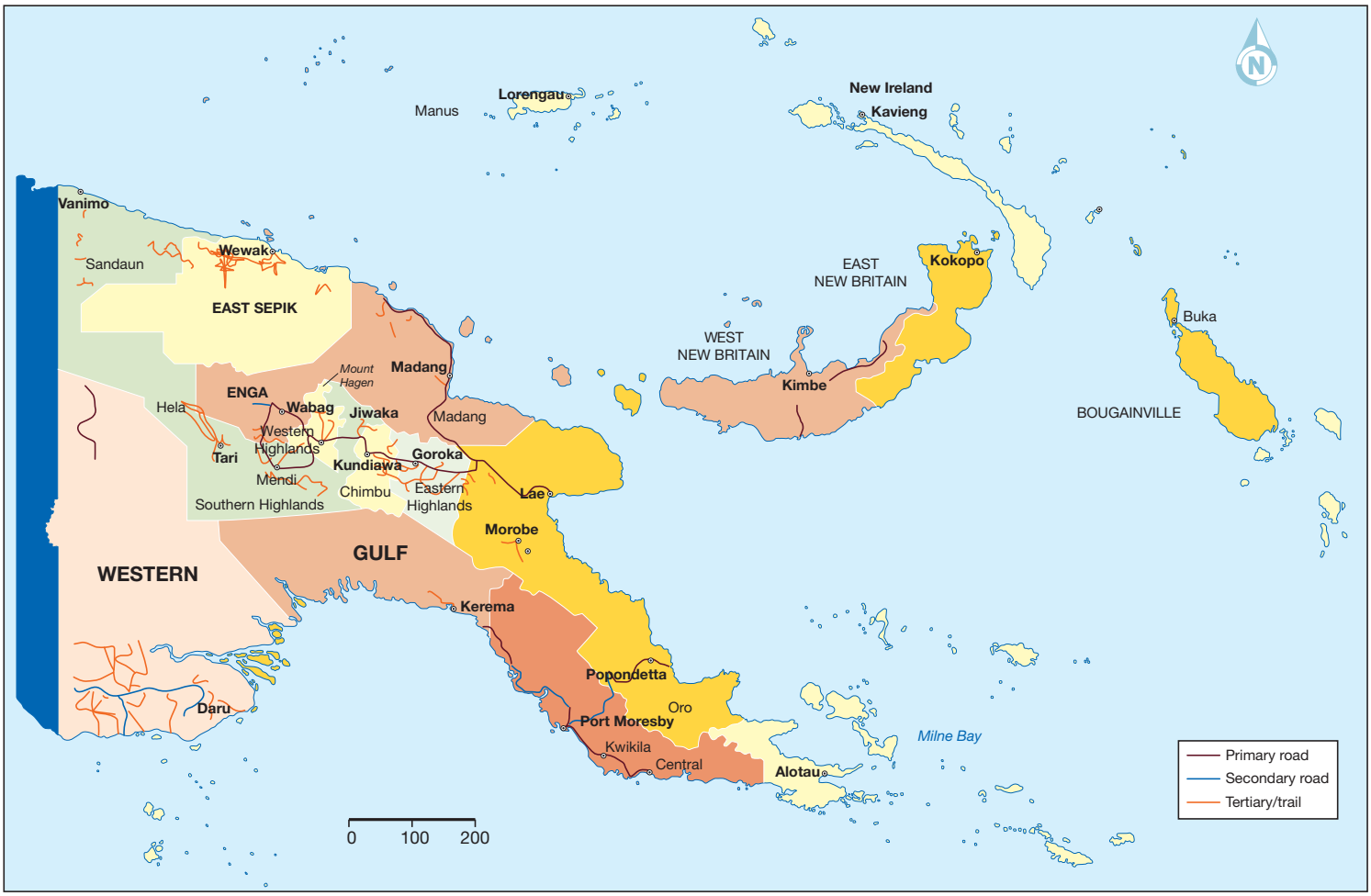


▲ **Figure 6.21** Elevation map of Papua New Guinea



▲ **Figure 6.22** Roads in Papua New Guinea

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ACTIVITY 6.6

Interpretation activity

Study Figure 6.21.

1 Describe the distribution of topography in Papua New Guinea.
2 In what ways does topography influence people's access to services?

ACTIVITY 6.7

Interpretation activity

Study Figure 6.22. Describe the distribution of roads in PNG. Ensure that you distinguish between primary, secondary and tertiary roads.

In Australia, transport networks are changing the way we connect to retail services. The role of Australia Post has changed from primarily delivering letters to becoming a courier service that facilitates the increase of online shopping.

New technologies such as drones will also play a greater part in providing a convenient online shopping service to people. While drone delivery is more fuel-efficient than other forms of transport, there are laws regarding the airspace above private property that may limit the scale of this service.

Self-driving trucks, trains reaching speeds of 400 kilometres per hour using magnetic levitation technology, and hybrid cargo airships, are some of the new technologies that could minimise the travel time of people and services in the near future.

▼ **Figure 6.23** Is this the new normal? Wing is the first company approved to launch a drone delivery service in Australia.

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◄ **Figure 6.24** Australia Post has increasingly become a delivery service for online purchases

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 6.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 How do businesses benefit from their employees learning new languages?
2 What is offshore outsourcing?
3 What makes India a good place for customer services and telemarketing?
4 How many Indigenous Australian languages were spoken in Australia prior to British invasion?

Interpret

5 a Explain the change that has occurred at Alice Springs School of the Air.
  b Describe the impacts of this change.
  c Discuss the strengths and weaknesses of distance education.
6 Identify transport or information and communication technologies from this topic that help perform the following tasks (note that many of the technologies discussed fit into more than one category):
  a connects people to a service
  b connects people to information
  c connects people to other people.
7 Outline some of the impacts that can result from having a poor transportation system.

Argue

8 Why do you think it is important to be able to speak the language of your ancestors?
9 How can the physical geography of a place impact people's access to services? Make reference to Alice Springs School of the Air and the highlands region of Papua New Guinea in your answer.

Extension

1 Explore the Google Earth tour 'Celebrating Indigenous Languages'. In a group or as a class, create your own Google Earth languages tour (or tour of Aboriginal languages) using the knowledge you have in your class of other languages. Each student writes down a couple of words/sentences that they know of another language – record these and add them to the country the language is from. Give the tour an appropriate title.
2 Invent your own transport or information and communication technology that connects services to people. Present your invention to your group or the class.

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6.3 Connecting people and places through trade

FOCUS QUESTIONS

- How and why are places interconnected regionally through trade?
- How are products and services in your local region traded?
- How and why are places interconnected globally through trade?

The phenomenon of globalisation has not only influenced how we perceive places and use spaces; it has also created connections between people and places all over the world, whether we are aware of these connections or not. Many of these connections have been formed through trade. Trade simply refers to the buying and selling of goods and services. Goods are items that can be sold and moved, while services involve doing work or performing a task for others.

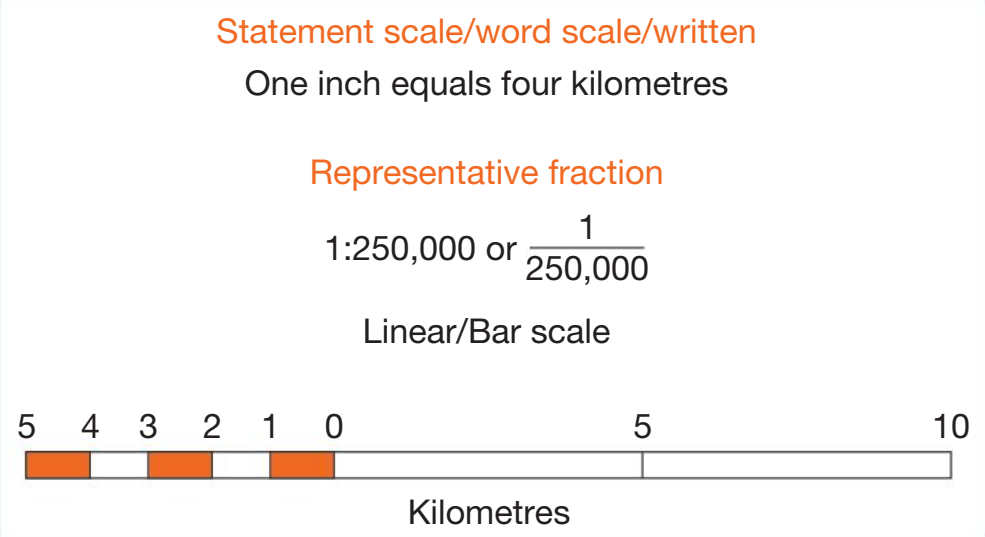
Goods and services are traded at all scales, and we are constantly participating in different scales of trade. For example, if you have dinner at a local, family-owned restaurant, you may be engaging in local-scale trade. The food that you eat may have been transported to the restaurant from another state or even overseas, therefore having been traded nationally or internationally. If you pay for this meal using a smartphone, which is manufactured by using a vast network of materials and labour from across the globe, you are playing your part in a global network of trade.

In this topic, we will explore the ways that places and people are interconnected with other places through trade in goods and services at different scales.

DEVELOPING GEOGRAPHIC CONCEPTS AND SKILLS 6.1

Scale

Scale refers to the size or amount of something. In Geography, we can determine the distances between places on a map, or the size of an area, by reading the scale. Examples of what we call 'map scale' can be found in Figure 6.25.



◄ **Figure 6.25** Examples of scales found on maps, otherwise known as 'map scales'

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Another version of scale is what we call 'observational scale'. The most commonly used observational scales are identified in the Table 6.3.

▼ **Table 6.3** Examples of observational scales

Local scale	A local area, such as a street, school or town
Regional scale	Regions are areas that share the same or similar geographic characteristics. Regions can vary in size. Smaller regions may include a few towns or suburbs – for example, the Yarra Valley or East Gippsland. Larger regions may include a group of countries – for example, South-East Asia.
National scale	Encompassing a whole country
International scale	Including two or more countries, but not most of the world
Global scale	Includes most of the world

1 Refer to the map of Indonesia in Figure 6.2. What is the relative location (that is, distance and direction) of Mount Ijen from Indonesia's capital city, Jakarta? Use the scale on the map to calculate the distance.

2 What are the observational scales shown in Figures 6.2, 6.22 and 6.34?

Investigating how and why places are interconnected regionally through trade in goods and services

Local-scale trade

When this scale of trade occurs, the goods and services are made, provided and sold locally or within a small region. Some benefits and drawbacks of this scale of trade are outlined in Table 6.4.

▼ **Table 6.4** Benefits and drawbacks of local trade

Benefits of local trade	Drawbacks of local trade
• Can rely on word of mouth to build business • Lower transport costs • Understand the region/market • Provide jobs for local people. When people work locally, they can support the local economy indirectly. For example, people can spend their wages on goods and services provided by other local businesses.	• Limited in how much your business can grow • Word of mouth may not be beneficial, depending on what people have to say about the business • May be difficult to find and keep employees, especially skilled employees • Can be more expensive to produce goods and provide services

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CASE STUDY 6.5

Transition Farm

Transition Farm is located in Fingal, on the Mornington Peninsula, 100 kilometres south-west of Melbourne. The farm is set upon a 7-acre property and grows over 70 species of food, and hundreds of varieties of each species type, using the regenerative agricultural methods that were discussed in Chapter 5 (Case Study 5.3).
The food is grown for the local region and is sold using a local-scale method of trade called community-supported agriculture (CSA). Source 6.27 is an excerpt taken from the Transition Farm website, which explains its method of trade. Table 6.5 outlines some of the impacts of this trade method.

▲ **Figure 6.26** Transition Farm, showing fields of produce, growing tunnels and the farm store shed in the background

CSA is a relationship of mutual support and commitment between us the farmers and our CSA members. In return for a seasonal membership fee to help cover the production costs of the farm, CSA members receive a weekly share of quality produce grown by us using biodynamic practices. Members share in the risks and the bounty of farming. Through weekly newsletters, talking with us at farm pick up, farm tours and frequent farm photos, members have the chance to enter into a relationship with their food – where it comes from, who is growing it and the experience it has from seed to harvest. CSA is a chance to know your farmer, get real food at a great value and eat delicious, high quality, chemical free, nutrient dense vegetables and fruit.

▲ **Source 6.27** A quote from Transition Farm owners and farmers Peter Carlyon and Robin Koster-Carlyon about the CSA method of trade (Transition Farm, *How It Works*, 2019)

▼ **Table 6.5** Benefits of community-supported agriculture.

The community has access to fresh produce
Customers develop a personal relationship with the people growing their food and a deeper appreciation for the work of the farmers
Relationships can also form among locals who meet at the farm gate to collect their produce
The produce is localised – seeds have been domesticated to suit the growing conditions of the region and are therefore stronger and healthier
It involves fewer food miles, reducing the environmental impact associated with transport.
The farmer does not have to bear the entire economic burden if something goes wrong. For example, if a storm were to damage crops, each member of the community would lose the money they have invested at the start of the season, rather than the farmer risk losing their livelihood.
On the other hand, everyone reaps the rewards when yields are high, as the extra food is passed on to locals
People become educated about their food, such as in which season different produce grows and regenerative farming practices that they can apply to their own gardens

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Analysis questions

1 Look at the benefits of the CSA method listed in Table 6.5. Classify each benefit in the table as being social, economic or environmental.

2 What do Peter Carlyon and Robin Koster-Carlyon mean when they say 'Members share in the risks and the bounty of farming'?

Investigating some of the products and/or services that businesses in your town, city or rural region sell to other places

Please see the Interactive Textbook to download a fieldwork template

FIELDWORK 6.1

Tally (quantitative) and interview (qualitative)

There are two types of data that we can collect when conducting fieldwork: quantitative and qualitative. Quantitative data is data that can be counted and measured (such as a tally), while qualitative data is less structured and may not be expressed in numbers. Instead, it is investigative and may involve open-ended questions (such as in an interview).

In this fieldwork, we will practise collecting both types of data.

1 Select a manageable local scale to research and visit. This may be your local shopping strip or industrial area.

2 Create a simple research question that is easy to investigate. Your question should focus on where and how trade occurs for businesses in your chosen area.

3 Tally the amount of goods and services and categorise each using the digital versions of the textbook.

4 From your tally list, choose one business to research in-depth. Create interview questions that will provide you with an understanding of where and how trade occurs for that business. Example questions include:
- What goods and/or services do you provide?
- What goods do you need to import to support your business? Where do these imports come from?
- What goods or services do you trade and which places do you trade these to?
- Do you classify yourself as local, regional, international or global traders? Why?
- What strengths or weaknesses do you find with your scale of trade?

5 Present and summarise your findings. Because your tally is a form of quantitative data, it can be expressed in a graph. Create a graph, then summarise the main findings from your graph and your interview in two paragraphs.

Investigating how and why places are interconnected globally through trade in goods and services

Global-scale trade

Before his death, Apple co-founder Steve Jobs expressed his hope that the iPhone would be made entirely in the United States. However, this has been far from the case. In fact, the iPhone is a symbol of globalisation as it takes many countries to make and trade an iPhone.

Meanwhile, in the Tiwi Islands of the Northern Territory, acacia mangium tree plantations are felled to make woodchips. These woodchips are then sold to Japan and China, where they are turned into paper and fabric, which is then sold back to us at a higher price.

Global interactions such as these are occurring all across the world with respect to many different products. So why doesn't the United States make the entire iPhone and why do we make such a small amount of our own paper? What is the purpose of global trade?

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CASE STUDY 6.6

The iPhone

Apple is a multinational corporation (MNC). An MNC is a company that has facilities in more than one country. It often has one place that operates as the headquarters, where the operations of the business in all other countries are organised. Apple's headquarters are in Cupertino, California, in the United States.

Every day, half a million iPhones are manufactured in Zhengzhou, central China, by a company called Foxconn.

An iPhone's birth begins with the manufacturing of its components, which are made by over 200 suppliers, such as Intel, Samsung and Sony, in many countries around the world, including the United States, Japan, Korea and Taiwan. Just a handful of these components are identified in Figure 6.28. Apple then buys these components from the manufacturers and sells them to Foxconn.

Geographers refer to this phenomenon as the international division of labour, as each country may specialise in manufacturing certain goods or services that contribute to the creation of an overall product. So, for instance, to make one product, the parts may be made in different countries, based on each country's specialty. Then the parts are all transported to a place that specialises in assembling and packaging products.

▲ **Figure 6.28** The iPhone supply chain

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MAKING THINKING VISIBLE 6.2

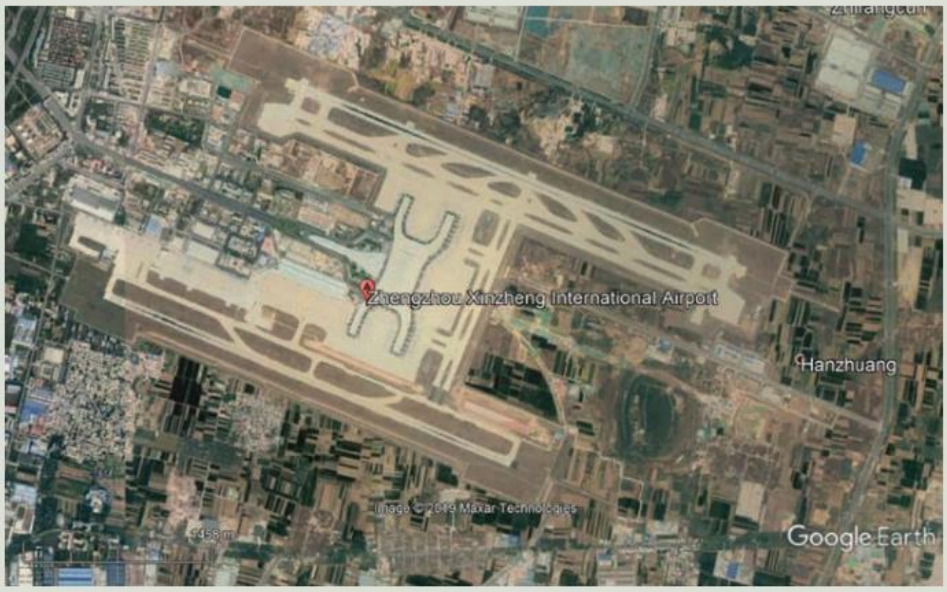
See, think, wonder

Study Figure 6.28 closely and answer the following questions:

1. What do you see?
2. What do you think about that?
3. What does it make you wonder?

At the Foxconn factories, the iPhone is assembled via an intricate 400-step process across 94 production lines. Large-scale product assembly and cheap labour (US$1.90 an hour – a price that cannot be matched by the United States) are two services that this place has specialised in. The Chinese Government has invested millions of dollars into building the infrastructure to create this type of specialisation and provide jobs in a poor region that was struggling to provide work. The phones are then packaged and transported to trucks, which then transport the phones to a customs facility.

◄ **Figure 6.29** Satellite map of Zhengzhou International Airport, China, 2009, approximately one year since it began manufacturing iPhones



◄ **Figure 6.30** Satellite map of Zhengzhou International Airport, China, 2019

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While in customs, Foxconn sells the completed iPhones to Apple, which resells them to Apple affiliates around the world. iPhones that are exported from China are taken by truck to the nearby Zhengzhou airport. Figures 6.29 and 6.30 are satellite maps that have the same map scale. They show how the airport has grown in order to transport the increasing number of iPhones. These products were once transported by ship, but it has become cheaper to use planes, as a single wide-body Boeing 747 can carry 150 000 iPhones.

From Zhengzhou, a variety of freight carriers, such as FedEx, fly the phones to hubs around the world, where they are then transported via various means to Apple affiliate stores. From here, the product can be bought by us, the customers.

Interpretation activity

1 What is the map scale of Figures 6.29 and 6.30?
2 Describe the land change over time between Figures 6.29 and 6.30.
3 Why has this change occurred?

END-OF-SECTION REVIEW.6.3

Review questions

Answer these questions on paper or in the Interactive Textbook.

Digital quiz
Please see the Interactive Textbook to access digital activities

Recall

1 Define the terms 'trade', 'goods', 'services', 'multinational corporation', 'international division of labour'.
2 What is a manufacturing industry? Provide two examples.
3 How much does an iPhone employee in Zhengzhou get paid per hour? Why do you think that the United States could not compete with this level of wages?

Interpret

4 Explain how the iPhone is an example of specialisation and the international division of labour.

Argue

5 Discuss the pros and cons of buying locally compared to buying globally made products. In your opinion, which is better?

Extension

1 Create a world map, either on paper or online using Google Earth Pro, to show the journey of an iPhone from start to finish, based on the information provided in this chapter. Using annotations, include information about the role each location plays in creating the phone.
2 Choose another product made by a multinational corporation to investigate. Research the location of the MNC's headquarters, where the parts of this product are manufactured, where they are assembled and how they are transported and sold.

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6.4 The effects of the production and consumption of goods

FOCUS QUESTIONS

- What are the social and environmental impacts on places that produce raw materials?
- What are the social impacts on places that make products?
- What are the environmental impacts on places that receive waste?

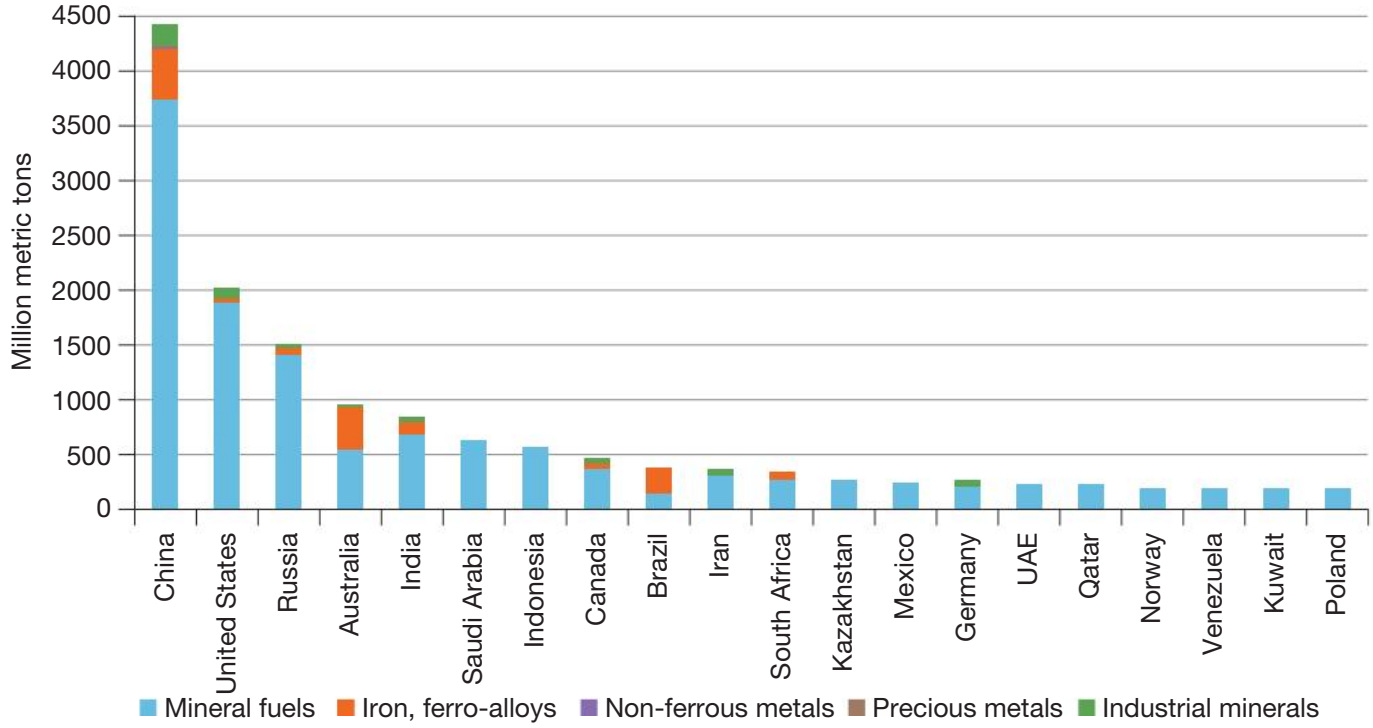
As we have learned, the production of goods is often a global-scale process. In this process:

- a variety of parts may be made in different places across the world
- these parts are transported to a central place to be assembled and packaged
- the products are then distributed across the world to consumer markets.

In this section, we will examine the environmental and social impacts of goods production (where goods are made) and goods consumption (where goods are bought, used and discarded).

Social and environmental impacts on the places that produce raw materials

Raw materials are the basic materials that we use to make products. Examples of raw materials include water, vegetables, wood, oil, coal and metals. The stacked bar graph in Figure 6.31 shows the largest producers of raw materials by volume. Australia ranks fourth in the world. Our status as a raw materials producer has had significant impacts on our society and economy. Some of these impacts are outlined in Case Study 6.7.



▲ **Figure 6.31** The 20 biggest producers of raw materials (in million metric tons)

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ACTIVITY 6.8

Interpretation activity

Study Figure 6.31.

1 What type of raw materials does Australia produce?
2 In what ways is Australia's production of raw materials similar to and different from that of other countries in the graph?

CASE STUDY 6.7

Australia's mining boom

In 2003, a mining boom began – Australia's largest since the 1850s gold rush. This boom was the consequence of a rapid demand for raw materials from Asian countries to meet the needs of their expanding manufacturing industries. In a short period of time, prices for iron ore increased from $20 a tonne to peak at $170 a tonne. The impacts of Australia's mining boom affected many Australians, as outlined in Table 6.5.

▼ **Table 6.6** Impacts of Australia's mining boom

Workers	Many employees were well paid. For example, truck drivers in the mines could earn $150 000 a year.
Property owners	House prices in the Pilbara mining region increased from $200 000 to over $1 000 000 as many people moved to the region for work, which increased housing demand
Multinational corporations and Australian mining companies	The revenue (income) made from selling their products at a higher price than in the past increased by sevenfold. This created huge profits for the companies and their shareholders.
Australia's society	Migration to Australia increased, which in turn energised the economy as new residents require goods and services, which stimulates businesses
Australia's economy	At its peak, mining made up 8.5 per cent of Australia's GDP. The global financial crisis hit many countries hard, and unemployment increased. However, Australia's employment remained strong, and the country's wealth enabled the government to spend money on the Australian public to allow us to maintain our standard of living. Australia was therefore much less affected by the crisis.
Agricultural, tourism and manufacturing industries	During the boom, the Australian dollar became strong, which made our produce expensive. Local manufacturing industries were forced to pay high prices for Australian raw materials. Agricultural and tourist industries suffered due to the strength of Australia's economy, as the exchange rate made our country expensive for foreigners to buy from or visit.

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Interpretation activity

Study Table 6.6 and identify two winners and two losers from Australia's mining boom.

The mining boom peaked in 2012 and then slowed temporarily. Although levels of employment are slowly increasing again, this new wave of mining activity is aiming to use more robotics and automation – that is the process where tasks are performed by machinery. This will impact the distribution of workers, as there will be more workers in city offices overseeing robots and machinery, rather than on the ground in the mines. This may also reduce the economic benefits for regional communities that had benefited from the local economic activity generated by the last boom.

▲ **Figure 6.32** Australia's actual unemployment rate compared to the estimated unemployment rate if the mining boom did not occur

Interpretation activity

Study Figure 6.32. Summarise the impacts that the mining boom has had on the employment rate from 2000 to 2013. Refer to the data in your answer.

Environmental impacts on countries that supply raw materials

Societies and environments are increasingly impacted as raw materials become less available. Table 6.7 shows how long some raw materials are predicted to remain available for. Many raw materials will not necessarily run out completely; for example, there is much gold at the bottom of the ocean. However, as raw materials become more scarce, we begin to extract them from more difficult locations, which can be dangerous and expensive. For example, natural gas is now being mined through hydraulic fracturing,

▼ **Table 6.7** The amount of years before the global consumption of raw materials are exhausted, as based on the consumption rate of these materials in 2009 (which is unlikely to have remained constant, with an ever-increasing population and increase in consumption). All these resources but aluminium will be used up, at a very conservative estimate, in the next 350 years.

	Raw material	Some of its common uses	Years from 2020 until completely used up
	Indium	LCDs	2

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	Raw material	Some of its common uses	Years from 2020 until completely used up
	Silver	Jewellery, catalytic converters – i.e. a device that reduces the toxic gases and pollutants that come out of a car's tailpipe	18
	Antimony	Batteries, increasing metals' durability and decreasing friction	19
	Tin	Cans, preventing other metals' corrosion	29
	Lead	Pipes, batteries	31
	Gold	Jewellery, dentistry	34
	Uranium	Power stations, nuclear weapons	35
	Zinc	Galvanises metals and used as alloys in a lot of products like plastics and cosmetics	35

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	Raw material	Some of its common uses	Years from 2020 until completely used up
	Copper	Wires, coins, plumbing	50
	Nickel	Batteries, turbine blades	79
	Tantalum	Mobiles, camera lenses	105
	Chromium	Chrome plating, paint	132
	Phosphorus	Fertiliser, animal feed	334
	Platinum	Jewellery, catalysts, fuel cells for cars	349
	Aluminium	Foil, aeroplane parts	1016

Source: Armin Reller from the University of Augsburg and Tom Graedel from Yale University. These figures do not take into account the development of new technologies that is likely to increase these rates even more rapidly.

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ACTIVITY 6.9

Interpretation activity

Study Table 6.7.

1. Which raw material are we expected to use up first?
2. Which raw do we use the most? What products is this raw material used for?
3. Create a bar graph titled 'Use of recycled raw materials', using data from the donut graphs on the right of the image. Rank the recycled materials from most consumption met to least consumption met.
4. Choose one recycled material to investigate further. How and where is it recycled?

or fracking, which can create 300 million litres of toxic wastewater per well. Oil is now being extracted from tar sands in the deep ocean, which requires a lot of energy to extract and convert into a usable form. This dangerous process resulted in the oil spill in the Gulf of Mexico in 2010, which killed 11 workers and thousands of animals. Half of the surviving dolphins were also found to be extremely sick from lung and adrenal disorders linked to oil exposure.

However, there is potential for new technologies to extract, recycle or even replace popular raw materials. For example, the use of coal is being replaced by renewable energies in some countries.

Mining raw materials impacts the environment by reducing water supplies and changing biomes. This has the flow-on effect of harming the livelihoods of rural communities who live in places where mining is occurring. Mining corporations often draw water from nearby rivers and aquifers, while run-off from the mines pollutes local water sources and soils with metals such as mercury and lead. This reduces the water and soil available for communities and their commercial and subsistence agricultural activities.

Such pollution has led to community protests across the world. In Peru in 2017, people from the town of Cerro de Pasco marched 240 kilometres to Lima to bring attention to the fact that 2070 of their children have extremely dangerous levels of lead in their blood.

In 2019, thousands of people from Çanakkale in north-western Turkey protested against the deforestation carried out for a new gold mine and the heap leaching process used by the mining company to separate gold from ore. There is concern that the process will leak cyanide into the local dam that provides water to 180 000 people and irrigates over 5000 hectares of land.

In Australia, the proposed Carmichael coalmine in central Queensland is being resisted by people who are concerned about the potential 500 coal ships that will be able to travel through the Great Barrier Reef World Heritage Area, and about the estimated 270 billion litres of Queensland's groundwater that the mine will have access to in an area that is already prone to drought.

The social impacts on places that make products

Have you ever wondered how an A$5 T-shirt is made? After running the farm to make the fibres, harvesting the raw material, turning it into fabric, designing the product, manufacturing the product and then transporting it; how does anyone make a profit?

As we know, companies can move their manufacturing to places that offer cheap labour. While this international division of labour increases the profits of multinational corporations, it has significant, and sometimes devastating, social impacts for the places where these products are made.

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CASE STUDY 6.8

Life at Foxconn, Zhengzhou, China

Foxconn in Zhengzhou is one of the main manufacturers of iPhones. The 3.5-square-kilometre area of land was once used for agriculture, but was purchased by the government in 2010 and converted to a gated industrial and residential zone that is often now referred to as 'Foxconn City'. Some of the work is seasonal. It is busiest in summer, when up to 350 000 people are hired to produce the new iPhones before their global release in autumn. The conditions in Foxconn are believed to be fairly standard for the Chinese manufacturing industry. So, what does life look like for the makers of your smartphone?

▼ **Table 6.8** Living and working conditions for Foxconn workers in Zhengzhou, China

The people	The factory attracts mostly 16–30-year-olds from the Henan province. People migrate to Foxconn City as it is close enough to their villages to be able to see their families. Liu (an employee) said, 'You get Sundays off and you can go home and visit your family. That's the perk' (Liu, a Foxconn employee, quoted in Harrison Jacobs, *Inside 'iPhone City,' the Massive Chinese Factory Town Where Half of the World's iPhones are Produced*, 2018). People who work at factories further away from home only see their families on Chinese New Year and National Day. Many children are raised by their grandparents while their parents work at the factories.
The work	Production line work can be monotonous, as each employee usually only has one job to do – for instance, wipe the iPhone screen or solder one component. Though the work may not be difficult, one employee states: 'You do the same thing every day. It never ends. After a while you get annoyed at the thing you are doing. You don't even notice it at first ... Eventually, I felt annoyed to the core of my heart. Like I had no purpose' (Chen, a Foxconn employee, quoted in Harrison Jacobs, *Inside 'iPhone City,' the Massive Chinese Factory Town Where Half of the World's iPhones are Produced*, 2018). Managers have been known to humiliate workers if they make mistakes – for example, by making the worker write a formal letter of apology that they need to read to fellow workers.
The wages	Workers typically earn A$585 a month, which is below the estimated **living wage** of A$857 a month. However, workers are attracted to this job because of the overtime that is often available. Some Foxconn workers work 60 hours of overtime a week, which amounts to 14-hour days, seven days a week. This can earn them A$900 per month. For those who can afford it, much of the money is sent back to their family, as it is the expectation that young Chinese economically support their elders.
w	Most workers live in the 10-storey residential buildings in Foxconn City. Eight people share a room and sleep in bunk beds. Rent is A$23.60 per month. The gated city has many of the usual businesses, run by migrants from the Henan province or other parts of China. This includes restaurants, karaoke lounges, sport clubs, internet cafes and clubs.

KEY TERM

living wage an income that is high enough to live a normal standard of life

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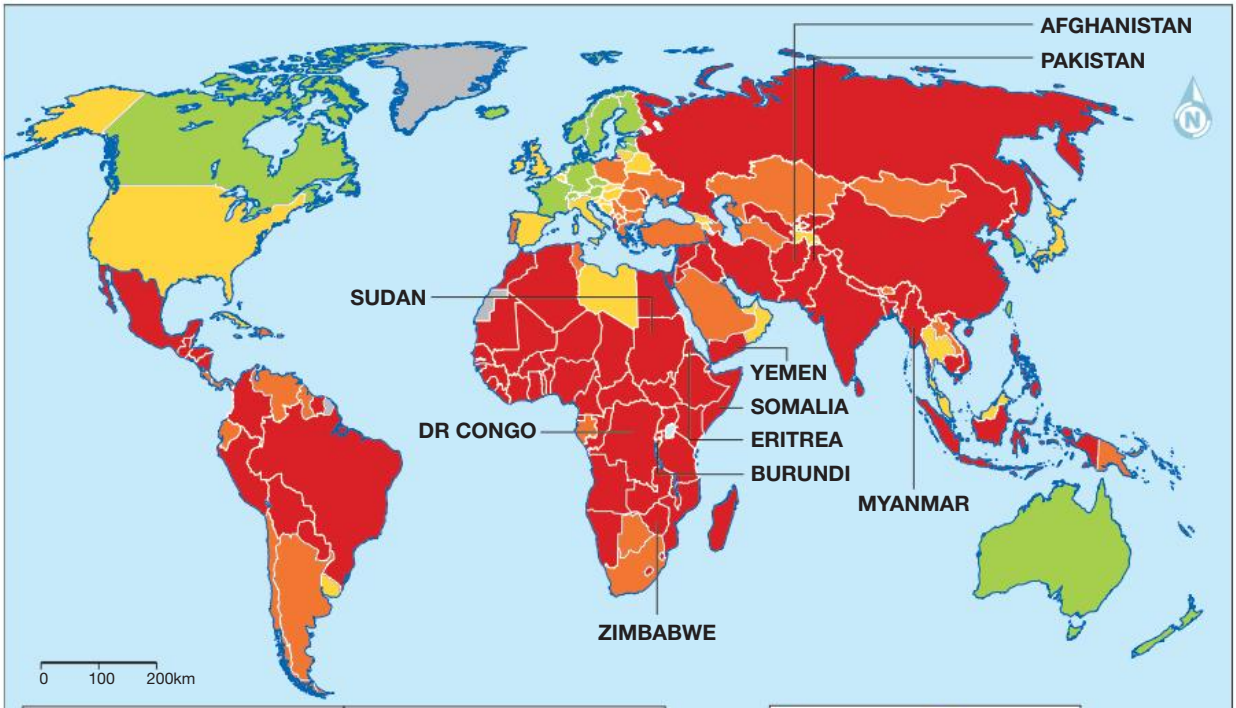
◄ **Figure 6.33** Happy faces. Migrant workers take the Migrant Train home to Beijing from Zhengzhou. For many of these workers, this is one of two times that they visit their family each year.

Child labour in the garment industry in Bangladesh

Child labour is defined by the United Nations Children's Fund (UNICEF) as any activity that affects a child's health and education. A child under 12 years old who is working one or more hours a week is considered to be a child labourer. Child labour has been decreasing over recent decades; however, 265 million (or 17 per cent) of children are still working. Figure 6.34 shows countries that remain places of child labour.



Rank	Country	Category	Rank	Country	Category
1	Eritrea	Extreme	6	Afghanistan	Extreme
1	Somalia	Extreme	6	Pakistan	Extreme
3	DR Congo	Extreme	8	Zimbabwe	Extreme
3	Myanmar	Extreme	9	Yemen	Extreme
3	Sudan	Extreme	10	Burundi	Extreme

▲ **Figure 6.34** A child's risk of entering into child labour depending on the country they live in

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ACTIVITY 6.10

Interpretation activity

Study Figure 6.34. Identify two regions, and two countries within each of these regions, that are considered to be in the following risk categories of child labour:

1. extreme risk
2. high risk
3. medium risk
4. low risk.

KEY TERMS

less economically developed country a low-income country that is struggling to develop in a sustainable way. Such countries are very vulnerable to economic and environmental challenges.

GDP per capita the gross domestic product divided by the amount of people in that country

poverty line the minimal amount of money needed to afford the basic necessities of life

Bangladesh is a country located in the region of South Asia. It is considered to be a **less economically developed country** and has a **GDP per capita** of A$2241, compared to Australia's GDP per capita of $79 524.

In Bangladesh, children as young as six years old work up to 110 hours a week for an average of less than A$2 a day. Boys typically work in agriculture, mining and quarrying, while girls typically work in the garment industry (making clothing) and as domestic servants in people's homes. This is often referred to by geographers as the gendered division of labour. Work is separated according to gender, based on the beliefs that a country or culture might have about the roles of men and women in society.

The garment industry is the country's largest export and Bangladesh is one of the top 10 garment exporters in the world. Many of the clothes for sale in Australia are made in Bangladesh.

Factors leading to child labour in Bangladesh

Economic factors are the main reason why children work in Bangladesh. In this country, 31 per cent of people live below the **poverty line**. Most child labourers come from poor families and are forced to leave school in order to work to help support the family. Sometimes children are forced to work for a living to support themselves because their families cannot look after them. The lack of education as well as the long, tiring hours of work make it very difficult for these children to have the opportunity to work in higher paying jobs. When families continue to live in poverty from generation to generation because of the lack of opportunities, it is known as the poverty cycle.

The impacts of Bangladesh's garment industry

The garment industry is the main employer of child labour in terms of paid work, and has fuelled the rise in child labour in urban places. The hazards associated with this work include exposure to dangerous chemicals and machinery, which can lead to injuries ranging from cuts to musculoskeletal disorders. Fires and the collapse of buildings are other risks due to overcrowding and poor infrastructure.

Improving Bangladesh's garment industry through education and pay

Bangladesh has impressively cut its poverty rate from half of the population to a third over the last 20 years. Education was key to this shift. Primary school has become free and compulsory.

However, once a child is of secondary school age, poor families send their children to work as they cannot afford the school fees. The quality of education can be poor. On average, teachers in Bangladesh miss one out of five days of work a week. Many child labourers could not read the sentence 'the girl is playing' in Bengali.

The benefits of education are enormous. Each extra year of education increases a person's income by roughly 10 per cent. Moreover, GDP per capita in low-income countries could be up to 70 per cent higher if all children were educated.

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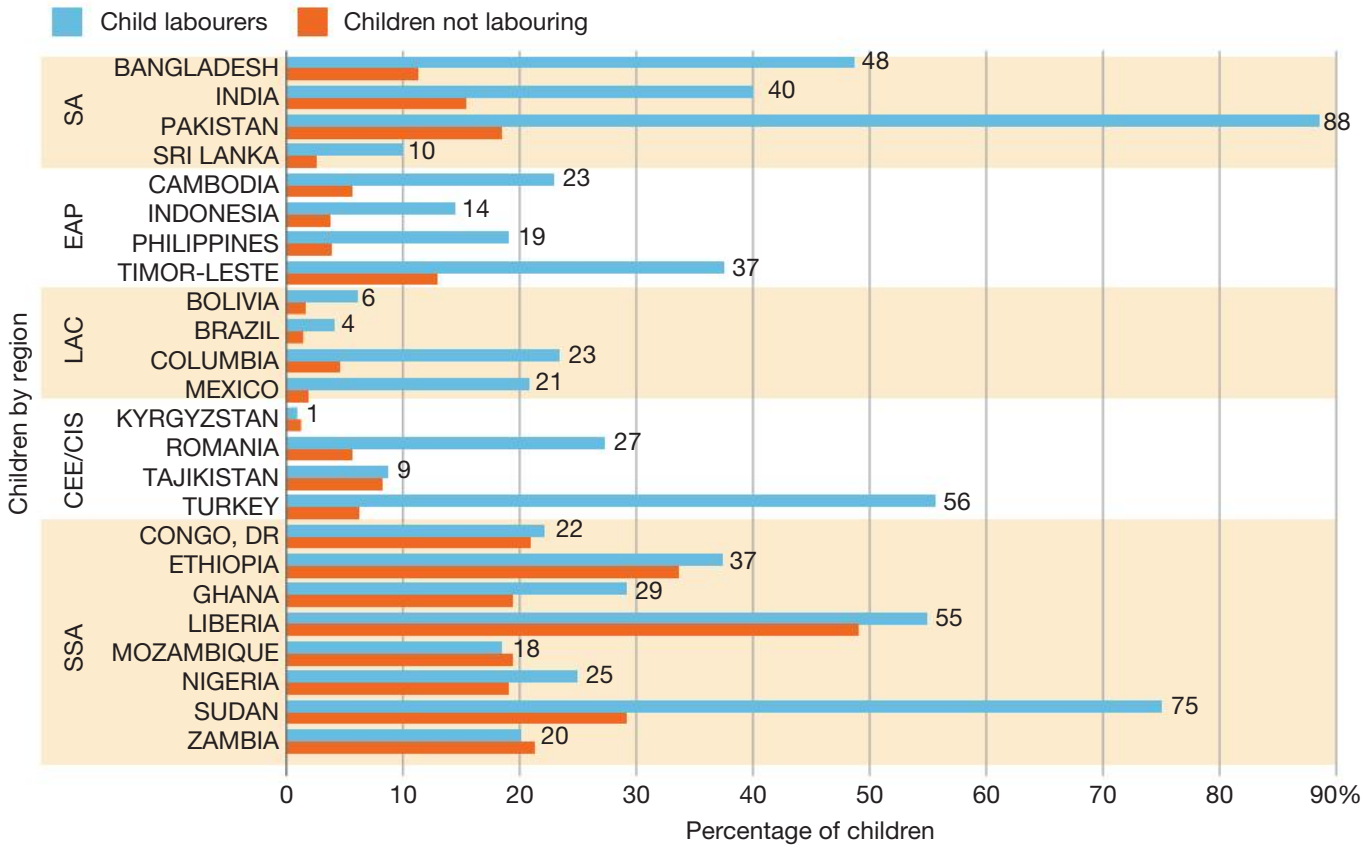

▲ **Figure 6.35** Percentage of children 7–14-years-olds who do not go to school, by child labour status and by country

ACTIVITY 6.11

Interpretation activity

Study Figure 6.35.

1 From which region do most children leave school to work?

2 From which region do most children leave school without entering the child labour force?

Although Bangladesh has created stricter labour laws, these laws are not enforced. The long supply chain from Bangladesh to our shopping stores means that we (the consumers) are disconnected from, and sometimes completely ignorant of, the places where our products are made, and the impacts of those working conditions. Paying workers a fair wage may result in paying A$1 extra for an item of clothing in a store, or a cut in the profits of multinational corporations.

However, if the yearly wage of a Bangladeshi increased from A$0–$500 to A$500–$1000, child labour would reduce from 30–60 per cent to 10–30 per cent. Websites such as Fair Trade Certified list brands that pay their workers a fair price for their labour. Consumers like us can choose to purchase fair-trade goods. This not only supports companies that do the right thing but gives poor-performing companies an incentive to improve their practices.

Environmental impacts on places that receive waste

There has been a trend in recent years towards the reduction of poverty around the world. However, as we continue to become more wealthy, our desire and expectation to own more goods increases. Ultimately, we want new things and cannot simply store everything that we purchase. As a consequence, we throw many of our old goods away to make room for the new. The scale of this behaviour is shocking. Hazardous waste from products such as batteries, cosmetics and electronics is increasing. In fact, human-made chemical production has increased by 40 000 per cent in just 40 years. One million plastic bottles are bought every minute.

For more on fair trade, please see more information in the Chapter 7, starting from p. 400

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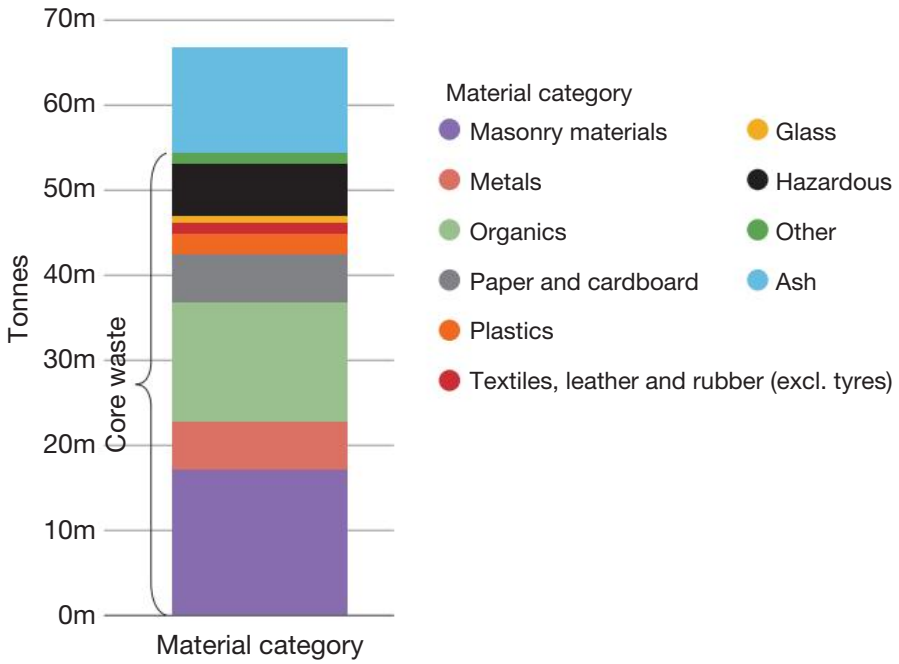
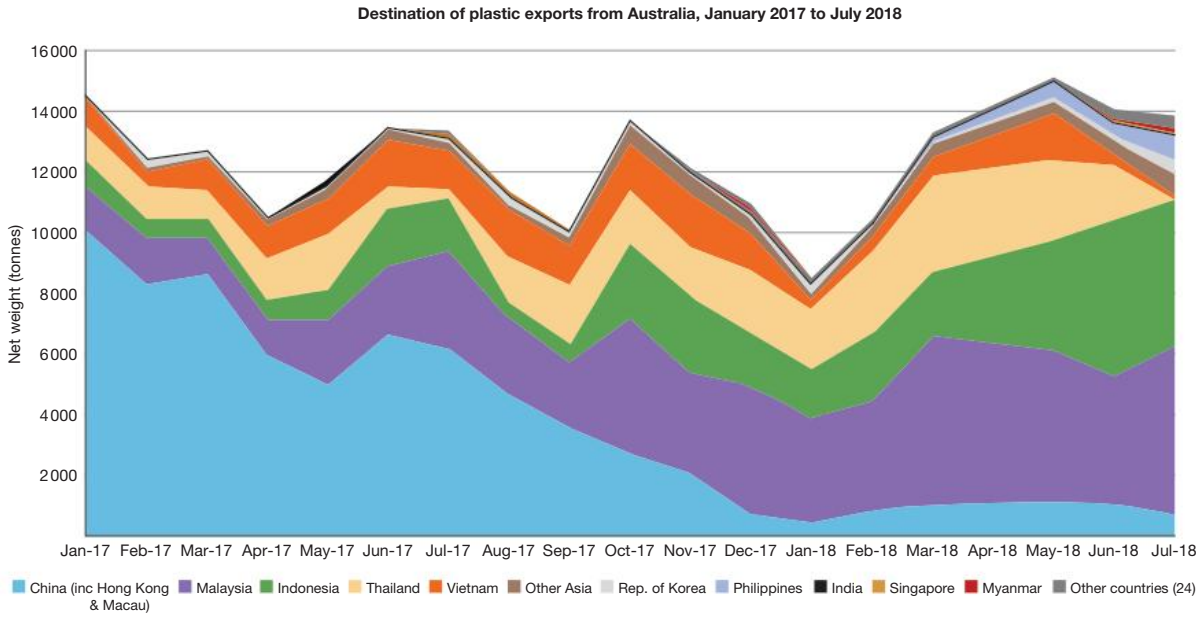


▲ **Figure 6.36** Australia's waste by type of material in 2016–2017



▲ **Figure 6.37** Countries that have received our plastic exports from January 2017 to July 2018 shown in an area chart. This shows the contribution each country has made to the total amount of plastics exports.

ACTIVITY 6.12

Interpretation activity

Study Figure 6.37. Rank the countries from most to least amount of waste accepted in January 2017 and in July 2018.

Until 2018, Australia was exporting half of its plastic waste, mostly to China. In 2018, China restricted the amount of waste it accepts from us. Since then, Australia has exported plastic waste to South-East Asian countries that have also since placed restrictions due to environmental and social issues associated with processing plastic.

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What are the impacts of plastic pollution?

Most plastics are sold to villages, where people melt the plastics so they can be used to create other products. This process uses large amounts of water and energy. Much of the plastic is dumped and ends up in the ocean, while some plastic is burned, polluting the air and water with toxic chemicals.

Responses: waste to energy and repair cafes

Waste to energy

Sweden made headlines when it announced that it was running out of plastic. In fact, it now makes A$100 million a year from accepting plastic from other countries. Plastic is burned on an industrial scale to create heating and electricity for the country. This is seen by many as being a better outcome than burying it in landfill. However, there are drawbacks. Because plastic is made from poor-grade oil, burning it emits carbon dioxide into the atmosphere. Moreover, when a similar plant was proposed in Sydney, many people were concerned about the toxic chemicals that could be released into the air. Sweden claims that its technology is advanced enough to sufficiently reduce this risk. There is also the risk that this practice encourages the making of plastic, as it becomes a source of income and energy.

Repair cafes

The first repair cafe started in Amsterdam, Netherlands, in 2009. Those who have goods that need repair can attend the cafe, where they are matched with people who have the skills to repair the goods. The idea is that those bringing in the goods will also gain skills and knowledge. The benefit of this is that it reduces the amount of goods being thrown into landfill, as well as stopping that individual from purchasing a replacement. It is also a cheaper alternative, being free. Social benefits include the sense of community and goodwill for those that attend the cafe, and free education. Drawbacks include the fact that for some, the repair cafe may not be as convenient as making a new purchase, and there is no guarantee that your goods may be fixed.

Amazing but true ...

For many years, Dromana College had been working with new plastic to teach design principles to students. With the growing awareness of how destructive single-use plastic can be to our environment, it had become apparent that the school's use of plastics was outdated. In order to address this issue, the school procured some machines that allow it to recycle existing plastic instead of working with new plastic. The goal of Dromana College is to transform its waste into functional objects such as outdoor seating, signage and building materials. With involvement from students, the school has introduced a new waste management system that will allow it to collect single-use plastics to recycle. By working towards a closed-loop waste system, the school aims to provide students with the space and context to come up with ideas that will move the school towards more sustainable practices.

END-OF-SECTION REVIEW 6.4

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. Provide three examples of raw materials.
2. Define the terms 'living wage', 'gendered division of labour' and 'automation'.
3. Which SHEEPT factor (see Chapter 5, Table 5.3 for an explanation of SHEEPT) is the main cause of child labour in Bangladesh?

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Digital quiz
Please see the Interactive Textbook to access digital activities

4 When did Australia's most recent mining boom reach its peak?
5 How will automation change the distribution of workers in the mining industry?
6 Would unemployment in Australia have been higher or lower without the mining boom?

Interpret

7 Imagine that you are an employee at Foxconn. Write a letter to your family in the village detailing what everyday life is like for you in Foxconn City.

Argue

8 Watch the video 'Child Labor: 11 year-old Halima sews clothing for Hanes' on YouTube. Write a letter from the perspective of Halima informing Australian children of her experience. Structure your letter in the following way:
- Begin by introducing yourself as Halima and describe your living and working conditions.
- Explain how poverty has influenced child labour in your country of Bangladesh.
- Then, with help from this chapter and external research, explain to the Australian people what they can do to ensure that products are made fairly.

9 Compare the responses to plastic waste management outlined in this topic. Which response is most sustainable? Justify your choice by comparing the benefits and challenges of both.

Extension

1 Describe the scale of Foxconn City. This includes area size and the number of people. Use Google Earth Pro to attach a satellite image of Foxconn City to your answer. Annotate the image to show where factories, residential and commercial shops are found.
2 Draw a flow chart to demonstrate the poverty cycle.
3 Copy and complete the following table with examples from this topic, or fill it in within the Interactive Textbook

	Places that produce raw materials	Places that produce the goods	Places that receive waste
Impacts on these places (Include a mix of social, environmental, positive and negative impacts.)			

4 Look up 'How do you make a fairer phone?' on the Fairphone website. In what ways is the Fairphone more sustainable and more 'fair' than the usual smartphone?
5 Create a fair-trade guidebook for teenagers. Create categories such as clothing, food, drinks, sports equipment and cosmetics. List as many fair-trade products as you can find under the appropriate categories and make the guidebook appealing with pictures, illustrations and some additional fun facts about fair trade.
6 Choose a raw material that is mostly derived from recycled materials. Research how this material is recycled into a reusable form.

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6.5 The effects of tourism

FOCUS QUESTIONS

- What are the impacts of tourism?
- How is technology changing the tourism industry?

The global growth of tourism and its likely effects on the future of places

Introduction

Tourism is one of the fastest growing industries in the world, and is growing faster than many geographers had predicted. In 2018, there were 1.4 billion international tourist arrivals, according to the World Tourism Organization. This has increased by 6 per cent since 2017.

Economic impacts of tourism

The jobs provided by tourism support local, regional and national economies. About 3 per cent of people worldwide work in the tourism industry directly. However, the industry has a much broader reach than this, as it supports the jobs 10 per cent of people worldwide. Figure 6.38 demonstrates the direct, indirect and induced impacts of cruise ship tourism. It can provide much-needed income in places that otherwise have few resources to trade, such as Macau, where 44 per cent of its income comes from tourism, particularly people drawn to the region's casinos.

However, there are some negative impacts of tourism, including underemployment or unemployment for parts of the year in places where tourism is seasonal. Moreover, the cost of housing, goods and services can increase in order to make money from tourists, which also puts financial pressure on locals who cannot afford the price increase.

Environmental impacts of tourism

Tourism can impact environments in a positive way by providing financial investment in improved water quality, pollution reduction and infrastructure. It can also encourage governments to protect natural environments and heritage areas.

On the other hand, tourism can put a large amount of stress on places, particularly fragile environments such as coral reefs, deserts, mountains and coasts that are not able to cope with large amounts of people and their waste. The consequences of this can be degradation of habitats and loss of wildlife, pollution and soil erosion. If the environment becomes too damaged over time, the place may also lose its appeal to tourists, who may no longer wish to go there. Moreover, transport alone contributes to climate change by emitting enormous amounts of carbon dioxide into the atmosphere.

Social impacts of tourism

Travel can enrich people's lives. Tourists and locals both have an opportunity to learn about each other's culture and language, which can help people overcome prejudices and stereotypes that they may have held. It can also show travellers that there is no one way to live, and help people broaden their perspectives.

However, there are negative social risks, which include changing the cultural values and behaviour of locals, increased crime, changes in family structures and roles, and damage to the natural and human environments. Conflict can occur between tourists and locals over resources. Tourists can use up to 16 times as much water as locals in some places. Moreover, locals are sometimes forced to move as their homes are used to expand tourist developments.

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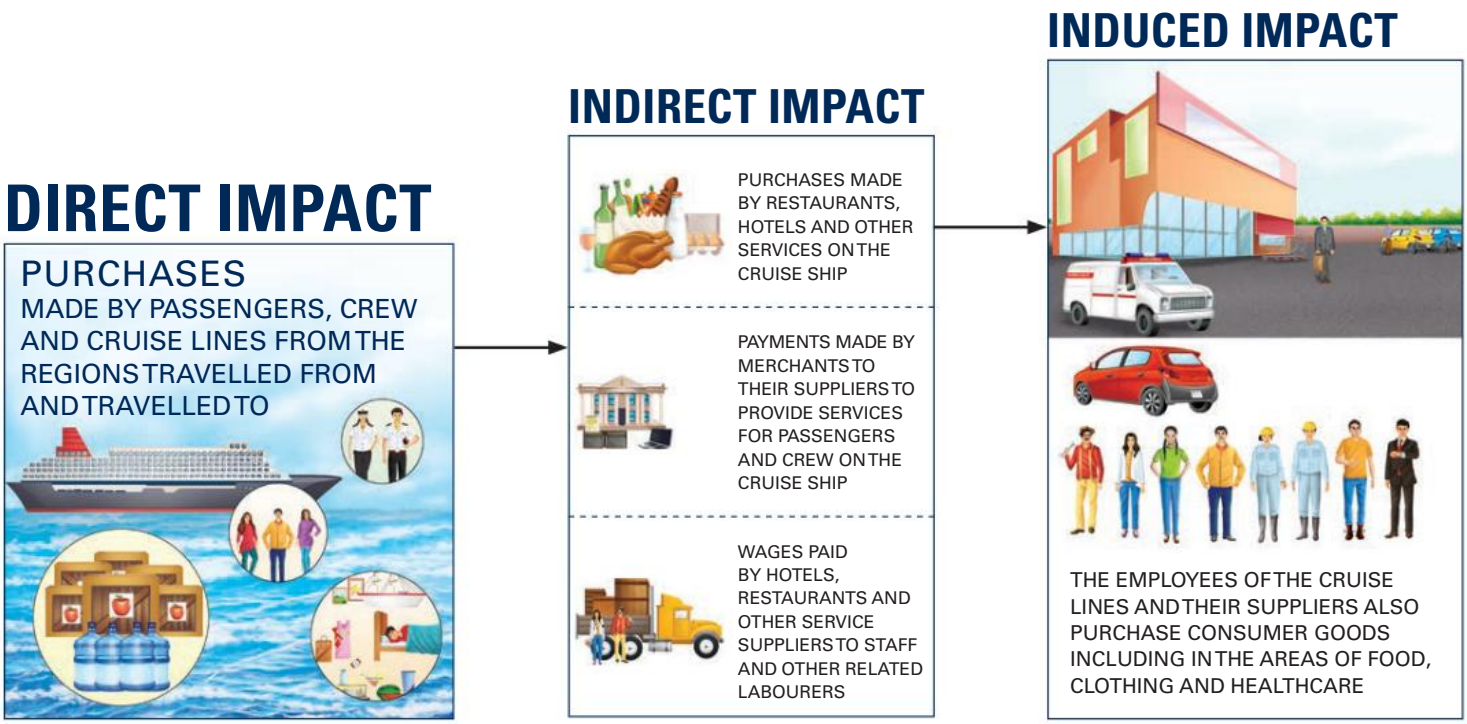
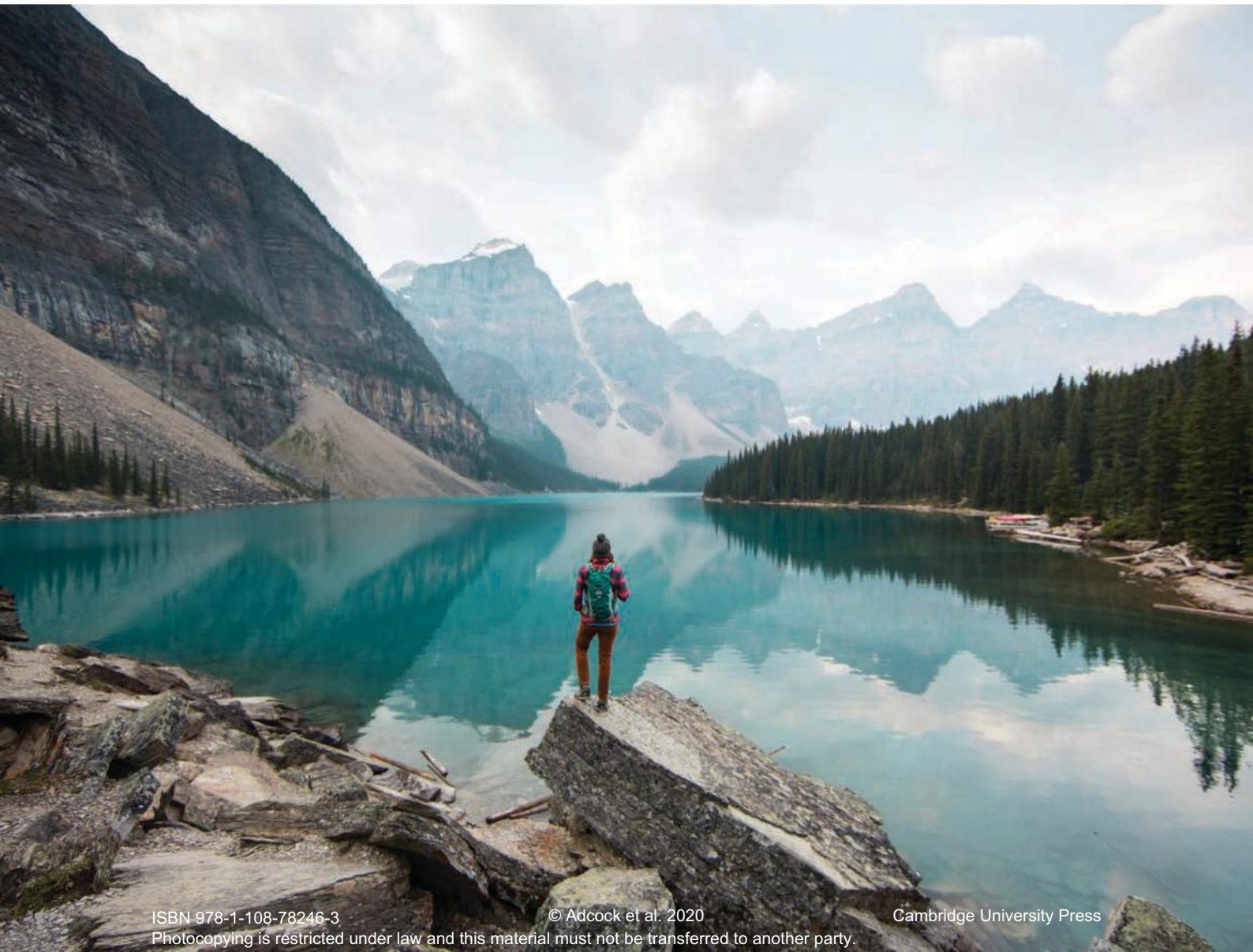


▲ **Figure 6.38** Direct, indirect and induced impacts of cruise ship tourism

▼ **Figure 6.39** Travelling and learning about the world can open up amazing experiences for young and old



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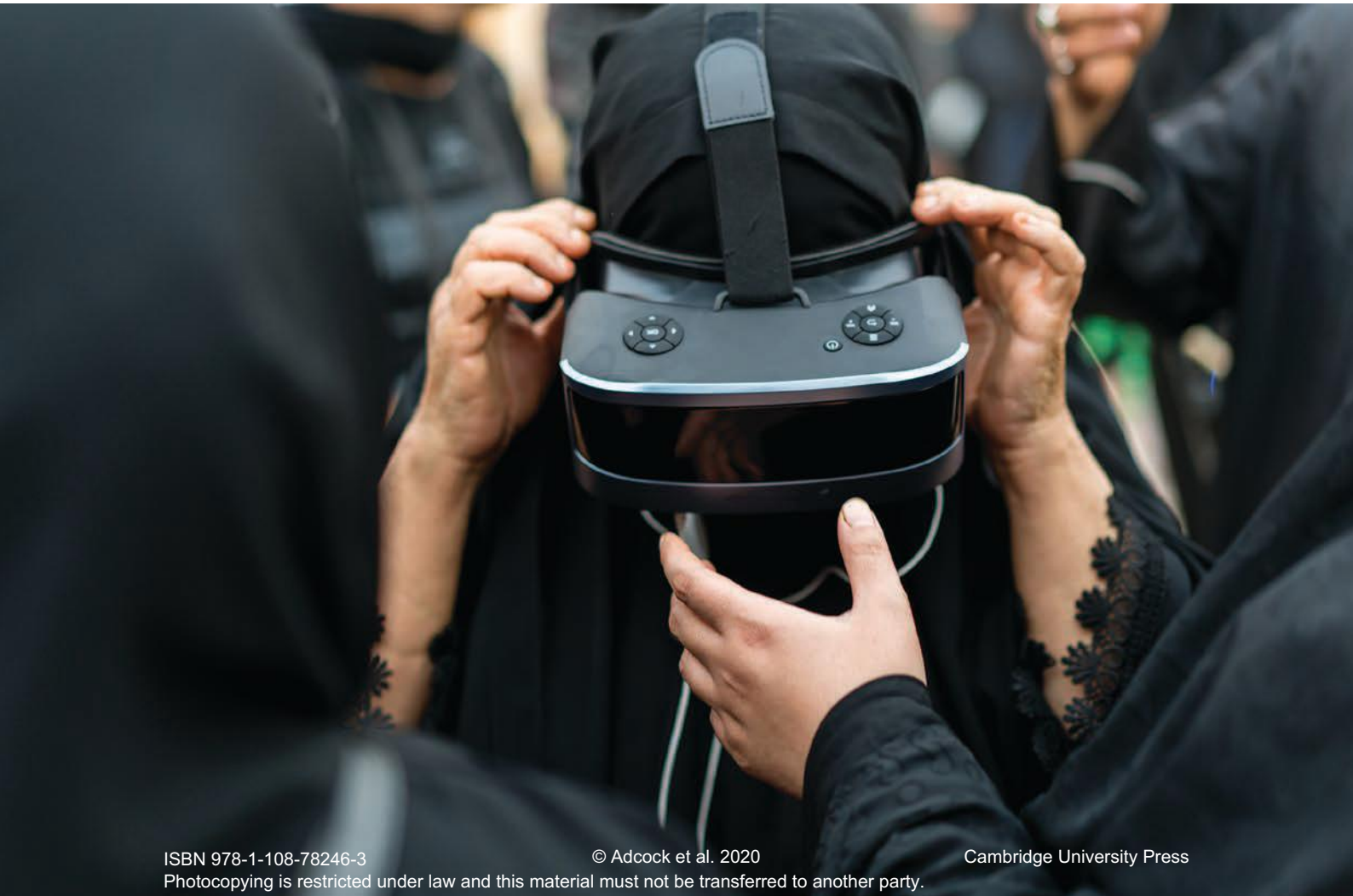
How is technology changing the tourism industry?

Technology has changed the travel experience and will continue to change our experiences in the future. Some emerging technologies that have an impact on tourism are outlined in Table 6.8.

▼ **Table 6.9** Emerging technologies and how they impact tourism

Technology	Use in tourism
Recognition technology	Biometric identifiers such as facial and fingerprint recognition can be used to streamline checkouts. In the future, you may be able to pay for a hotel by simply walking out the door.
Virtual reality (VR)	Virtual reality can be used by businesses to attract customers by showing them the experience that they could have. It can also be used by hotels to show potential customers the facilities they offer.
Artificial intelligence (AI)	Robots and chatbots provide travel information to tourists. Artificial intelligence is also being used to create hands-free luggage that will use sensors to automatically follow you.
Data collection	Data about each traveller is collected on databases in order to understand the traveller's wants and needs, and market a more personalised travel experience

▼ **Figure 6.40** This woman is using virtual reality (VR) during her visit to the Holy Shrine of Imam Hussain in Karbala, Iraq. VR can enhance the historical, cultural and religious experiences for visitors.



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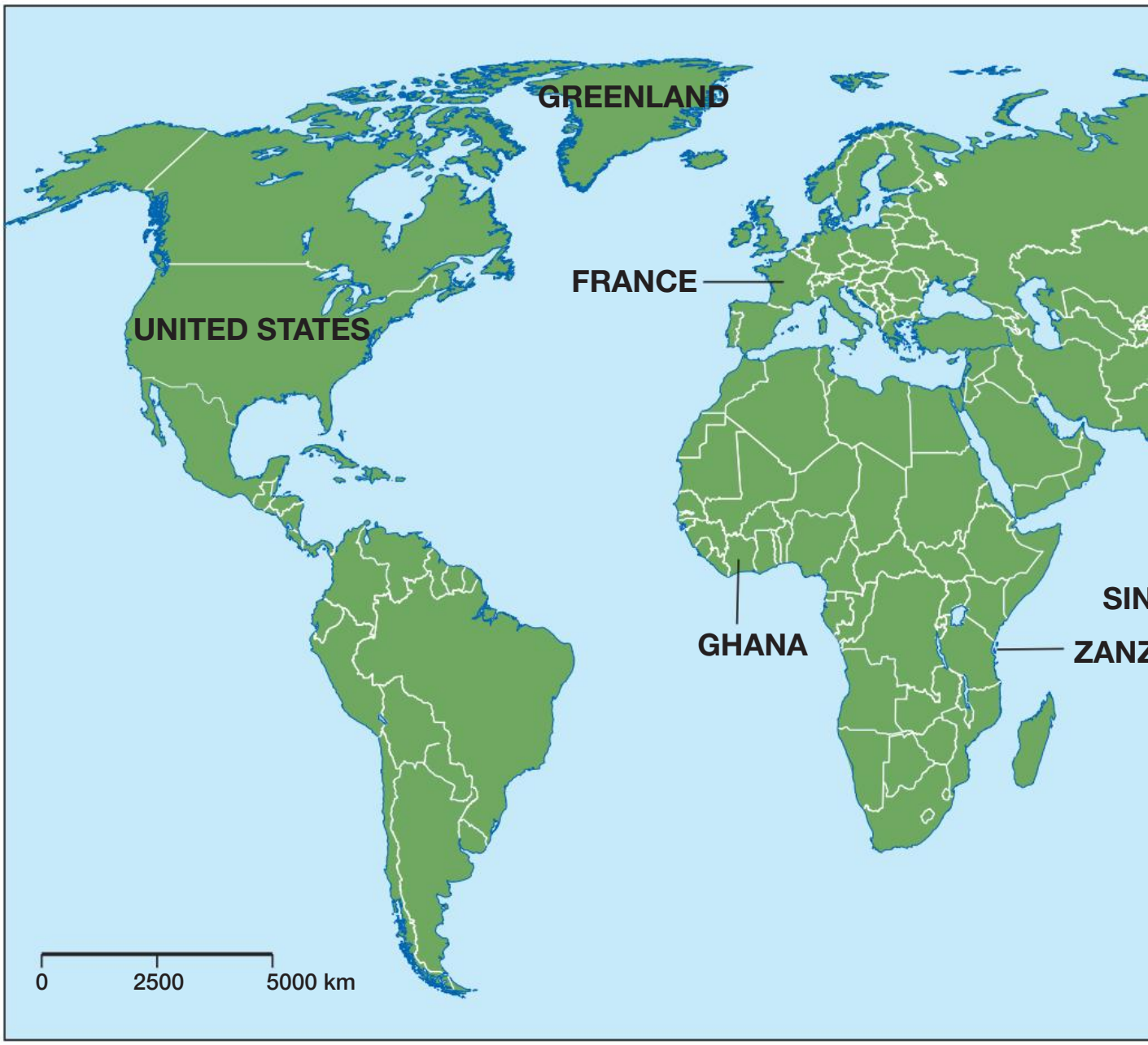
Impact of tourism around the world[1]



▲ **Figure 6.41** Impacts of tourism around the world

Cambodia

'Voluntourism' refers to tourists who perform volunteer work while being tourists outside of their home country. In Cambodia, tourists volunteer at orphanages as a way of doing good. However, 80 per cent of these children are not orphans. They have been recruited from their villages by people who tell their parents that this is a great opportunity for children to get an education and meet Westerners. These children grow up with a loss of their culture and identity. Their relationships with tourists only last a few weeks, which can result in a warped sense of connection to others that is not based on any substantial, ongoing love. Abuse and mistreatment are also reported. The outcome for these children is often grim, with many of them suffering mental health issues into adulthood.

Zanzibar

Hotels in Zanzibar hire security guards to protect the hotel's water pipes from locals who are experiencing extreme water shortages. Zanzibar was also affected by a cholera outbreak that killed three locals. This outbreak was connected to contaminated groundwater from hotel sewage.

Bali, Indonesia

Tourism makes up 80 per cent of Bali's income. The popularity of this island makes it far more wealthy than some other Indonesian islands where agriculture is the primary industry. Though pollution has been a problem, the group One Island One Voice holds an annual event called Bali's Biggest Clean Up. This event is supported by tourists and businesses, including MNCs that have a vested interest in keeping the island clean.

1 At the time of writing, the global COVID-19 pandemic was unfolding, and having a major effect on the numbers of foreign travelers coming to and from Australia. This will likely cause dramatic changes in global tourism figures.

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Ghana

Ghana is experiencing strong growth in tourism. Ghana has a tragic history, as many people who were taken as slaves to the United States came from Ghana. The Year of Return is a marketing strategy designed to attract African Americans to visit Ghana as tourists. While tourist growth is positive, the risk is that multinational businesses will invest in Ghana's tourism industry and overrun the locally-run businesses.

Singapore

'Bleisure travel' refers to combining travel for business with leisure activities. Singapore attracts international business people from the manufacturing, finance and real estate industries. For leisure, these people can also enjoy shopping, sampling a variety of cuisines, seeing cultural sights and enjoying the luxuries of high-end hotels. Bleisure travel is a quickly growing industry and has the benefit of attracting people to places that they may not have otherwise visited.

France

Paris is the most popular tourist destination in the world. The 50 million tourists each year impact local residents, who feel overwhelmed by the crowds. Tourism also affects the affordability of accommodation for locals, as residents are put out of their rental apartments by landlords who can make more money from renting the apartments using apps such as Airbnb. Some locals argue that the scale of tourism makes the city feel more like a theme park than an urban living environment.

Australia

People around the world are becoming more wealthy. The increased affluence in China has had a strong impact on international travel, including in Australia. Chinese tourists make up the most international travellers to Australia, yet only 1.8 per cent of Chinese travel to Australia. Australia is expected to benefit from increasing amounts of Chinese tourists as more Chinese begin to afford travel.

United States

National parks such as Yosemite and Yellowstone have helped protect the natural environment and native animals, as well as allowing tourists to enjoy nature-based tourism activities. However, the natural beauty of the United States also suffers from the impact of social media. For example, Horseshoe Bend near the Grand Canyon National Park became Instagram-famous and now attracts crowds of up to two million people annually, well beyond what the fragile desert environment can handle. The sudden popularity of the area also means that infrastructure is not in place to deal with the increase in visitors. As one local said, 'It was just a local place for family outings … But with the invention of the cellphone, things changed overnight' (Bill Diak, local, quoted in Charlotte Simmonds et al., *Crisis in Our National Parks: How Tourists are Loving Nature to Death*, 2018).

Greenland

Greenland is the world's largest island after Australia, and is largely covered by the only permanent ice sheet outside of Antarctica. Greenland's ice is melting due to climate change, which has increased the average winter temperature by almost 6°C. Tourism to Greenland has doubled in six years. Climate change tourism is attracting people who say that they want to visit Greenland before the landscape changes and polar bears become extinct. Travelling by ship or plane to Greenland emits carbon emissions, so some people argue that it is exacerbating climate change, while others see it as an opportunity for the tourism industry to grow.

New Zealand

Wilderness refers to land that has not been developed, and has a very small, if any, amount of human impact. People attracted to wilderness tourism are often seeking the comfort of nature and hoping to escape the busyness of everyday life. However, there can be safety risks associated with this type of tourism. In 2019, tourists visiting White Island volcano lost their lives when the volcano erupted. Although the volcanic activity was being monitored, geographers are still developing their ability to accurately predict the timing of natural disasters such as this.

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► **Figure 6.42** Advertisement urging tourists to consider the impacts of orphanage tourism

END-OF-SECTION REVIEW 6.5

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1. How many international tourists were there in 2018?
2. Is tourism a growing industry? Provide one statistic from the text to support your answer.
3. List one direct and one indirect impact of tourism.
4. Define the terms 'voluntourism', 'bleisure tourism', 'climate change tourism' and 'wilderness tourism'.
5. What does The Year of Return refer to?

Interpret

6. Rank the emerging technologies in terms of technology that will have the most impact on tourism in the future to technology that will have the least impact. Justify your ranking order.

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Argue

7 Provide your opinions on the following two questions. Justify your opinions using information from the textbook and further research. Hold a class debate on one of these topics.

a Do you think that voluntary tourism should be banned?

b Do you think that tourists should have a limit to how much water they can use in places that are experiencing water scarcity?

Extension

1 Organise the information that you have read in Section 6.5 by copying and completing this table, or by filling it in within the Interactive Textbook.

	Positive impacts	Negative impacts	Example from 'Impact of tourism around the world' map
Economic impacts			
Social impacts			
Environmental impacts			

2 Create a travel tour through the African continent. You must stop at a minimum of one country from northern, southern, eastern and western Africa (a minimum of four countries in total).

a Describe the geographic characteristics (human and physical) of each place. Include characteristics such as the location, major landforms and biomes, places of interest, currency and exchange rate for Australian travellers, and the culture/religions/daily life of the people.

b For each country, include three activities that tourists can enjoy.

▲ **Figure 6.43** Where will travellers stop on your hypothetical tour of Africa?

Digital quiz
Please see the Interactive Textbook to access digital activities

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Making thinking visible

In this chapter, we have read many case studies on the impacts of trade on the environment and society. Take on one of the following roles: a multinational corporation, a child labourer or other worker, the environment, a government, or a consumer. Consider the phenomenon of global trade from your chosen perspective by answering the following prompts:

1 I am thinking of global trade from the point of view of a …

2 I think … (describe global trade from your viewpoint). Be an actor – take on the character of your viewpoint.

3 A question I have from this viewpoint is … (Ask a question from this viewpoint.)

Wrap up: What new ideas do you have about the topic that you didn't have before? What new questions do you have?

3 Research tasks

1 Choose a multinational corporation to investigate. Suggestions include McDonald's, Rip Curl, Rebel, Amazon, Nestlé, Coca-Cola, Boeing, L'Oréal or BP. Address the following:

- **a** Where is its headquarters?
- **b** How much is the company worth?
- **c** How much revenue (income) did it earn in the last financial year?
- **d** How much does the average employer earn?
- **e** Where does the company manufacture its goods? (Include places that supply the parts and assemble the products. You may wish to annotate a map to show this.)
- **f** In which countries does it sell its goods?
- **g** What are the environmental and social impacts associated with this company's operations?

2 Research your own connection to places around the world. Create a list of your possessions. For each item, write down where it comes from. Discuss your results in a paragraph.

4 Extended-response question

'The biggest problems facing the world today are not at all beyond our control, rather they are all of our own making, and entirely in our power to deal with' – geographer and author Jared Diamond (quoted in Darek Gondor, *Why Do We Over-consume?*, 2009). To what extent do you agree with this statement? Use examples from this chapter to help answer this question.

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5 Problem-solving task

Consider one of the challenges discussed in this chapter. Examples include child labour, lack of transport networks in Papua New Guinea, plastic pollution and reduction in raw material availability. Create a strategy that can overcome or reduce the negative impacts of this challenge. What are the main causes of this challenge? How does your strategy address the causes of the challenge? How could your strategy be implemented and what resources do you need? What difficulties might you face in trying to implement your strategy? How can you overcome these difficulties?

▲ **Figure 6.44** A Bangladeshi garment worker pictured at a factory in Savar, on the outskirts of Dhaka, February 2020

6 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about global interconnections

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3

Economics and Business

What is Economics and Business?

Ever wondered where all the goods you buy come from? Do you purchase more goods from overseas manufacturers or from Australian manufacturers? How does buying goods satisfy your wants and needs? How does it improve our living standards and general wellbeing? Is having more always better? Do you use a credit card or cash to make your purchases? Do you think about the consequences of your purchases on the community, the environment and the economy?

Economics and Business looks at the way individuals and other groups in the community, such as government and businesses, make decisions about how limited resources will be used to satisfy our needs and wants. What will we buy? What will businesses make or produce? What goods will the government provide? These decisions about what we want and need are limitless, but the resources used to make these products are limited. The decisions made by individuals, government and businesses are all interrelated, and the decisions made by any one of these can impact on the other.

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Unit 1

Resource allocation and making choices

Overview

In this unit, you will focus on economic decision-making at individual, business and national levels, and you will look at the various forces shaping these decisions. These decisions will impact on the health of our economy as well as the health of our environment today and into the future. Your decisions will also impact on our material and non-material living standards.

You will learn about how you can manage your finances, including through saving and investing, and the risks and rewards associated with how you use your money. This should mean you will have a better understanding of your role in the economy and how current decisions and actions can impact on your future.

You will become a well-informed and critical decision-maker, which means that you will be able to contribute to a prosperous but sustainable future both nationally and globally.

Learning goals

After completing this unit, you should be able to answer these questions:

- How does Australia trade with the rest of the world?
- What measures are used to determine the health of our economy?
- What is the link between the economy and our living standards?
- Does a strong economy mean a happy population?
- Why do we save and invest?
- What is the difference between risk and reward?

Please note at the time of writing in early 2020, the global COVID-19 pandemic was unfolding, and having a major effect on the world. The consequences were still largely unknown at the time of publication.

Video
Unit Overview

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CHAPTER 7

Going global

Setting the scene: the story of trade

Trade is the activity of buying and selling, or exchanging, goods and/or services between people or countries. Throughout human history, forms of trade have evolved over thousands of years. Though we today trade using currencies, in the past precious **commodities** such as gold, salt, frankincense and myrrh were used as forms of currency to enable trading across countries and continents.

KEY TERM

commodity a substance or product that can be traded, bought or sold

Did you know that salt was once a precious commodity because it could be used to flavour and preserve food and could be used as an antiseptic? Salt was so precious that it made up a portion of a Roman soldier's pay. It is from this that we get the word *salary* (from the Latin for salt, *sal*) and the phrase 'Not worth his salt' (meaning that if a soldier did not work hard enough, his salt pay would be docked).

◄ **Figure 7.1** In ancient times, Roman soldiers were paid for their service in salt

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You may have also heard the well-known Christian story of wise men bringing the precious gifts of frankincense and myrrh for the baby Jesus. But do you know what these substances actually are?

Frankincense and myrrh both come from tree sap that is dried in the sun. This dried sap could be burned as incense or used as perfume and was popular in burial rituals to aid embalming. The domestication of the camel allowed the Arabians to transport their valuable incense from the southern Arabian Peninsula to the Mediterranean, which was an important trade hub. Frankincense and myrrh became significant commodities for the Romans, Greeks and Egyptians. It is even said that the Roman emperor Nero had a whole year's harvest of frankincense burned at the funeral of his beloved mistress.

Frankincense and myrrh are still commodities today. They are used as essential oils and have become popular for use in aromatherapy treatments. At the end of 2019, 1 litre of frankincense oil cost about A$18 and 1 litre of myrrh oil cost about A$22.50. These commodities are therefore not quite as rare and precious as they have been throughout history.

▲ **Figure 7.2** (From left to right) salt, gold, frankincense and myrrh – commodities that have been traded by humans in the past

MAKING THINKING VISIBLE 7.1

Think, puzzle, explore

In groups of 3–4 students, share ideas and questions in response to the following prompts.

1. What do you know about this topic?
   - Write a list of things you know about trade in the past and today between Australia and the rest of the world.
2. What questions do you have?
   - Create a list of questions you have about trade and how it happens between Australia and the rest of the world.
3. What does this topic make you want to explore?
   - Create a list of topics about trade that you would like to explore further after reading this story.

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Chapter overview

Introduction

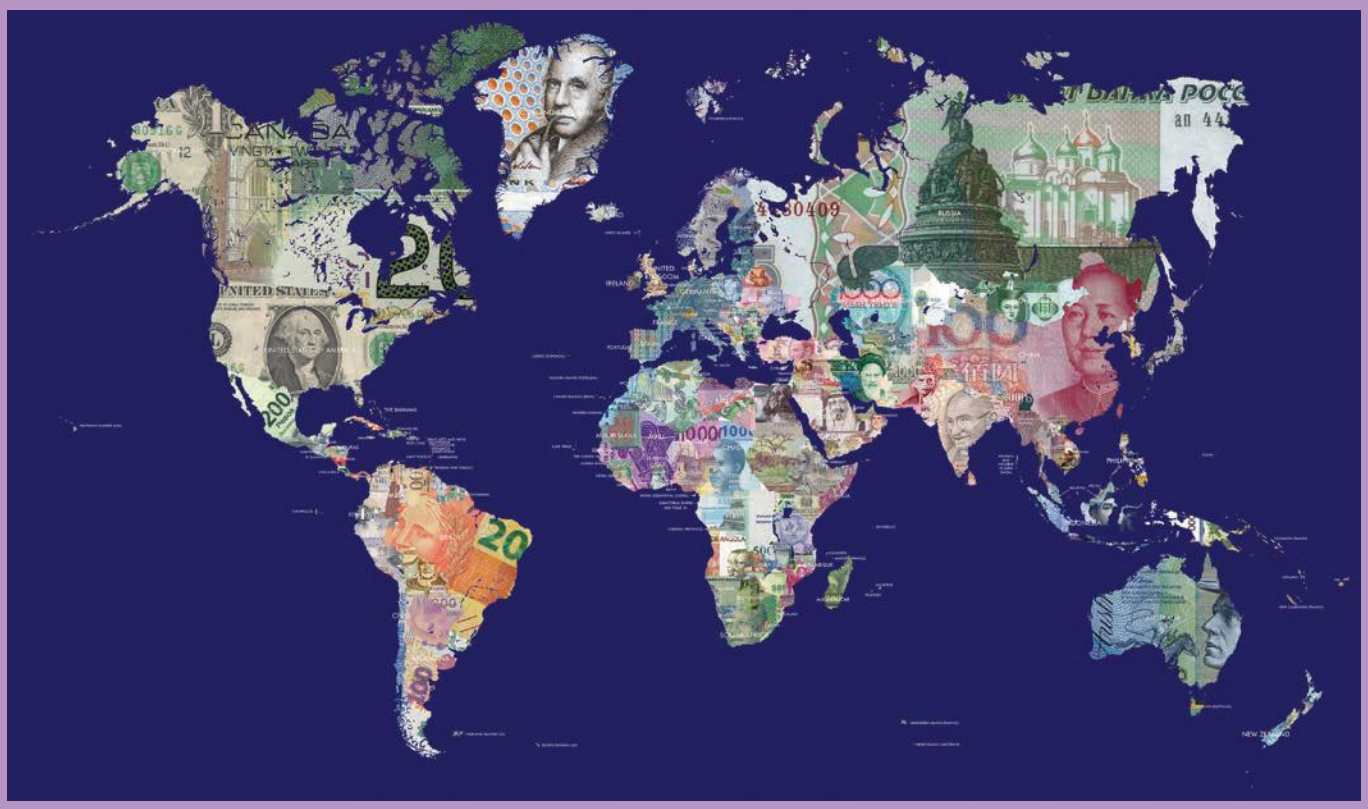
Going global looks at how Australia engages with the rest of the world. We will look at the nature and importance of trade to both the individual and to the economy. We will also look at the composition and direction of Australia's trade.

In this chapter, we will focus on economic decision-making on a national level and the various forces shaping these decisions, taking into account the global economy and the Asia–Pacific region, as well as domestic issues. We will examine the different ways we measure the health of an economy and how Australian businesses and consumers operate in this environment. By looking at Australia's geographical position and wealth within the broader global community, we get a better understanding of how Australians are globally connected.

Learning goals

After completing this chapter, you should be able to answer these questions:

- How does Australia trade with other nations and what is its place within Asia and the global economy?
- What are the indicators of economic performance and how does Australia's economy perform?
- What are the links between economic performance and living standards, including the variations that exist within and between economies?
- What are some reasons for the variations between economic performance and living standards that exist within and between economies?



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7.1 Australia as a trading nation and its place within Asia and the global economy

FOCUS QUESTION

Why do countries trade?

Countries have traded for centuries, and **trade routes** have developed since ancient times to move goods from places of production (such as workshops and factories) to places of commerce (such as markets). Commodities that were only available in limited locations were so desired that fortunes were made or lost on the delivery of these traded goods. Trade routes developed and became vital, not only for the movement of goods and services, but also for the spread of technology, religion, wealth and knowledge.

Today, trade continues to be equally important, with many countries relying on trade as a major factor in raising living standards, providing employment and higher incomes, and enabling **consumers** to enjoy a greater variety of goods and services.

International trade is the buying and selling of goods and services across international borders. Countries sell goods and services produced domestically to buyers overseas. These goods and services are called exports. Countries also buy goods and services from other countries to use domestically. These goods and services are called imports.

KEY TERMS

trade route a route, often covering a long distance, that people buying and selling goods often used in the past

consumer a person who buys goods or services for their own use

Amazing but true ...

Australia is the world's largest exporter of iron ore.

▼ **Figure 7.3** Australia is part of a larger global economy

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KEY TERMS

free trade international buying and selling of goods, without limits on the amount of goods that one country can sell to another and without special taxes on the goods bought from a foreign country

globalisation the increase of trade around the world, especially by large companies producing and trading goods in many different countries

import to buy or bring in products from another country

International trade has created a shopping paradise because **free trade** and **globalisation** have opened up markets for goods and services that 20 or 30 years ago were not available.

Consumers and households now have a much greater variety of offerings from overseas, such as cars, clothes, cosmetics, phones and food. The range of goods and services is so wide, that no one country could manufacture and provide all these products. Therefore, the importance of trade cannot be underestimated.

Consumers want greater choice of goods and services at lower costs. Businesses want to **import** raw materials at a cheaper price to reduce their costs of production to be more competitive in markets. Governments place importance on trade because it can improve the profits of Australian industries and provide jobs and income for all Australians. This, in turn, can assist in improving living standards.

▼ **Figure 7.4** The availability of goods, products and services can be overwhelming

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Some countries are rich in natural resources such as iron ore. Australia **exports** iron ore to many places overseas where the ore is used to make steel. Countries also tend to trade mainly in the types of goods that they are particularly proficient at making.

Some examples of countries and regions that have specialised exports include:

- New Zealand – dairy, eggs, honey and meat
- Canada – mineral fuels, oil, vehicles and machinery
- Japan – vehicles, machinery, electrical goods
- The European Union – machinery, vehicles, pharmaceuticals
- Indonesia – coal briquettes and palm oil.

Amazing but true ...

Australian agriculture feeds 60 million people around the world each year.

Without trade these countries would not benefit as much from their specialisation within their own country, so they export these goods to earn more income. Countries that cannot produce these goods import them because they do not have these natural resources or are not able to produce the goods as cheaply or as well.

KEY TERM

export to send goods to another country for sale

▼ **Figure 7.5** Manuka honey from New Zealand

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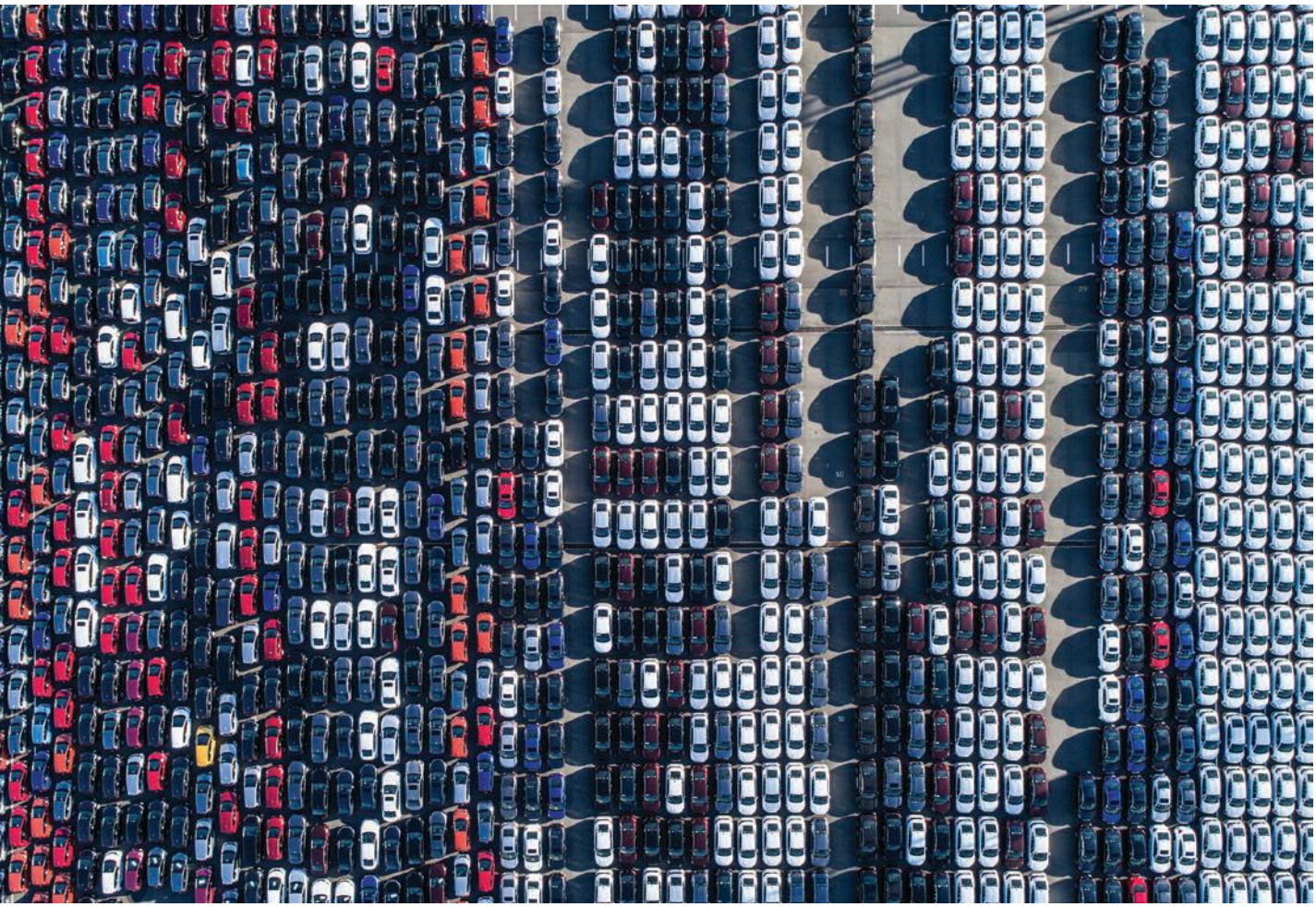

▲ **Figure 7.6** The three top car manufacturers in Japan are Toyota, Honda and Nissan. While they have a global supply chain and a global market, they keep their headquarters and many research facilities in Japan.

KEY TERMS

comparative advantage an advantage a country has over another country because it can produce a particular type of product more efficiently

labour-intensive production industries and methods that are labour-intensive need a lot of workers

supply chain the system of people and things that are involved in getting a product from the place where it is made to the person who buys it

multinational corporations (MNCs) involving several different countries, or (of a business) producing and selling goods in several different countries

Countries that have these areas of specialisation benefit from this trade because other countries are not as capable of producing these goods. This is described in economics as **comparative advantage**. This means, compared to other countries, they have an advantage to be able to produce goods more efficiently and therefore at a lower cost. This lower cost enables them to compete more aggressively and cheaply in the world market, thus earning more money from their specialised products or services.

As an example, India has very low labour costs compared to other countries, such as Australia, which gives India an advantage in **labour-intensive production** (e.g. call centres, clothing manufacture). Therefore, it is usually more efficient and beneficial for India to export these services to other countries.

Sometimes countries make goods and services that involve the use of resources from multiple countries. This is referred to as a global **supply chain**. A supply chain is when a collection of suppliers (sometimes from different countries) is required to create one specific product for a company. Large **multinational corporations (MNCs)** make use of global supply chains. They have supply chains that span across national borders. They have offices and factories in different countries around the world to facilitate the purchase, production and distribution of goods and services that those MNCs then sell on the international market.

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◄ **Figure 7.7** From production in factories, to transportation, to orders from retailers, to shops all over the world

MAKING THINKING VISIBLE 7.2

Think, pair, share

Think about each stage represented in this supply chain diagram. Take a few minutes to identify and think about what happens at each stage and find a partner to talk about each stage. Do you identify similar stages?

Trade ultimately can allow for greater choice for consumers because trade increases the variety and availability of goods and services that can be imported. These are the products and services that cannot be produced as cheaply and/or efficiently by the domestic market. It is important to remember that some goods and services are imported not necessarily because they are cheaper, but because they are unique and have **brand value**.

Brand value means that consumers are willing to pay more for a certain brand because of the reputation of the manufacturer and the perceived prestige of ownership. We import Maserati from Italy, Chanel from France, Adidas and Nike from the United States (via their overseas factories in places like China and Vietnam) to name but a few.

KEY TERM

brand value the financial value of having customers who will pay more for a particular brand

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▲ **Figure 7.8** Some of the best-known brands are up in lights

Fair trade and free trade

Fair trade

Fair trade is about helping consumers make informed choices about where their purchases come from and who made them. In very complex global supply chains and with increasingly cheap prices, fair trade is about ensuring the products we do buy are made by people who receive a fair wage and who work in safe conditions where child labour is forbidden.

KEY TERM

fair trade a way of buying and selling products that makes certain that the people who produce the goods receive a fair price

Fairtrade Australia is an organisation that advocates for reasonable wages, safe working conditions and good environmental standards. Fairtrade Australia certifies certain products, including coffee, chocolate, tea and cotton. Fairtrade certification informs the consumer who ultimately purchases the goods that not only are they enjoying a product from overseas, but they are also supporting gender equality, eradication of child labour, strong environmental standards and safe conditions.

▲ **Figure 7.9** Commonly labelled Fairtrade products include coffee and chocolate

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Amazing but true …

Trade brings prices down. Trade **liberalising measures** increased more than 60 per cent in recent years, which has helped to bring down the prices of imports. This translates into spending less on our purchases.

Free trade

Free trade occurs when there are no restrictions on trade. Many countries impose trade restrictions such as **tariffs** or **quotas** on certain imports to protect their own industries. This is because by the government imposing a tariff (or a **tax**) on an imported good, it will make it more expensive and less desirable compared with the cheaper domestic version. Imposing a quota means only a limited number of these goods can be imported, which also makes the imported goods more expensive relative to what can be purchased locally.

Free trade and free trade agreements (FTAs) are designed to reduce the barriers (such as tariffs and quotas) between two or more countries, and therefore allow citizens of countries to obtain goods and services at a lower price.

FTAs exist between many countries. They can be bilateral (between two countries) or multilateral (between three or more countries).

Australia has entered into 11 FTAs, including:

- the AUSFTA (US–Australia Free Trade Agreement)
- ChAFTA (China–Australia Free Trade Agreement)
- SAFTA (Singapore–Australia Free Trade Agreement).

KEY TERMS

liberalising measures removing or softening barriers between trading nations

tariff a charge or list of charges either for services or on goods entering a country

quota a fixed, limited amount or number that is officially allowed

tax money paid to the government that is based on your income or the cost of goods or services you have bought

▼ **Figure 7.10** Free trade agreements are made between countries all over the world

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Amazing but true …

Fewer tariffs mean greater trade. Over the past 20 years, an average tariff reduction of 15 per cent helped to quadruple trade worldwide. That has not only helped to boost local economies but also to increase the global standards for health, security and environment, which in turn increase average life expectancy.

Disadvantages of free trade

While the advantages of free trade are immense, it is important to also recognise that free trade comes at a price.

Free trade can lead to the misuse of natural resources. Because Australia is rich in naturally occurring resources such as iron ore, many see Australia as a quarry for the world's steel. Do we rely too heavily on extraction of natural resources at the expense of developing other export industries in Australia? Are our environmental controls strong enough to protect our environment from the impact of mining?

KEY TERM

investment the act of putting money, effort, time and so on into something to make a profit or get an advantage, or the money, effort, time and so on used to do this

The extraction of natural resources from the ground can lead to environmental degradation and economic exploitation in Australia and in other countries. Some developing countries need **investment** in mining in their countries, and sometimes have lax environmental standards to entice MNCs to invest in their country. These natural resources (such as oil, rare earth and gas) are used in production processes.

However, many people are unaware of the negative impacts these mines can have on their local communities. These impacts include the displacement of people from their homes and land, water pollution, soil erosion and air pollution. These impacts are among the most severe effects of the mining industry.

▼ **Figure 7.11** Impacts of the mining industry

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▲ **Figure 7.12** Pollution from production processes

The negative impacts of increased international trade can also be seen in the increased transport of goods and services around the world. This is especially the case with shipping, as close to 90 per cent of the world's trade is carried out by sea. Much of the oil and gas used in Australia is imported by ship. The food we eat and goods we consume are not always produced or sourced locally but shipped from various locations around the world. More than 100 million container ships are moving around the world at any one time. Despite the large number of container ships moving around the world, accidents are relatively rare. However, they do happen and, when they do, they can have disastrous effects.

Amazing but true …

Over 90 per cent of Australia's iron ore and metallurgical coal production is exported, with a combined value of A$70 billion in 2015.

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Additional content
See the digital versions of this textbook to access an activity on global shipping routes.

ACTIVITY 7.1

Research task

Read the article 'Christmas Island oil spill: time to value natural treasures, not just trade' on *The Conversation* website.

▲ **Figure 7.13** A coconut crab on a beach on Christmas Island

Questions

1. Outline why David Attenborough described Christmas Island as one of the greatest wildlife spectacles on Earth. In your answer, describe three marine species found around Christmas Island and Flying Fish Cove.
2. The Panamanian cargo ship MV *Tycoon* shipwrecked at Flying Fish Cove. What pollutants spilled from the ship and what impact did this have on the unique marine life?
3. The MV *Tycoon* incident is not the only shipping accident described in the article. Outline two other accidents.

KEY TERM

economic growth an increase in the economy of a country or an area, especially of the value of goods and services the country or area produces

Australia as a trading nation

According to the Department of Foreign Affairs and Trade (DFAT), one in five jobs in Australia relies on exports in mining and farming. Australia has abundant natural resources and is a leader in the global mining industry, exporting many natural resources, including bauxite, iron and zinc ore, nickel and gold. The strength of our mining industry has seen Australia become one of the world leaders in the development and manufacture of mining equipment. However, Australia has recognised its dependence on mining for export and therefore is continuing to grow and become competitive in the world market for other key exports such as education and tourism.

Australia as a nation supports free trade and subsequently has entered into many free trade agreements. These agreements are seen to strengthen ties between nations globally, improve investment in Australia and improve **economic growth** and employment opportunities in Australia.

Australia's major trading partners

Top five export markets: China, Japan, United States, Republic of Korea and India

Top five exports: iron ores and concentrates (A$49 060 million), coal (A$37 031 million), education-related travel services (A$18 801 million), natural gas (A$16 456 million) and personal travel (excluding education) (A$15 943 million)

Total value of imports: A$352.7 billion

Source: DFAT website

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ACTIVITY 7.2

Interactive quiz

Visit the DFAT 'Trade through Time' website and complete the online quiz.

▲ **Figure 7.14** Coal is one of Australia's biggest exports

Trade in the Asia–Pacific

Traditionally, Australia has carried out most of its trade with Britain and the United States. However, over the past decades, and with the opening up of new markets in our region, Australia has expanded its trade to include many Asian nations, such as Japan, China, Taiwan and South Korea. Given our geographical position in the world, the emphasis of Australia's trade has shifted from the United Kingdom at Federation (1901) to the Asia–Pacific region in the 2000s.

Asia is an important trade partner, not only because Australia is located in the Asia–Pacific region but also because Asia exerts enormous influence globally and is one of the most populous regions in the world. It is home to two-thirds of the world's population and is well on the way to becoming both the largest producer and consumer of goods and services in the world.

Therefore, Australia's trade with countries in the Asia–Pacific region is more important than ever. It is so important that four out of five of Australia's major trading partners are located in the Asia–Pacific region. Much of Australia's export growth has been built on the country's abundant natural resources. The huge demand for raw materials, such as iron ore, by the rapidly growing economies of Asia has helped to drive Australia's export growth.

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▲ **Figure 7.15** Four out of five of Australia's major trading partners are located in the Asia–Pacific region

Global trade

Globalisation can be defined as the increasing integration of economies across borders. Globalisation is behind the growth in free trade and free trade agreements. Free trade and globalisation are seen to assist economic development, improve living standards and promote harmonisation between countries. Trade forces countries to communicate and agree to the mutual benefits of trade for their respective countries.

Global trade has become so important to the economic performance of many countries that the World Trade Organization (WTO) was established in 1995 to assist with the following:

- Liberalise world trade (promote free trade as much as possible)
- Promote economic growth and stability
- Lay down the rules for world trade.

The trade rules developed by the WTO are based on agreements between member nations. The WTO provides a forum for negotiations and disagreements around trade to be resolved. WTO trade rules are only enforceable on the member countries. The WTO currently has 153 member nations, including Australia.

Amazing but true …

Did you know there was a trade war known as the Chicken Wars? In the early 1960s, France and Germany imposed high tariffs on American chickens after demand for European chickens fell with people preferring cheaper American chickens. The United States retaliated by imposing higher tariffs on several commodities, including French brandy and Volkswagen vehicles. It even threatened to cut NATO troops to Europe. However, France and Germany didn't buckle under pressure, even though consumers from both sides of the Atlantic Ocean were the financial losers.

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ACTIVITY 7.3

Graphic organiser task: brands and products

Copy and complete this table or fill it in within the Interactive Textbook. Thinking about the brands and products you like from overseas, write a list of your favourite brands in the first column. In the second column, write the name of the country where this brand comes from. In the third column, write why you like this brand. Share and discuss your selections with a partner.

Product/brand	Country of origin	Why do you value this brand?

END-OF-SECTION REVIEW 7.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Explain the following terms:
   - a comparative advantage
   - b supply chain
   - c free trade
   - d fair trade.

2 Explain the difference between imports and exports.

3 What is a possible disadvantage of free trade?

4 Where are goods made? Find the country of manufacture for the following products you will find at school:
   - a school shoes
   - b exercise book
   - c lunch box
   - d watch
   - e shirt
   - f jumper
   - g computer
   - h phone.

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Digital quiz
Please see the Interactive Textbook to access digital activities

Interpret

5 Using the internet, investigate the major exports and imports for the following five countries:
   a Peru
   b South Africa
   c Netherlands
   d Thailand
   e Switzerland.

Argue

6 Go to 'What is fair trade' on the Fairtrade Australia website and write a report on the following four fair trade products: chocolate, coffee, tea and cotton. Your report should include:
   - the name of the product
   - where the product is farmed
   - how fair trade helps farmers
   - where you can buy your chosen fair-trade products.

▲ **Figure 7.16** Fair-trade coffee

Extension

Read the article 'Shipping in the Great Barrier Reef: the miners' highway' on *The Conversation* website.

1 Questions
   a According to the traffic report, why do you think the Great Barrier Reef is referred to as the miner's highway? How many ships are estimated to travel through the Great Barrier Reef by 2032?
   b Identify the three main types of incidents that occur due to shipping in the Great Barrier Reef.
   c Research and write a report on the MV *Shen Neng I* environmental accident that occurred on the Great Barrier Reef in April 2010.

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7.2 Economic performance and how Australia's economy is performing

FOCUS QUESTION

How is the performance of an economy judged?

Who makes up our economy: the role of economic agents

In an economy, there are key participants or **economic agents** who are the decision-makers influencing the economy by buying, selling and producing goods and services. These economic agents include consumers or households, businesses and the government. These agents together create demand and supply for goods and services.

The key economic agents in an economy include:

- **Households and consumers** – These are individuals like you and households like yours, who purchase goods and services in the economy and provide labour to businesses. In other words, households and individuals consume, work and save. They consume to satisfy their necessities, they save and borrow for greater future consumption, and they work to be able to earn and ultimately consume. They have a dual role in the economy. On one side, they are consumers, who demand goods and services; and on the other, they own the **means of production** (labour) through which the goods and services are produced.
- **Businesses** – These are organisations that sell goods and services with the goal to make money or profit. Businesses (or firms) use factors of production (labour) to produce goods and services, creating value and wealth. They require labour from individuals in return for a salary or wages. They can offer goods and services to individuals, households, other businesses, the governments or a combination of these.
- **Government** – Governments provide most of the rules as to how other economic agents should interact. They offer goods and services (mostly public goods and services such as roads or national security), yet governments also demand goods from businesses and labour from households and individuals. The government taxes individuals and businesses based on their income and revenue.

The government can place limits on or prohibit the consumption of certain goods, such as illicit drugs. The government can also put tariffs on imports or provide subsidies for production of certain goods and services. The government also has the ability to redistribute wealth through social services such as welfare payments and via payments to subsidise education, health and poverty programs.

KEY TERMS

economic agent a person, company or organisation that has an influence on the economy by producing, buying or selling

means or factors of production something that is needed in order to make a particular product (e.g. labour, land, materials)

▼ **Figure 7.17** Households and consumers are key economic agents

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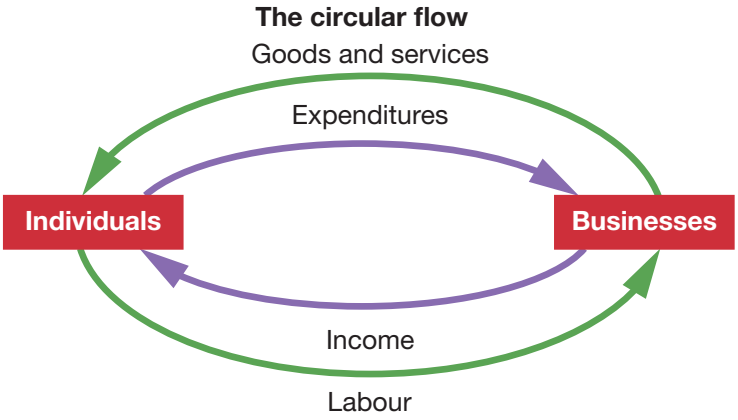

▲ **Figure 7.18** Model of a basic economic circular flow diagram illustrating the interdependence of each economic agent in our economy. Individuals provide labour to businesses, and businesses provide goods and services to individuals.

KEY TERM

gross domestic product (GDP) the total value of goods and services produced by a country in one year

Strong and sustainable economic growth: GDP as an indicator of economic performance

What is economic growth?

Economic growth refers to an increase in the size of a country's economy over time. The size of a country's economy is traditionally measured by the total production of goods and services in that economy, which is called the **gross domestic product (GDP)**.

GDP is measured each quarter (every three months) by the Australian Bureau of Statistics (ABS). Each quarter is added together to determine the annual GDP.

▼ **Figure 7.19** Gross domestic product (GDP) is a common indicator used to judge the economic performance of a country

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What is strong growth?

The target annual range set by the government as strong economic growth is a rate of around 3 per cent per annum (per year). Periods of growth higher than this can cause inflation (price rises). Periods of economic decline, defined as a reduction in GDP for six months or two consecutive quarters, would tend to indicate a **recession**.

What is sustainable growth?

Sustainable growth refers to growth that does not lead to overuse of our nation's resources and does not cause unnecessary increase in prices or inflation due to too much demand by economic agents.

Sustainable growth means that the nation has the right balance between resources used for current as opposed to future uses.

How is Australia performing?

Australia's GDP growth target is somewhere around 3 per cent per annum. It is important that the economy continues to grow, but not so excessively that it causes problems such as higher prices.

According to the 2019–20 budget documents, Australia's economy is forecast to grow by 2.75 per cent in 2019–20 and 2020–21.

Economic growth is set at a certain percentage to ensure living standards and welfare of Australians continue to grow. This means people should be able to find employment and therefore receive some form of income. However, economic growth needs to be higher than the population growth. If our rate of economic growth falls below our rate of population increase, it means the economy is not growing. For example, if the population growth rate is 1.5 per cent, the economic growth rate needs to be higher than this rate to ensure our economy is still growing and that we do not end up worse off.

KEY TERMS

recession a period when the economy of a country is not successful and conditions for business are bad

sustainable growth economic development that attempts to satisfy the needs of humans but in a manner that sustains natural resources and the environment for future generations

▼ **Figure 7.20** Australia's economy has been forecast to grow in the coming years

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KEY TERMS

material living standards material living standards include tangible goods and services (e.g. cars, health cover)

non-material living standards can be hard to measure, since they are made up of intangible things (e.g. environment, freedom of speech, free elections, crime rates, time off work)

Economic growth also improves living standards and the welfare of Australians. Higher income levels enable people to access more goods and services and thus improve their **material living standards**. Economic growth can also improve our **non-material living standards** in areas such as general happiness and interconnectedness with the community and workplace, as well as self-esteem and mental wellbeing.

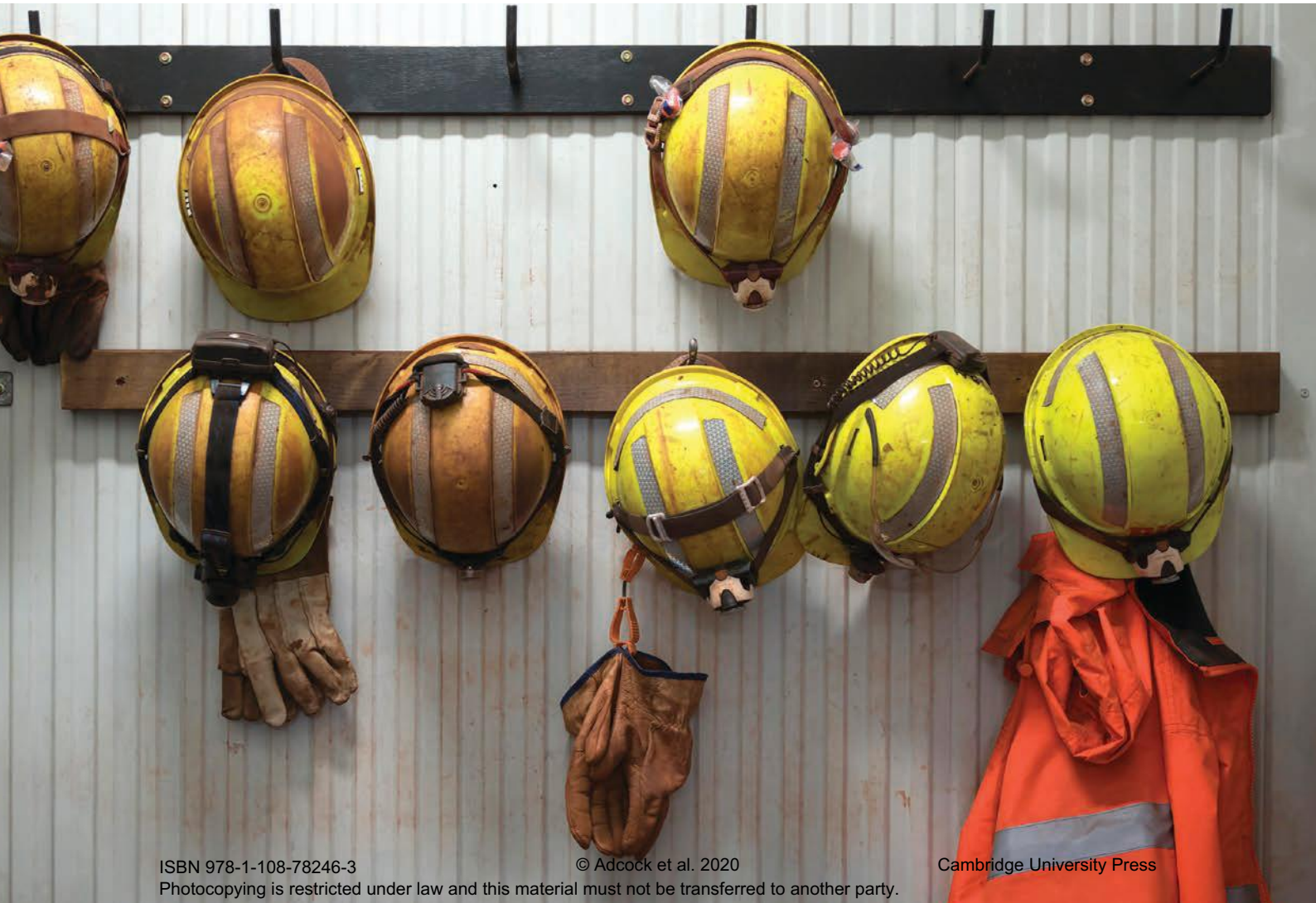
Most nations, like Australia, pursue economic growth as their primary means by which living standards can be improved. Economic growth tends to be associated with greater employment opportunities. Growth in production typically means there has been a growth in industries and businesses that employ people, creating more jobs and allowing households and individuals to purchase goods and services due to an increase in income.

GDP as a measure of economic performance has limitations

GDP does not consider how output contributes to the quality of people's lives. It simply measures how much output a country produces. Therefore, an increase in the GDP on its own does not mean a better life for everyone, particularly in countries that are already wealthy. It doesn't reflect many inequalities in an economy, including material wellbeing differences between people within an economy. It does not reflect the value people place on:

- health
- free time
- low crime rates
- good community relationships.

▼ **Figure 7.21** Employment rates and the ability for people to earn an income are key factors that contribute to overall economic performance



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▲ **Figure 7.22** Work is important for both material and non-material living standards

Another important drawback of GDP as a measure of economic performance is that GDP only measures the output produced and sold in legal markets and does not include productive activities that do not have a market transaction, such as:

- household production – the costs of caring for children and the elderly in home
- volunteer work
- the impact of pollution and environmental degradation in the pursuit of economic growth.

Some people mistakenly think a higher income (and larger GDP) is linked with a higher quality of life and more happiness. But arguably, beyond a certain point, non-income factors (such as the equity of income distribution and access to education and healthcare) are more closely linked to a happier, healthier society.

▼ **Figure 7.23** The work of lifeguard and CFA volunteers is not included in GDP

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▲ **Figure 7.24** GDP is calculated quarterly by the ABS

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 7.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 The economy is made up of three key economic agents. Identify and explain the role of each of these agents.

2 What is the main measure of economic growth? What is meant by sustainable growth?

Interpret

3 How does economic growth improve living standards?

Argue

4 Explain three limitations of GDP as a measure of economic growth.

Extension

1 Think about how we measure growth. Is economic growth the best measure of a successful economy? Find a partner and share your thoughts with each other.

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7.3 The link between economic performance and living standards

FOCUS QUESTION

What is the connection between economic performance and standards of living?

What are living standards?

The welfare of people in a country is made up of both material and non-material living standards.

Material living standards (MLS) include the following factors:

- promotion of consumption and materialism
- access to good and services.

Non-material living standards (NMLS) include the following factors:

- environmental quality
- physical and mental health
- life expectancy
- crime rates
- **literacy rates** (also material).

The difference between material and non-material living standards

MLS refer to our access to physical goods and services. These are things we can buy and consume, such as the house we live in, the food we eat and the cars we drive. They are our physical possessions. Services include going to the hairdressers or visiting a dentist.

KEY TERM

literacy rates the percentage of people who are able to read and write

NMLS refer to more intangible items, such as our quality of life and things we cannot buy. These can include mental wellbeing; connections between family, friends and the community; self-esteem; high life expectancy; and low crime rates.

Some MLS and NMLS cross over, such as literacy rates. High literacy levels, achieved through access to teachers and schools, can provide us with greater job opportunities and access to income. Low levels of literacy can lead to low levels of self-esteem because of difficulties with reading and writing and embarrassment at lacking the necessary skills to undertake certain jobs.

▼ **Figure 7.25** Non-material living standards include enjoying holidays and the great outdoors

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Economic performance and living standards

Economic performance is generally measured by GDP. While GDP is the most widely used measure of a country's economic activity and growth, GDP per capita is a better indicator of a nation's living standards because it adjusts for population.

GDP per capita

A country's gross domestic product (GDP) per person (also referred to as per capita) is obtained by dividing a country's GDP for a particular period by its average population for the year. It is a measure used to compare the **standard of living** between countries over time. It is an important indicator of economic performance and is useful when making cross-country comparisons of average living standards and economic wellbeing. However, GDP per capita is limited in that it does not measure personal income and the distribution of income or wealth across a population.

KEY TERM

standard of living the amount of money and comfort people have in a particular society

Beyond GDP: alternative indicators of economic performance

In addition to GDP and GDP per capita, there are many other measures that help us to understand the living standards in a country. Many of these help us to understand the development of a country as well as its material living standards and non-material living standards.

Some of these indicators include:

- **Human Development Index (HDI):** The HDI was developed to emphasise that people and their capabilities should be a criterium for assessing the development of a country, not solely the GDP. The HDI is a measure of key aspects that are considered important, including a long and healthy life, being knowledgeable and having a decent standard of living.
- **World Happiness Index (WHI):** The WHI is a measure of wellbeing and is also an alternative to the GDP and GDP per capita. It measures aspects of wellbeing seen as important, including ecological footprint, inequality of outcomes, life expectancy and social support.
- **The Genuine Progress Indicator (GPI):** The Genuine Progress Indicator (GPI) is used to measure the economic growth of a country. It is often considered an alternative to GDP. The GPI indicator takes everything the GDP uses into account but adds other figures that represent the cost of the negative effects related to economic activity, such as the cost of crime, cost of ozone depletion and cost of resource depletion. The GPI looks at the positive and negative results of economic growth to examine whether or not it has benefited people overall.

▲ **Figure 7.26** Happiness is not a measure of GDP

▼ **Figure 7.27** Happiness relates to recreation time, including the time we spend with family and friends

▼ **Figure 7.28** Progress can be measured in how we treat the environment and the way we produce energy

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Amazing but true ...

In 1972, Bhutan's then-king, Jigme Singye Wangchuck, declared gross domestic product was not a meaningful measurement for wellbeing, and said the country should instead look at gross national happiness (GNH).

▲ **Figure 7.29** Tiger's Nest Monastery in Bhutan

END-OF-SECTION REVIEW 7.3

Review questions

Answer these questions on paper or in the Interactive Textbook.

Digital quiz
Please see the Interactive Textbook to access digital activities

Recall

1 Explain the difference between material living standards and non-material living standards. Use examples in your answer.

2 What is the difference between GDP and GDP per capita?

Interpret

3 GDP has its limitations as a measure of economic growth. Choose and research one of the three alternative measures of economic growth discussed above: HDI, WHI or GPI. Write a paragraph explaining why your chosen measure is the best measure of economic growth.

Argue

4 You have an opportunity to present a speech to parliament outlining the problems of only using GDP as a measure of economic growth. Write a draft of this speech to present to your class. Your speech should outline the arguments for and against GDP as a measure of economic growth. Your speech should be 2–3 minutes in length.

Extension

1 Think about alternative measures of economic growth to GDP. Which is the best measure? Find a partner and share your thoughts with each other.

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Research tasks

Research task 1: DFAT

Go to the Department of Foreign Affairs and Trade (DFAT) website, select the 'Countries and regions' tab, then choose 'Trade and economic fact sheets'. From the list of fact sheets, choose a country you are interested in learning about and create a presentation based on the trade and economy between Australia and that country.

Your presentation should include:

- where that country is located in the world
- three key facts about that country
- the major goods and services exported from Australia to that country
- the major goods and services imported by Australia from that country
- that country's principal export destinations
- that country's principal import sources.

Research task 2: Maritime disasters

There have been a number of environmental maritime disasters due to shipping and offshore oil drilling. Write a report on any two of the following maritime disasters.

Your report should include where the disaster happened, the details of the disaster, why the disaster occurred and what was the environmental impact of the disaster.

- **International:**
  - *Deepwater Horizon* – Gulf of Mexico
  - *Exxon Valdez* – Prince William Sound, Alaska
- **Australia:**
  - *Shen Neng 1* – Douglas Shoal, Queensland
  - *Pacific Adventurer* – Cape Moreton, Queensland.

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3 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about Australia's economy

▼ **Figure 7.30** Then-US President Barack Obama inspects the environmental damage of the *Deepwater Horizon* oil spill in Louisiana, May 2010

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CHAPTER 8

Money matters

Setting the scene: Australia's first currency – the holey dollar

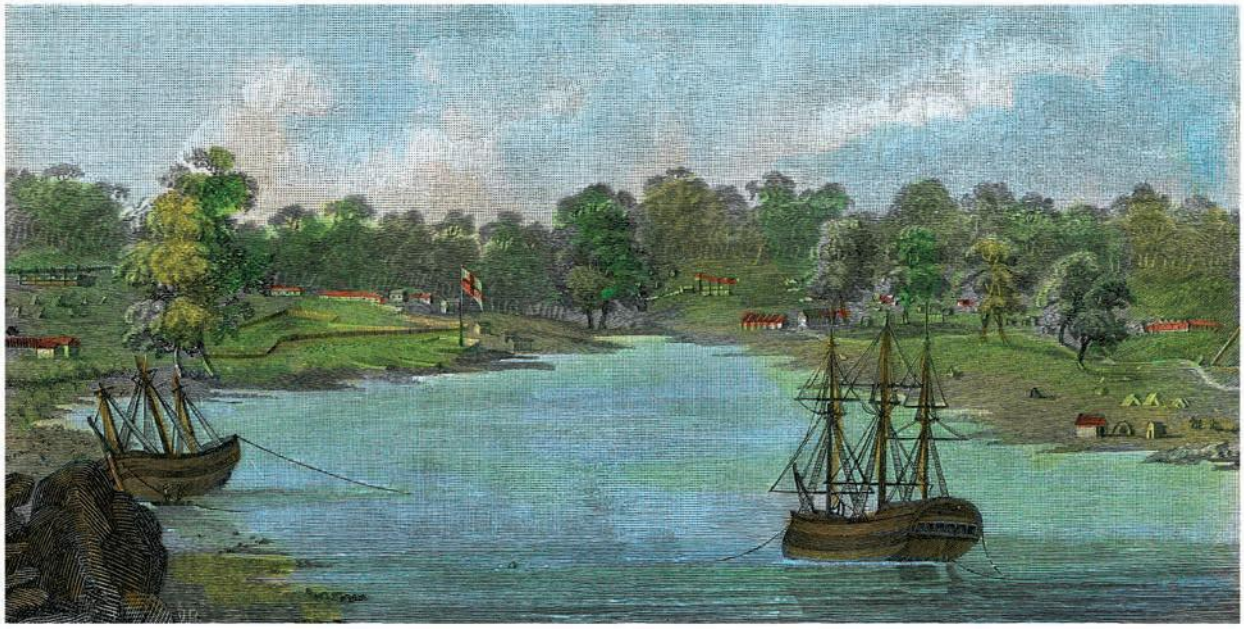
When the colony of New South Wales was established, no plans were made for a form of currency that people could use to trade with. There were no banks for some time. So, early on, the colonies relied on barter – the exchange of produce, goods and services – and other makeshift currencies such as rum (as all spirits were then called).

Around this time, the Spanish dollar was a major international currency. Coins from a range of other countries were also used, such as Dutch guilders and ducats, Indian mohurs and rupees, and Portuguese johannas. Much of this coin left the colony as a result of trade with visiting merchant ships. Governor Lachlan Macquarie needed to address the shortage of coin and came up with the idea of a holey dollar.

He imported 40 000 Spanish reales in 1812 and had convicted forger William Henshall cut the centre out of each, to double the number of available coins. The coins were counter-stamped so they could not be re-exported. By having the centres cut out and the coins stamped, Macquarie distinguished these coins as belonging to the colony of New South Wales and prevented them from going straight out again. In doing so, he created the first currency minted in Australia.

The outer ring became known as the 'holey dollar', and the centre was called the 'dump'. Macquarie set the value of the holey dollar at five shillings, with 15 pence for the dump. These coins went into circulation in 1814.

'Holey dollars speak eloquently of the creative and improvisatory attempts to create an orderly administration in colonial Australia,' said National Museum Director Andrew Sayers. 'The holey dollar we have acquired for the National Museum is a finely preserved example of this iconic object from the era of Macquarie'. It is one of only 300 holey dollars remaining in the world.



▲ **Figure 8.1** Sydney Cove, circa 1788. The Colony of New South Wales was the first British settlement in Australia.

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▲ **Figure 8.2** Governor Lachlan Macquarie

▲ **Figure 8.3** An example of one of the original Spanish reales imported by Macquarie. It featured King Charles III of Spain on the currency.

▲ **Figure 8.4** Front and back views of the holey dollar and the dump

MAKING THINKING VISIBLE 8.1

Think, puzzle, explore

In groups of 3–4 students, share ideas and questions in response to the following prompts.

1. What do you know about this topic?
   - Write a list of things you know about how money has been used in Australia.
2. What questions do you have?
   - Create a list of questions that you have about how money has been used in Australia from early settlement to today.
3. What does this topic make you want to explore?
   - Create a list of topics about money that you would like to explore further after reading this story.

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Chapter overview

Introduction

Regardless of whether you are 15 years old or 50 years old, money matters. When we have money, we can use it to buy things we like. We can also invest to make more money. But with every investment, regardless of the type, you must weigh up the risk and rewards. Will the gain be worth the pain? Understanding the relationship between risk and reward underpins your money decisions and is key to developing a strong personal investment philosophy. Whether investing overseas or domestically, whether you are investing in Bitcoin, shares or property, understanding your risk profile can help you to protect your money and make money matter.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What is the purpose of money?
- What is the role of banks, credit unions or building societies?
- What are some different types of saving and investment?
- What are good debts and bad debts?
- What are the risks and rewards of investing?
- What are scams?
- What are some of the risks and rewards of the Australian and global financial landscape?

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8.1 What is money?

FOCUS QUESTION

What is the purpose of money?

Money is a means of exchange. It is also a store of value and a measure of wealth. Businesses sell us things to get money and make a profit, and we work to earn money otherwise known as a salary or wages. But money itself has no intrinsic value apart from the value of the paper it is printed on. However, its value is secured by the country that issues the money. Globally, various countries have different values for money bearing unique names. **Fiat money** is a term used to describe money declared by a government to be legal tender. However, this money is standardised from one country to another via exchange rates to ease foreign trade.

▲ **Figure 8.5** Some of the different currencies (monies) around the world

Money is referred to by many different names, such as wages, salary, sales, expenses, revenues, rent, income, profit, price of goods and services, spending and **savings**, and wealth. These money terms are central to our economy and its operation. Interestingly, physical notes and coins account for only a small proportion of the money in the world. According to *Business Insider*, there is currently about US$5 trillion of cash and coins in the world. This amount of money increases to in excess of US$80 trillion when other accessible money in bank accounts is included. This amount further increases when **Bitcoin** and other **cryptocurrencies** are included. The total amount of money under such classification could be as high as one quadrillion US dollars.

Amazing but true …

Mary Reiby, who appears on the Australian $20 note, was a convict sentenced to seven years transportation when she was 13 years old for stealing a horse. However, she grew up to become an outstanding businesswoman.

▲ **Figure 8.6** Mary Reiby on the Australian $20 note

Currencies of the world

A currency is simply defined as a system of money in general use in a country or region. Every country or region has its own currency, made up of its own banknotes and coins.

When we travel to other countries, like Japan or to regions of Europe, we must exchange our currency for the currency used in the place we are visiting. If you go to Europe, you will exchange Australian dollars into Euros; if you go to Japan, you will exchange Australian dollars for yen.

Just like when we are travelling, when countries trade, they must also agree on the currency in which the transaction will take place. Mostly, if foreigners want to

KEY TERMS

money coins or banknotes that are used to buy things, or an amount of these that a person has

fiat money legal tender whose value is backed by the government that issued it

savings the money you keep, especially in a bank or other financial organisation

Bitcoin a type of cryptocurrency (see **cryptocurrency**)

cryptocurrency a digital currency produced by a public network, rather than any government, that uses cryptography to make sure payments are sent and received safely

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KEY TERM

foreign reserve currency a particular currency that is held by many countries that use it to make payments to other countries. The US dollar is effectively the reserve currency of the world.

invest in Australia and buy exports, they will exchange their currency for the Australian dollar and pay in our currency, and vice versa.

Foreign exchange rates help to enable the changing of one currency into another currency. It is, in effect, the amount of one currency you can exchange for another.

When travelling, the exchange rate is advertised and determined by how much money, or the amount of a foreign currency, that you can buy with one US dollar (USD). The US dollar stands out in particular as it enjoys status as the world's **foreign reserve currency**. For this reason, many international transactions are completed in US dollars. As a result, the US dollar is the most commonly traded and used currency in the world.

▲ **Figure 8.7** A foreign exchange board showing the value of various currencies

Amazing but true …

The British pound is the world's oldest continuing currency, dating back to Anglo-Saxon times.

▲ **Figure 8.8** The world's oldest continuing currency, the British pound

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The US dollar is also considered a **hard currency**. This term refers to money issued by a country that is widely accepted around the world because the nation that issues it is economically and politically stable. Hard currencies are widely accepted around the world as a form of payment for goods and services and may be preferred over the domestic currency.

Apart from the US dollar, the most traded currencies in the world include the euro (EUR), Japanese yen (JPY), Great British pound (GBP), Swiss franc (CHF), Canadian dollar (CAD) and the Australian dollar (AUD). This is because these currencies have the confidence of investors and businesses as they are not generally prone to dramatic **depreciation** or **appreciation** in value. Moreover, in many developing nations, citizens will ask to trade in a hard currency because their nation's currency is prone to fluctuations in value. This helps to protect their wealth.

Amazing but true …

Tulips were once a form of currency in their own right! In 1633, in the Netherlands, actual properties were sold for a handful of tulip bulbs.

▲ **Figure 8.9** Did you know that tulips were once used as a form of currency?

KEY TERMS

hard currency money that is valuable and can be exchanged easily because it comes from a powerful country

depreciation the process of losing value

appreciation increase in price, value and so on

central bank a bank that provides services to a national government, puts the official financial plans of that government into operation and controls the amount of money in the economy

decentralised used to describe organisations or their activities that are not controlled from one central place but happen in many different places

cryptocurrency exchanges a place where digital currencies are bought and sold

stock exchange a place where shares in companies are bought and sold, or the organisation of people whose job is to do this buying or selling

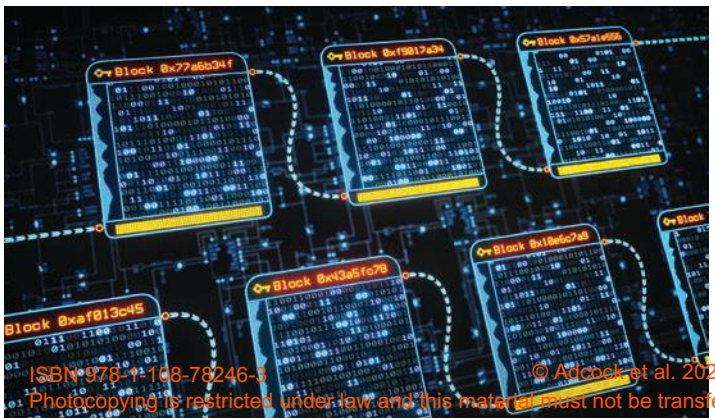
Cryptocurrencies

Cryptocurrencies are a digital currency that uses encryption techniques for security. These digital currencies are not issued by any **central bank**; rather, cryptocurrencies exist in digital form. Cryptocurrencies are transferred between peers, and transactions are recorded on a digital public ledger called a blockchain. All transactions are encrypted using cryptography, and thus the name cryptocurrency.

The idea behind a cryptocurrency is it is **decentralised**, meaning it is controlled by users and computer algorithms rather than a central bank. Cryptocurrencies are traded through online **cryptocurrency exchanges**, which operate in a similar manner to **stock exchanges**.

There are many cryptocurrencies, including the well-known Bitcoin (BTC) as well as Ether (ETH), Ripple (XRP) and Litecoin (LTC).

▼ **Figure 8.10** Bitcoin is a famous example of a cryptocurrency



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Amazing but true …

A Hungarian programmer made the first Bitcoin transaction in 2010 when he purchased two pizzas paying 10 000 BTC. Today, the value of that transaction would be approximately $180 million. Pretty expensive pizzas!

MAKING THINKING VISIBLE 8.2

Think, pair, share

What are some problems with cryptocurrency? Could they ever be a fiat currency?

Take a few minutes to think about the advantages and disadvantages of cryptocurrency and then find a partner with whom you can share and discuss your thoughts.

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 8.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Define the following terms:
   a fiat money
   b currency
   c hard currency
   d reserve currency.

Interpret

2 The ISO (International Organization for Standardization) codes are the three-letter alphabetic codes that represent various currencies used around the world. Research the name and three-letter ISO code for the following countries' currencies:
   a India
   b South Africa
   c Indonesia
   d Cambodia
   e Spain
   f Mexico
   g Brazil
   h China
   i UAE.

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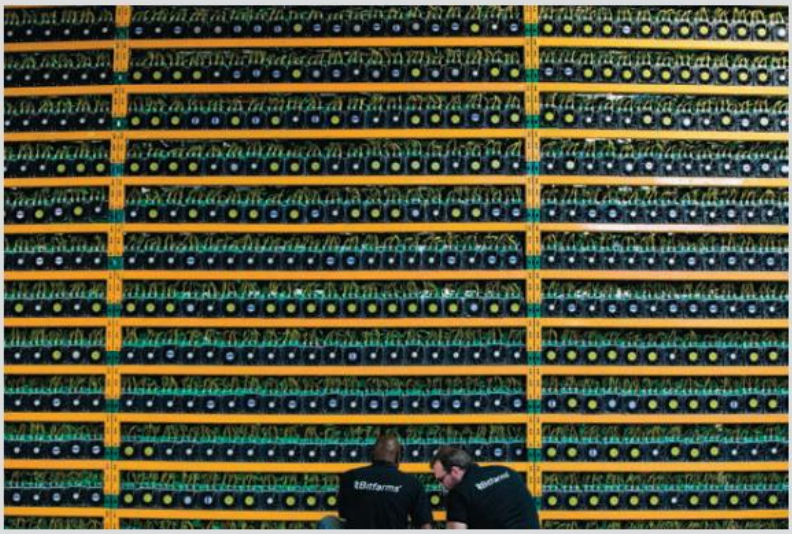
3 In August 2019, one Bitcoin had a value of A$14 808.15. Find out the current value of one Bitcoin in:

a GBP
b USD
c EURO
d CAD
e NZD
f JPY
g YUAN.



▲ **Figure 8.11** Two technicians inspect Bitcon mining in Bitfarms in Canada

Argue

4 Read the article 'The lowdown on Libra: what consumers need to know about Facebook's new cryptocurrency' on *The Conversation* website and answer the following questions:

a What is Libra?
b How is Libra different from Bitcoin?
c Why are banks and financial regulators worried about cryptocurrencies, particularly Libra?
d What is one benefit to consumers if they use Libra?
e What are the risks of using Libra?

Extension

1 The US dollar is a hard currency and the most traded currency. Research how much you will receive in each of the following currencies for one US dollar and one Australian dollar. Copy and complete this table, or fill it in within the Interactive Textbook.

Currency	1 USD	1 AUD	Difference
NZD			
EURO			
GBP			
CHF			
JPY			
CAD			

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8.2 Role of banks, credit unions and building societies

FOCUS QUESTION

Where is money held and why?

Most of our money is held by banks like the ANZ (Australia and New Zealand Banking Group), Westpac, CBA (Commonwealth Bank of Australia) and NAB (National Australia Bank), as well as credit unions and building societies. The key difference between the banks and the credit unions and building societies is that profits from building societies and credit unions are reinvested for the benefit of the members, whereas banks' profits are only for the benefit of their **shareholders**.

KEY TERM

shareholder a person who owns shares in a company and therefore gets part of the company's profits and the right to vote on how the company is controlled

We use banks and credit unions or building societies because we do not necessarily spend all money that comes our way. Many people choose to save money, and we do this by depositing our money in banks, credit unions and building societies, more technically known as authorised deposit-taking institutions (ADIs). ADIs are banks, building societies and credit unions authorised by the government to conduct banking business in Australia. This government authority that oversees banks is called APRA (Australian Prudential Regulation Authority).

The Reserve Bank of Australia (RBA) and the Royal Australian Mint are responsible for producing Australia's notes and coins respectively. The Royal Australian Mint is in Canberra and is the sole producer of all circulating coins

▲ **Figure 8.12** Logos of Australia's 'big four' banks

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in Australia. Note Printing Australia (as part of the RBA) is in Craigieburn in Victoria and produces all of Australia's banknotes. Banknotes in Australia represent around 95 per cent of Australian currency by value. Under established agreements, commercial banks purchase banknotes from the Reserve Bank as required to meet demand from their customers. Hence, growth in the value of banknotes in circulation represents growth in the demand for cash.

▲ **Figure 8.13** The Reserve Bank of Australia manages the amount of physical cash that circulates

END-OF-SECTION REVIEW 8.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Go online and find the names of five banks, three credit unions and three building societies.

Interpret

2 What is an ADI? Who is the body responsible for overseeing ADIs? Go to their website and find out three more facts about APRA.

Argue

3 Go to the Reserve Bank of Australia website and find the Australia's banknotes' section. Use the fact sheet to answer the following questions:
   a How many denominations of banknotes exist in Australia? List them.
   b What value of banknotes are currently in issue?
   c Of what material are Australian banknotes made? Explain the process of making a banknote.
   d Outline security measures used when producing banknotes to reduce fraud.

Extension

1 Do you think we still need cash? Do you and your family use cash or a debit card for everyday transactions? Discuss your experiences and thoughts with a partner.

Digital quiz
Please see the Interactive Textbook to access digital activities

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8.3 Savings and investment: types of investment

FOCUS QUESTION

What is the difference between saving and investing?

The terms saving and investing are often used interchangeably, but there is a difference.

Saving is setting aside money you don't spend now for emergencies or for a future purchase. Many people save for a holiday. Students might save for a car. When you save money and deposit it into a bank, the bank will pay you **interest** based on the amount of money in your account. This interest is money the bank pays you so that they can use your money to fund loans for other people.

Investing is buying an asset with the expectation that your investment will make money for you. The goal of investing is to make money, so it is natural to pursue investments that offer the greatest **returns**. Often the return can be via **capital improvement** or via an income stream from the investment.

KEY TERMS

interest money that is charged by a bank or other financial organisation for borrowing money

investing to put money, effort, time and so on into something to make a profit or get an advantage

return to give a particular amount of profit

capital improvement an addition or change made to land, equipment or a building that increases its value or the profit it produces

dividends part of the profit of a company that is paid to the people who own shares in it

Amazing but true ...

Just 15 per cent of 18–24-year-olds own shares.

Example

When you choose to invest and buy shares, you are choosing to own a piece of a company, which entitles you to potential profit on your investment. There can be capital appreciation (or capital gains), which means an increase in the value of the share (e.g. $1 to $1.25). There may also be **dividends**, which are regular income from shares. A dividend is a portion of a company's profit that it decides to pay out to shareholders, in return for their investment. These are two ways to make a profit on investments, but it is important to remember not all shares will appreciate in value and not all companies will pay a dividend. A company may not pay a dividend at all if it has failed to make a profit or has chosen to reinvest profit back into the business.

◄ **Figure 8.14** Traditional piggy bank savings have never gone out of fashion

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END-OF-SECTION REVIEW 8.3

Digital quiz
Please see the Interactive Textbook to access digital activities

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What is the difference between saving and investing?

Interpret

2 Explain the difference between the following ways of making money from investing in shares:
   a capital gain
   b dividend.

Argue

3 Warren Buffet has been referred to as the 'Oracle of Omaha' because of his immense wealth developed through adherence to his investing philosophies. He is also famous for being chairman and the largest shareholder of Berkshire Hathaway (an investment company) whose A class shares have produced an overall gain of more than 2 000 000 per cent from 1964 until now. Write a brief biography on Warren Buffet or another famous investor explaining their investment philosophy and how they came to be successful. Other famous investors could include John Templeton, George Soros, Thomas Rowe Price Junior, Benjamin Graham or Carl Icahn.

▲ **Figure 8.15** Famous American investor Warren Buffet

Extension

1 Go to the Royal Australian Mint website and find the fact sheet 'Australian coins – a fascinating history'. Using the fact sheet, create a timeline of coins used in Australia from 1813, when the holey dollar and dump first appeared.
2 Research the annual *Forbes* magazine's Midas List. Prepare a short report on the purpose of the list and describe the rise of female investors each year.

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8.4 Debt and credit: good debt and bad debt

FOCUS QUESTION

What is good debt and what is bad debt?

Credit is money you borrow from a financial institution, such as a bank or credit union, to spend the way you want. You need to repay this debt to the credit provider, usually with extra costs on top of the amount you borrowed. These extra costs can be in the form of annual fees, but most institutions also charge very high rates of interest for the convenience of using the bank's money at call (at call means available immediately).

KEY TERMS

credit a method of paying for goods or services at a later time, usually paying interest as well as the original money

credit limit the largest amount of money that a bank allows you to spend using a credit card

Borrowing is not necessarily a bad thing, as it allows you to achieve some goals such as buying a car, buying new clothes and buying household items. But it is important to remember that with all loans and credit come fees, charges and interest, which can make borrowing very expensive.

According to ASIC's MoneySmart website, there are a number of types of credit you can choose from, but the important aspect to consider is that they all have pitfalls.

Credit cards: A credit card allows you to borrow money from a credit provider to buy something without using your cash or savings. You have a limited amount of money you can borrow (known as your **credit limit**), and you must pay back that amount by a set date.

Ideally, you would pay off the whole balance on the due date, but if you do not, you will be charged interest on the balance owing. On a low-rate card, this can be between 8 per cent and 15 per cent for new balances, but can get as high as 20 per cent on existing balances. The interest charged is also dependent on the type of transaction, such as a purchase versus a cash advance. Even if you pay the balance and any interest off at the end of each month, there will also be an annual fee for the privilege and convenience of the card.

Amazing but true ...

There are 10 000 credit transactions worldwide every second.

▲ **Figure 8.16** Credit cards have many pros and cons

Store cards: These are credit cards associated with particular department stores or large retail outlets. These cards are very similar to credit cards but also work on store loyalty to offer special discounts when you use the store card that you would not get using a regular credit card. Like credit cards, they have high levels of interest payable on balances, annual fees and due dates for balances to be paid.

Personal loans: These are usually obtained through a bank and generally will have a lower rate of interest compared with a credit card or store card. These loans are used for lump sum payments, such as for a car or renovations, when you do not have adequate savings to cover the whole price of the purchase. Personal loans are usually for a set period of time (fixed term), such as five years, and you will be required to make monthly repayments on the loan until the loan is paid off within the term of the loan.

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▲ **Figure 8.17** Furniture stores often offer interest-free deals

Interest-free deals: These include buy now, pay later services. Many stores offer purchase terms to encourage consumers to buy goods and take them home before fully paying for them. This does not mean they are cost-free; rather, like other forms of loans such as credit cards, there are still fees and charges. With interest-free deals, if you do not pay off the amount within the set period, very high interest will be charged on any outstanding balance. There are many retailers and service providers who offer buy now, pay later services, including Afterpay and zipPay.

▼ **Figure 8.18** Where can I get money?

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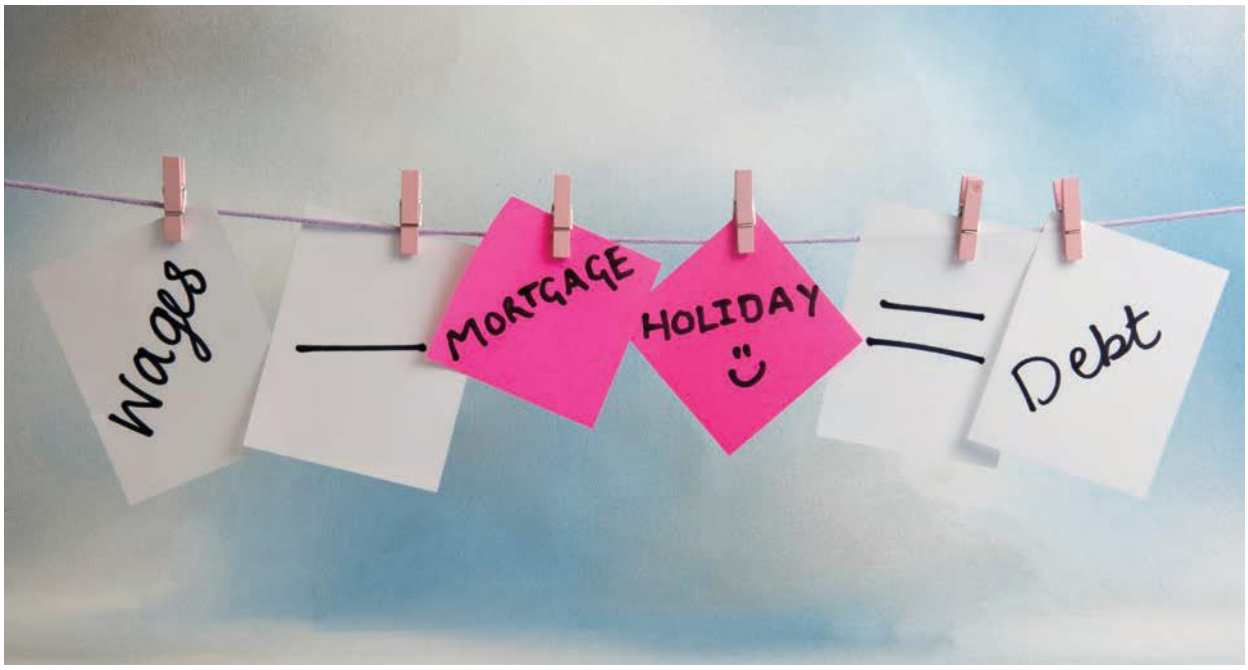

▲ **Figure 8.19** Wages come in, and from that, we have to pay expenses. Sometimes we go into debt.

Payday loans: These are very expensive and are a trap for many consumers. These payday loans are generally for $2000 or less and you have a very limited amount of time to repay the loan. Interest rates on payday loans are very high, and many people who fail to pay them back within the set period find their debt increases very quickly.

Good debt versus bad debt

Many people may argue that there is no such thing as good debt. However, borrowing money is often the only way people can afford to purchase a house or a car. This type of loan can be considered justifiable, as opposed to careless and frequent spending on other types of high-cost credit, such as credit cards and store cards. So, when considering whether debt is good or bad, it is important to look at the reason behind the borrowing.

KEY TERM

discretionary spending money spent by consumers on things other than necessary things such as food, clothes and fuel

Good debt

Debt could be considered good for big items that people would not normally be able to afford without taking out a loan of some kind. As mentioned earlier, a car or a home would come into this category. Other reasons why people borrow include for education and for small business ownership. In all these circumstances (except for the purchase of a car), it is possible to see a return on the investment in either an increase in the value of your home, an opportunity to gain a better and higher paying job through education or to go into business with the hope of making an income and earning a profit. While these all look very likely to maximise the value of the loan, it is also important to realise that, under certain circumstances, house prices can fall, jobs cannot be found and many small businesses fail.

Bad debt

While good debt has the potential to increase a person's wealth, bad debt usually involves **discretionary spending** to purchase goods and services to fulfil a short-term need or want. Some people would argue that buying a new car is taking on bad debt. This is because the new car value depreciates very quickly, and it is very unlikely you will make a gain on a new car when you sell it five years later with 100 000 kilometres on the odometer.

Clothes and consumables also only fill a short-term need or want, and if you use credit to purchase these goods and services, and do not pay this debt off quickly, you will end up paying a lot more for the jeans you thought you would wear every day but only wear once or twice.

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MAKING THINKING VISIBLE 8.3

I used to think, but now I think …

1. Do you think there is good debt and bad debt? Do you agree that there are different kinds of debt?
2. Have your thoughts changed on the topic of debt?
3. With a partner, discuss what you used to think about debt and what you now understand.

Risk versus return: investing – is it too good to be true?

The risk–return trade-off states that the potential return (gain) improves with an increase in **risk** (what you might lose). This means that, if you have a chance of getting a large return on your investment, then you will also need to accept a higher risk of loss. Nearly every investment carries some risk. Shares and property both have the potential to increase and decrease in value, proving that there is no such thing as a 'sure investment'.

What is risk?

Risk is a choice about how you invest. Risk is uncertainty. Any investment has the potential to affect your financial welfare. The level of risk you are willing to take on for an investment must also be seen in terms of how much money you are willing to lose. Some investments will be riskier than others.

KEY TERM

risk the possibility of something bad happening

Managing risk

There is risk in every investment. There is no such thing as a sure thing. There are investment strategies that can be used to manage or reduce the exposure to risk. One such strategy is portfolio diversification. This means that you invest across different asset classes to increase the probability that, while some of your investments might fail, others might provide a small return.

The important aspect of diversification is variety. For example, when investing in the share market, it is important to invest in shares across several

▼ **Figure 8.20** Risk is related to choice

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sectors to prevent all your eggs being in one basket. This means that if one sector of the economy does not give positive returns (e.g. oil and gas), other sectors might provide a return (e.g. banks and finance). You can also reduce risk through investing in a number of different asset classes. This would mean investing in real estate and in the share market as well as keeping some cash in term deposits.

Scams

A **scam** is a dishonest scheme or **fraud**. Other words used to describe a scam include 'swindle' and 'hustle'. Scams can take many forms, and consumers must be aware of the potential for transactions to be dishonest and that people may try to swindle you out of your money.

KEY TERMS

scam an illegal plan for making money, especially one that involves tricking people

fraud the crime of getting money by deceiving people (e.g. credit card fraud)

You can be scammed by someone in Australia, but you can also be scammed by people overseas.

There are many different types of scams. The Scamwatch website is run by the Australian Consumer and Competition Commission (ACCC). The purpose of Scamwatch is to inform the public about emerging trends and techniques used by scammers to steal a person's identity and take money from them.

Everyone believes that they would be able to identify a scam when they come across one, but the financial losses to scammers across a variety of types of scams would suggest otherwise.

Scamwatch identifies many types of scams, including personal identity scams, online shopping scams, fake charity scams and love and romance scams. The Scamwatch website outlines the different ways people will try to trick you into giving them information or money. In July 2019, Scamwatch reported that approximately $20.5 million was lost in scams in that month alone in Australia. People over the age of 65 years were the most likely to be affected, and the most common forms of scam were via phone and email.

▼ **Figure 8.21** Online scams are a downside to the convenience of using the internet to make purchases and other financial transactions

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▲ **Figure 8.22** Phishing emails are deceptive messages where scammers pretend to be from a well-known company or to be selling something too good to be true. Always consider if you receive one of these emails – is it too good to be true?

Amazing but true …

In 2019, $78 685 724 was lost on scams in Australia.

CASE STUDY 8.1

Online scams in Australia

The following article, which appeared on *The Conversation* website in 2018, was written by Cassandra Cross, who is Senior Lecturer in Criminology at the Queensland University of Technology.

How to get away with fraud: the successful techniques of scamming

It is easy for those of us who have ignored emails from Nigerian princes or refused to transfer money on behalf of an online love interest to scroll past stories about scams, thinking it could never be us.

But so far this year, Australians have reported losing more than AU$76 million to all types of fraud, with phishing scams being the most prevalent. Given fraud has one of the lowest reporting rates, this is likely to be the tip of the iceberg.

From the outside, it's difficult to understand how fraud occurs, and why some victims send large sums of money to offenders or take other drastic actions. It's easy for a rational person to identify these situations as fraud.

Too often, we focus our attention on the culpability of victims in these situations. But it's the offenders and their actions we should be focusing on. How exactly do fraudsters get victims to do such outlandish things?

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Grooming the victim

In many cases, it's a culmination of efforts that result in the victim sending money or complying with a fraudster's request. Some offenders target specific victims and build a profile of them through online or offline tracking.

In other cases, the contact may start as random, but the fraudster will work hard to establish trust and build rapport.

There is research to support the concept of 'hyperpersonal' relationships, or ones that are developed more intensely and quickly online compared to offline. Online communication lacks the non-verbal cues that could raise suspicions on the part of a victim.

Further, there is power in the written word. Several fraud victims I interviewed in my research told me they saved all their chat logs with their offenders from the first contact. Re-reading these conversations allows them to feel a deeper connection to the words – and the person sending them – compared to a verbal conversation.

By being persistent and patient with their contact, fraudsters raise few red flags when they ask a victim for money. Many victims come to believe the situation they are being presented with and the reason behind the request.

Social engineering techniques

Online offenders are also able to identify a weakness or vulnerability in a person relatively quickly and decide on the appropriate strategy to exploit this.

The use of authority to gain trust and compliance is commonplace. Offenders will take on the identity of a person or organisation and use this to threaten victims into submitting to their requests. Fear can be a strong motivating factor.

This is why so many people fall for phishing emails, or those that appear in our inboxes from a bank or government organisation. These emails say there is a problem and threaten a negative consequence (such as the closure or freezing of a bank account) if their instructions are not followed.

A sense of authority has been clear in the recent scams targeting Chinese students in Melbourne who have been tricked into staging their own kidnappings. The victims receive calls from the Chinese 'police' or some other authority and are told there is a problem with their visa, or that they have been involved in criminal activity.

In order to prove their innocence, the victims are asked to send money. Or, they are directed to stage their own kidnapping, with the intention of extorting money from their families. The threat of deportation and jail time are powerful motivators for victims, who genuinely fear for their safety.

The use of scarcity – the idea of a limited offer – is another successful technique of fraudsters. By implying their request has a limited timeframe for response, or that the promised reward is limited in availability, they compel people to respond.

Examples of scarcity are commonly seen with lottery scams and sales frauds. Earlier this year, for instance, Scamwatch reported that fraudsters were advertising pedigree breeds of puppies for sale, often demanding money up front to cover transport or medical costs. Victims were duped out of over AU$300,000 in a single year.

Coercive control

The use of psychological abuse tactics by online fraudsters also helps to explain why they have so much power over victims despite a lack of physical proximity.

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Richard Tolman, a professor of social work at the University of Michigan, identified nine techniques of psychological abuse used by offenders in situations of domestic violence. In an exploratory study, my colleagues and I were able to apply many of these to the context of fraud.

In these cases, offenders employ abusive techniques in their communications to gain compliance at the beginning and maintain it throughout the fraud. In my research, several victims reported being verbally abused when they questioned the nature of the relationship or refused to send money.

Several victims felt the offenders were deliberately leading them to question themselves or their own judgement. This destabilisation is not exclusive to romance fraud and can allow offenders to exploit victims over long periods of time.

Fighting against fraud

The pervasive nature of these tactics is difficult to guard against. Most people do not believe they are vulnerable to fraud and are not aware how they could be deceived. Offenders rely on this.

There is also a strong stigma attached to falling prey to scams. Victims are often blamed for their own circumstances and losses. This exacerbates the suffering they've experienced at the hands of the offender.

It's important to raise awareness of the pervasiveness of this type of fraud and the methods used by offenders to target victims. Promoting a culture in which we can openly talk about fraud without judgement or blame is critical to achieving this.

After all, offenders rely on the silence of victims most of all to continue committing these crimes. In order to break through the silence, we need a better understanding of the techniques they use and more work to identify successful countermeasures and prevention messages.

▲ **Figure 8.23** Cassandra Cross, 'How to get away with fraud: the successful techniques of scamming', *The Conversation* website, 17 August 2018

Analysis questions

According to the article:

1. What is the most common form of online scam in Australia?
2. Why does the author suggest that online scams are a bigger problem than many people think?
3. How do online fraudsters 'groom' their victims?
4. Why do people fall for phishing scams?
5. What does the author suggest will help combat online fraud in Australia?
6. Predict whether you think online fraud will rise in the coming years, or reduce in prevalence. Justify your response.

END-OF-SECTION REVIEW 8.4

Review questions

Answer these questions on a piece of paper or in the Interactive Textbook.

Recall

1. Using the internet, list the names and terms of three different payday loan services.

Digital quiz
Please see the Interactive Textbook to access digital activities

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Interpret

2 Using the internet, find a credit card that is issued by a bank, a credit card that is issued by a credit union and a credit card that is issued by a building society.
   a What are the interest rates on each of those credit cards?
   b Do the interest rates differ between each institution?
   c Which credit card would you apply for, and why?

3 Read the article 'Department Store Credit Cards' on the Finder website and answer the following questions:
   a How do store cards work?
   b Who makes money out of store cards?
   c Name three major store cards and the financial institutions that provide the credit.
   d Store cards can offer special discounts and exclusive shopper events. What are the drawbacks of using store cards?

▲ **Figure 8.24** There are many different types of credit cards available. Institutions offer different incentives and costs, so it can be worth doing careful research to see which is best for you. First you need to decide if using credit cards is the right choice for you at all.

Argue

4 Read the article 'Buy now pay later services' on the ASIC website and answer the following questions:
   a List three providers of buy now, pay later services.
   b How does buy now, pay later work?
   c List four steps or ways to stay in control when you use buy now, pay later services.

Extension

1 Have you ever been scammed, or do you know someone who has been scammed? Discuss your experiences and thoughts with a partner.

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Research task

1 Visit the Scamwatch website. Choose one type of scam and create a presentation informing your teacher and classmates about:

- How the scam works and how much money has been lost in this type of scam
- Warning signs – what to look for when you might be scammed
- How to protect yourself – how to prevent being scammed.

2 Create a poster outlining the different types of scams. Your poster should inform your audience about how to protect themselves against scams and include some special tips on what to look out for.

▲ **Figure 8.25** Keep in mind that older Australians are particularly vulnerable to scams, especially online scams

3 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about money

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4

Civics and Citizenship

What is Civics and Citizenship?

All Australians are citizens of a democratic country. This provides the opportunity to influence the decisions that impact you. The age at which you can drive or drink alcohol, the criminalisation of drugs, and the hours and rate of pay at work are all decided by decisions or laws made by governments. All aspects of your lives are affected by laws telling you what you must or cannot do. For example, when driving you must wear a seatbelt but cannot speed.

Civics and Citizenship studies the political and legal systems that make and enforce these laws, and evaluates their effectiveness. It considers the diverse range of people that are citizens in Australia and how this influences the laws made. Most importantly, studying Civics and Citizenship provides the knowledge needed to actively participate in Australian democracy, having a say in the issues you care about and the laws that affect your lives every day.

Please note at the time of writing in early 2020, the global COVID-19 pandemic was unfolding, and having a major effect on the world. The consequences were still largely unknown at the time of publication.

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Unit 1

The Australian political system

Overview

This unit examines the features of Australia's system of government, in particular the role of political parties, and considers how and why citizens' political choices and beliefs are made. Australia's role and responsibilities on a global level are then explored and Australia's system of government is compared to that in Vietnam.

▲ **The House of Representatives** in Parliament House, Canberra, in December 2018. The Labor Party's members (shown on the left) were speaking during Question Time, but the Liberal/Nationals Coalition government members (who usually sit to the right) had left the chambers due to an early adjournment of Parliament.

Learning goals

After completing this unit, you should be able to answer these questions:

- What are the key features of the Australian political system and what is the role of political parties in this system?
- What are political beliefs and choices, and how are they decided?
- What are the roles and responsibilities of the Australian Government on a global level?
- How do the values and features of government in Vietnam differ from the Australian system of government?

Video
Unit Overview

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CHAPTER 9

Government and democracy

Setting the scene: students striking for change

Fifteen-year-old Swedish schoolgirl Greta Thunberg had no idea when she first planned her 'school strike for the climate' that she would trigger a global protest movement. Unhappy with the Swedish Government's response to the climate crisis, Greta declared in the lead-up to the September 2018 Swedish election that she was going on strike, spending school hours protesting outside the Riksdag (Swedish parliament).

After the election, Greta continued her strike on Fridays, quickly gaining supporters in Sweden and via social media across the globe. Beginning in November 2018, international strike days were organised, with students from hundreds of countries participating, including tens of thousands in different Australian locations.

▲ **Figure 9.1** Fifteen-year-old Swedish student Greta Thunberg leads a school strike and sits outside of Riksdag, the Swedish parliament building, in order to raise awareness for climate change, on 28 August 2018 in Stockholm, Sweden

The Australian strikes provoked a mixed response from political leaders, with Prime Minister Scott Morrison declaring he wanted 'more learning … and less activism in schools', and Resources Minister Matt Canavan saying that 'the best thing you learn about going to a protest is how to join a dole queue'. Labor member of parliament Joel Fitzgibbon was more positive, encouraging students to express their opinions and doubting that any would 'miss out on their careers because they missed a few hours of school today'.

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▲ **Figure 9.2** Students striking for action on climate change outside the Liberal Party's Melbourne headquarters in May 2019

Greta Thunberg's amazing rise from schoolgirl to global climate activist relates to many of the themes of this chapter. It illustrates how citizens participate in democratic political systems; the importance of the media, especially social media in shaping political choices; and the responsibility for countries to act on global issues.

MAKING THINKING VISIBLE 9.1

Compass points

Reflect on the story you've just read and the proposition that 'it is important for students to have the right to strike in order to express their political views'. On your own or with the person next to you, consider the following:

1. **E = Excited**
   What exites you about this proposition? What's the upside?
2. **W = Worrisome**
   What do you find worrisome about this proposition?
3. **N = Need to know**
   What else do you need to know or find out about this proposition? What additional information would help you to evaluate things?
4. **S = Stance or suggestion for moving forward**
   What is your current stance or opinion on the proposition?

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9.1 The key features and role of political parties in Australia's democratic system

FOCUS QUESTION

What are the key features of the Australian political system and what is the role of political parties in this system?

KEY TERMS

institution an organisation used by political leaders to gain power or rule a country (e.g. a public service department, police or the courts)

system of government how the institutions used to gain power and rule a country are organised. There are many different systems of government, including *democratic* and *authoritarian* governments.

liberal democracy a system of government that is a representative democracy and follows the rule of law. Most liberal democratic countries are former colonies of Great Britain, including Australia, Canada, New Zealand and the United States

federal a system of government where power is shared between a central, national government and regional governments

government the leadership of a country (or state) responsible for its day-to-day administration

bicameral a parliament with two chambers, usually a lower house and an upper house

Key features of Australia's system of government

The power to rule a country is achieved in many ways, including by birth (hereditary), by force (authoritarian) or by popular choice (democratic). Rulers use **institutions**, such as parliament, the public service, police, courts and the army to rule a country. How leaders gain power and the institutions they use to rule are known as a **system of government**.

Australia's system of government is called a **liberal democracy**. This means that it is a representative democracy, where citizens (the people) vote to elect leaders to run the country on their behalf. If the people are unhappy with the leaders, they can vote them out at an election. Liberal democracies also follow the rule of law. This means that, in exchange for obeying the law, citizens expect laws to be fair and to apply equally to all members of the community.

Australia's system of government is **federal**. Law-making power and the responsibility for governing are shared by a national **government** (the Commonwealth Government), and state and territory governments (such as the Victorian Government). At both levels, laws are made by a parliament consisting of members elected by voters from different geographic areas (electorates) who make laws on their behalf.

The Commonwealth and Victorian parliaments are **bicameral**. This means they consist of two chambers or houses: a lower house and an upper house. For a law to pass, it must be supported by a majority (more than half) of the members in both houses of parliament.

Table 9.1 outlines the features of the Commonwealth and Victorian parliaments.

▼ **Table 9.1** Key features of the Commonwealth and Victorian parliaments

Level of government	Commonwealth Parliament	Victorian Parliament
Name of upper house	Senate	Legislative Council
Number of representatives in upper house	76	40
Electoral term	Six years	Four years

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Level of government	Commonwealth Parliament	Victorian Parliament
Name of lower house	House of Representatives	Legislative Assembly
Number of representatives in lower house	151	88
Electoral term	Three years	Four years
Title of Queen's representative	Governor-General	Governor
Title of leader of government	Prime Minister	Premier
Examples of areas of law-making responsibility	Defence, foreign affairs, tertiary education and Indigenous affairs	Schools, public transport, police and hospitals

▼ **Figure 9.3** The Commonwealth Parliament House, Canberra

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▲ **Figure 9.4** The Victorian Parliament House, Melbourne

A government is responsible for the administration – day-to-day running – of the state or country. The government is led by the Prime Minister (Commonwealth) or Premier (state) and is made up of ministers, who are each responsible for the running of a department of the public service, such as the Minister for Education or the Minister for Defence. To form government and to appoint the Prime Minister, Premier and ministers, a political party or parties must hold a majority of seats in the lower house of parliament.

KEY TERM

constitutional monarchy a system in which the king's or queen's power is severely limited, because they act only on the advice of the politicians who form the government

Amazing but true …

Did you know that we have a Queen of Australia? Elizabeth II is Queen of the United Kingdom and the other Commonwealth realms, including our nation. She has been in power since February 1952. Under the Australian Constitution, executive power is exercised by the Governor-General as the Queen's representative.

You may be wondering what the role of the Queen's representative is in democratic Australia. Although the Australian system of government is based on the idea of liberal democracy, it is also a **constitutional monarchy**. While the Commonwealth and state governments are chosen by the people through elections, the highest political office – the head of state – is in fact the Queen of Australia, represented in Australia by the Governor-General and state Governors.

However, their roles are mostly ceremonial, and in practice, most of the duties of a head of state are carried out by the Prime Minister and state Premiers.

▼ **Figure 9.5** Australia's head of state is the Queen of Australia, Her Majesty Queen Elizabeth II (left). The Governor-General of the Commonwealth of Australia is His Excellency General the Honourable David Hurley AC DSC (Retd) (right). The Governor-General is appointed by the Queen on the advice of the Prime Minister of Australia.

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Political parties

At election time, citizens in a representative democracy face the difficult decision of who to vote for. Most people vote for the candidate whose values and beliefs they believe most closely reflect their own. However, the beliefs and values of individual candidates are not always clear. Therefore, over time in most democracies political parties have formed.

Political parties are groups of people with similar views who join together with the aim of having their members elected to parliament with the hope of forming government. A **party platform** outlines the aims, values and policies of a political party, indicating what the party would do if elected to government.

In Australia, there are two main political parties. The oldest party, the Australian Labor Party (ALP), traditionally represents the interests of unions and workers. The Liberal Party was formed to unite opposition to the ALP and to represent the interests of small businesses and **free enterprise**. The Liberal Party usually governs in **coalition** with the National Party, a party formed to represent people living in regional areas. In coalition they are known as the LNP (Liberal National Party).

These parties are described as major parties, as they aim to form government by having their candidates elected to a majority of seats in the lower house of parliament. Other parties that lack the broad support to form government are known as minor parties, and include the Greens and Pauline Hanson's One Nation.

Standing for election as a candidate of a political party makes electoral success more likely. However, party membership is not compulsory. Candidates standing without support of a political party are known as independents.

KEY TERMS

party platform an outline of a political party's aims, values and the policies they intend to implement if elected to government

free enterprise a belief that businesses should operate with limited regulation by governments

coalition a formal agreement between two political parties to operate together in parliament

▼ **Figure 9.6** Voters in the Victorian seat of Chisholm queuing to cast their ballots in the 2019 federal election. In the foreground are election posters from different political parties.

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Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 9.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What is a system of government?
2 Name the two features of a liberal democratic system of government.
3 Who are the leaders of the Commonwealth Government and the Victorian Government?
4 What is a political party? List the two main political parties in Australia.

Interpret

5 Describe the role of citizens in a representative democracy.
6 Explain the difference between a *major* and a *minor* political party.

Argue

7 Why do you believe a candidate nominated by a political party is more likely to win an election than an independent candidate?

Extension

1 It's party time! Create a political party and hold an election.
   a Form small groups based on an issue members feel strongly about.
   b Name your political party and outline its party platform.
   c Prepare materials such as posters, pamphlets or a website and launch your campaign (present to the class).
   d Hold an election.
   e Reflect on the election result. Did the party with the best platform win? What factors decided the vote?

▼ **Figure 9.7** A voter is handed two ballot papers when they vote. Here a voter places their green ballot paper in the House of Representatives box. The white paper is for the Senate.

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9.2 How citizens' political choices are shaped

FOCUS QUESTION

What are political beliefs and choices, and how are they decided?

How should I vote? This is the question facing voters in a representative democracy at election time and one that you will be faced with in the near future. Shaping this choice are many factors, including a citizen's personal **ideology**, which includes their belief in how a country or state is best run. This includes the issues and policy areas they believe are most important and how they balance their own self-interest with the needs and welfare of the community as a whole. A person's ideology is shaped by many influences, including their family background and life experiences such as education, work and travel.

Many groups in the community actively seek to shape the choices of voters. Political parties, as described earlier in this chapter, seek to have their candidates elected to parliament. **Interest and pressure groups**, such as the students inspired by Greta Thunberg who formed School Strike 4 Climate, aim to influence who is elected and their decisions once in parliament or government. They do this through methods such as petitions, protests, lobbying and the use of the **media**.

Media outlets such as television, radio and newspapers, as the main source of political information, are traditionally one of the biggest influences on a citizen's voting choices. However, this influence is diminishing as more and more voters use digital sources to access the news. The fact that these sources, particularly social media, aren't as strictly edited as traditional media has led to criticisms of **fake news** (misleading or false reports or information). Both the 2016 US presidential election and the 2019 Australian federal election featured accusations that fake news affected voters' choices, distorting the results of the elections.

KEY TERMS

ideology a set of beliefs on how a country is best run and its political system organised

interest/pressure groups groups of people formed to promote change to the law in a particular area or issue

media organisations that publish or broadcast information

fake news deliberately misleading or false news reports

▼ **Figure 9.8** Voting is compulsory in Australia's democracy. On federal election day, 18 May 2019, the Coalition was returned to power under Prime Minister Scott Morrison.

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▲ **Figure 9.9** Fake tweets impersonating US President Donald Trump believed to have originated in China

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 9.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What is a personal ideology?
2 Identify two factors that influence a person's ideology.
3 List two examples of traditional media outlets.
4 What is meant by 'fake news'?

Interpret

5 Outline the difference between the aims of political parties and interest/pressure groups.
6 Explain why fake news is more likely to be found on digital social media than in traditional media.

Argue

7 How do you think fake news can distort the result of an election?

Extension

1 Go to the Advocates for Self-Government website and complete the World's Smallest Political Quiz. Record your result and the features of the ideology. Do you agree with the result? Does it reflect your personal ideology?

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9.3 The roles and responsibilities of Australia's government on a global level

FOCUS QUESTION

What are the roles and responsibilities of Australia's government on a global level?

The climate crisis, refugees and tax avoidance by multinational companies are examples of issues that a single country cannot resolve on its own. To resolve these issues, countries must act as good 'global citizens', cooperating to remedy international problems and to improve the wellbeing of all people.

One of the ways that Australia fulfils its responsibilities as a global citizen is through its membership of **international organisations**. The most important and largest of these is the United Nations (UN). Formed after World War II with the aim of preventing a repeat of the atrocities of this war, the UN provides a forum for representatives from the world's countries to meet and reach agreements on issues such as human rights, the environment, development and security. Australia was a founding member and is an active participant in the UN. Australian politician and judge H.V. Evatt served as the third President of the UN General Assembly from 1948 to 1949.

Australia is also a member of international organisations that regulate the world economy and promote economic development, such as the World Trade Organization (WTO), International Monetary Fund (IMF) and G-20 (Group of the world's 20 largest economies).

▼ **Figure 9.10** Former Australian Prime Minister and then Foreign Minister, Kevin Rudd, addresses the United Nations General Assembly in 2010

Participation in these organisations is important to Australia as a trading nation whose economic growth is strongly reliant on trade, foreign investment in Australian companies and the international operations of Australian businesses. Australia has also signed a number of **bilateral agreements** promoting trade with other countries, including the United States, China, Singapore and Japan.

KEY TERMS

international organisations organisations with a membership of two or more countries established to manage and resolve international issues

bilateral agreement a formal agreement between two countries

foreign aid resources and assistance given by one country to help another country

peacekeeping a military mission tasked with maintaining or enforcing peace in a country or region

Australia provides assistance and resources to help improve the lives of people living in less wealthy countries. This is known as **foreign aid**. Examples of foreign aid include direct payments, infrastructure building, disaster assistance, training, and support with governance and elections.

The majority of Australian foreign aid is provided to countries in the local Indo-Pacific region and the largest recipients are neighbouring countries Papua New Guinea and Indonesia.

Under the Abbott and Morrison coalition governments, domestic spending (within Australia) has been prioritised over foreign aid, resulting in the proportion of national income spent on aid falling to about 0.21 per cent, the lowest rate in more than 60 years.

Peacekeeping is where armed forces are sent to a conflict zone to preserve or enforce the peace. Australia has a long history of participation in peacekeeping, often contributing to United Nations peacekeeping missions. These have included successful regional missions in Timor-Leste, the Solomon Islands and Papua New Guinea, and more recent missions in Sudan and the Middle-East.

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► **Figure 9.11** An Australian soldier guards a street in the East Timorese capital Dili in 2007 as part of the United Nations peacekeeping mission following the country gaining independence from Indonesia

KEY TERMS

alliances formal agreements between countries to support each other in times of war

ANZUS Treaty the Australia, New Zealand, United States Security Treaty; an alliance where each country agrees to assist the others if they are involved in an armed conflict

Australian governments have also sent armed forces to international conflicts in support of Australia's **alliances**. Membership of the British Commonwealth was a significant reason for Australia's involvement in World War I and World War II. In 1951, Australia signed the **ANZUS Treaty** with the United States and New Zealand, and has since fought alongside the United States in a number of international conflicts, including the first and second Iraq Wars and, Australia's longest military campaign, the 2001 Afghanistan War.

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 9.3

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Name two issues that a single country cannot resolve on its own.
2 What was the aim of establishing the United Nations and who was the Australian who served as a President of the UN General Assembly?
3 List two economic international organisations of which Australia is a member.
4 Define the term 'peacekeeping' and give an example of a country where Australia has participated in a peacekeeping mission.

Interpret

5 Why did the Abbott and Morrison governments cut spending on foreign aid?
6 Why do you think the majority of Australia's foreign aid goes to our closest neighbours?

Argue

7 'It is more important for the Australian Government to look after Australians than worry about being a good global citizen'. With reference to Australia's responsibilities on a global level described in this section, write a paragraph in support of or opposing this statement.

Extension

1 Research one peacekeeping mission or foreign aid project Australia has been involved in and prepare a fact sheet showing:
   a the location of the mission/project on a map
   b a description of the mission/project and its aims
   c an assessment of the effectiveness of the mission/project.

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9.4 The values and features of Australia's democratic system compared to Vietnam

FOCUS QUESTION

How do the values and features of government in Vietnam differ from the Australian system of government?

Liberal democracies, such as Australia, are only one of many different political systems that exist across the world. Vietnam, officially called the Socialist Republic of Vietnam, has a **communist** system of government. In a communist system, there is only one political party, in this case the Communist Party of Vietnam (CPV), that controls the country's government and economy.

Many features of the Vietnamese system of government are similar to the Australian system of government. They both have a national law-making institution elected by the people – in Australia, the Commonwealth Parliament, and in Vietnam, the National Assembly – and a government led by a Prime Minister and ministers.

However, in Vietnam, the CPV and its leadership group – the **politburo** – have the ultimate political power. They decide the types of laws that the National Assembly can pass and approve candidates for election to the assembly.

Unlike Australian elections, where citizens vote for candidates from different parties or independents to determine who governs the country, Vietnamese elections allow citizens to vote to decide who from the CPV will govern. Regardless of the election result, the CPV remains in control of the country.

KEY TERMS

communist a political system where all property and businesses are owned and controlled by the state (government), promoting an equal and classless society

politburo the leadership committee of a communist government

▼ **Figure 9.12** The Vietnamese parliament, the National Assembly, in the capital city Hanoi

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KEY TERMS

dissent displaying dissatisfaction with a government's laws or policies

authoritarian a government that uses force to prevent dissent and remain in power

communism the belief in a society without different social classes in which the methods of production are owned and controlled by all its members, and everyone works as much as they can and receives what they need

Enlightenment a movement of European philosophers in the eighteenth century who argued for the importance of reason, logic and freedom of thought

political revolution a dramatic upheaval where a country's system of government is abolished and replaced with a completely different one

police state a government that uses police and intelligence agencies to monitor its citizens, eliminate dissent and to maintain power

As Vietnam is a one-party state, the CPV allows no opposition to its control of the country. There is no right to demonstrate or protest, establishing alternative political parties is outlawed, and the media is censored and tightly controlled by the CPV in order to prevent **dissent**. The court system is closely linked to the CPV and provides limited opportunities for those accused of a crime to defend themselves or receive a fair trial. This type of government, where force or the threat of arrest is used to prevent opposition and maintain power in a country, is known as **authoritarian**.

The authoritarian nature of the Vietnamese Government reflects the values it is based on. **Communism** was developed by nineteenth-century German philosopher Karl Marx (1818–1883). Marx argued that the only way to stop the exploitation of workers by business owners (capitalists), and to create an equal and fair society, was for the government (the state) to own businesses and control the economy and society.

This differs from liberal democracies, whose values are based on the writings of eighteenth-century **Enlightenment** philosophers. These philosophers argued that a fair society requires the protection of individual rights and for citizens to have a say in who governs and the laws they make.

Marx's ideas were first put into practice in Russia, where a violent **political revolution** overthrew the existing government and a **police state** was established to enable the Communists to eliminate opposition and maintain power.

A similar pattern of violent revolution followed by the creation of a single-party authoritarian system of government occurred in other countries where communists gained power, such as Cuba, China, Vietnam and North Korea. In contrast, most systems of government based on the ideas of the Enlightenment, such as Australia, France, the United States, the United Kingdom and New Zealand, are democratic and respect civil rights and freedoms.

▼ **Figure 9.13** An armed soldier stands guard outside the CPV's 11th National Congress. In the foreground of the banner is Ho Chi Minh, the founder of communist Vietnam, and, in the background, Vladimir Lenin, the first leader of the Soviet Union.

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END-OF-SECTION REVIEW 9.4

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What is Vietnam's system of government?
2 Name the political party that governs Vietnam.
3 Outline two similarities between the Vietnamese and the Australian systems of government.
4 Recall which German philosopher developed communism and outline the main features of this system of government.

Interpret

5 Why is the CPV so opposed to dissent and opposing political views?
6 How are elections in Vietnam different from those in Australia?

Argue

7 Imagine you have been offered a job overseas and have a choice between two countries, one with a *democratic* system of government and one with a *communist* system of government. Which one would you choose to move to? Write a paragraph explaining the reasons for your decision.

Extension

1 Use the Human Rights Watch or Amnesty International websites to identify two examples of the Vietnamese Government using force to repress a dissenting citizen or group. For each example:
   a Name the citizen or group
   b Describe the actions of the citizen or group and why they were considered to be dissenting
   c Outline how the Vietnamese Government responded to the actions of the citizen or group.

Digital quiz
Please see the Interactive Textbook to access digital activities

▼ **Figure 9.14** The People's Committee Building Saigon in central Ho Chi Minh City acts as the city hall, and is of the main landmarks within the city

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Research task

Investigating the climate crisis

You are to research the climate crisis, including:

- The background to the issue
- The role of international organisations in resolving the issue
- The policies of the Australian Government and other political parties on the issue
- How interest groups and the media have attempted to shape voters' choices on the issue.

Copy out and complete the table below, or fill it in within the Interactive Textbook.

The climate crisis	Definition		
Background *Include statistics and examples of the effects*			
International organisations and agreements *For example, IPCC, the Paris Agreement*			
Australian policies	Government	Opposition party	Other
Interest/pressure groups *Examples of at least one in favour and one opposed to increased action on climate change*	For climate action	Against climate action	

Use your research to develop your stance on Australia's response to the climate crisis. Do you support current government policies?

Prepare a resource informing political leaders or other citizens of your stance. (Examples of possible resources include letters to a politician or newspaper, a petition, a website or a social media page).

Present your resource to the class, outlining the type of resource you developed and how it is intended to inform other citizens of your stance on the Australian Government's response to the climate crisis.

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▲ **Figure 9.15** Yallourn Power Station in Gippsland, Victoria. The continued use of coal for electricity and the speed of its replacement by renewable energy sources are key points of conflict in the debate over the climate crisis within Australia.

3 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about Australia's political system

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Glossary

History

abdication to give up rule from a powerful position

alienating being cut off from something

annex to take possession of an area of land or a country, usually by force or without permission

antagonism anger towards someone or something

appropriate take ownership of and claim as one's own

arduous difficult and tough

blockade a situation in which a country or place is surrounded by soldiers or ships to stop people or goods from going in or out

bureaucracy a system of government where unelected officials carry out the main functions

capitalism an economic system based on private ownership of property and business, with the goal of making the greatest possible profits for the owners

careen to ground a ship on its side in order to repair damage to the hull

cession surrendering of land to another country

collectivist belief that the interests of the group are more important than the interests of individuals

colonies settlements belonging to a nation that are made on land in another country

colonisers individuals who set up settlements in other countries for their home nation

concubines women who are taken as extra or second-class wives by wealthy men

controversy a matter of debate or disagreement

conventions meetings between large groups of individuals on common topics

cooey (cooee) a loud, long call to attract attention

corroboree a traditional dance ceremony of Aboriginal Australians that can be used for a sacred ritual or an informal gathering

cultivation the growing of food crops

courtier a person who attends the court of a king or emperor

dentition the number, type and arrangement of teeth in a person or animal

dowry money and property a woman's family provides upon marriage

duds clothing

edict an announcement of a new rule or law

egalitarianism the belief that all people deserve equal rights and opportunities

Elders leaders in a community who have significant life experience

empire a group of countries ruled by a single person, government or country

empirical knowledge information based on what is seen or experienced rather than theoretical

eunuchs male palace officials and servants who have been castrated so they cannot father children

exhibition large trade shows that showed off new technologies and innovations

exploitation to take unfair advantage of something or someone

federation a group of states with one central government that manages all common interests

fiefdoms areas of land controlled by independent rulers, like the estate of a feudal lord

formulaic containing or consisting of fixed and repeated groups of words or ideas

founded when a city is established

global warming a rise in Earth's average temperature due to the atmosphere's inability to release heat because of the growth of greenhouse gas emissions

hang Chinese merchants authorised to trade with foreigners, often called 'cohong' by the Westerners

heir a person who inherits the property and title of another

hew dig

hovel a very poor-quality shelter, not fit for human use

hoy throw

husbandry farming

immigrants people who move from one country to another. This can be for a variety of reasons.

imperialism the domination of one or more nations by another, which seeks to use the wealth and people of the dominated nation for its own interests

incursion a sudden attack into enemy territory

indemnity protection via a payment against future loss (such as insurance)

industrialisation the process of developing industries in a country

industrialist an owner or an employee in a high position in industry

junk a Chinese ship with a flat bottom and square sails

kowtow to kneel and bow, touching one's forehead to the ground

laissez-faire unwillingness to get involved in or influence other people's activities

literati the educated or scholar class

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lubra a First Australian girl or woman, *now an offensive term and should not be used*

Mandate of Heaven a Chinese belief that heaven gives authority to a dynasty to rule and may revoke this authority if the dynasty is immoral or incompetent

martial law when a military force is given direct authority over normal civilian functions

massacre the killing of large numbers of people

missionaries people who travel to foreign countries to convert others to their religion

modernisation the act of making something more modern

narcotic a psychoactive drug that changes brain functions to alter mood, perception or behaviour

nationalist a person who wants their country to be politically independent

native individuals who are born and raised in a particular area

necrosis death of cell tissues

no man's land the contested strip of land between enemy trenches on the battlefields of World War I

noxious harmful or dangerous

pagan a person who has no religion or a religion other than Christianity, Judaism or Islam

pastoral land used for grazing or agriculture

patriarchy a society in which power and privilege are held mostly or entirely by men

patrimonial estates property inherited by a son from their father

penal colony a colonial settlement where a country sends its prisoners

piccaninny a black child, *now an offensive term and should not be used*

Pitt Prime Minister William Pitt, who encouraged the Enclosure Movement

plenipotentiary a diplomat authorised to represent a ruler or government in negotiations

proclamation an official document or announcement

propaganda the use of persuasive information by a government to publicise its military success and/or to demonise an enemy country

ratify the official approval of an act already agreed by a lesser authority

redress compensation for an injustice

regent a person who rules a state or country because the emperor is too young or ill

republican government a form of government where the power is held by the people rather than rulers who inherit it

revoke to say officially that an agreement, permission, a law and so on is no longer in effect

rod an old unit of measurement of about 5 metres

rogue an individual who is untrustworthy and unreliable

romanisation to turn a traditional language, such as Chinese, into the Latin or Roman alphabet

run-off water that flows away from high areas to low areas

self-government when an area is allowed to make its own laws

sepsis a severe medical condition in which bacteria enters the bloodstream after an operation or accident

silence ruse a detailed plan to allow Anzac forces to evacuate from Gallipoli in complete silence, and by stages, to avoid the possibility of a Turkish attack on retreating troops

slaughter the killing of a large number of people

slum a run-down and overcrowded urban area populated by some of the poorest in society

sniper a highly trained rifleman equipped with an accurate, long-range rifle, able to shoot enemy troops from a distance and from a hidden firing place

stagnation a situation where development or progress becomes inactive

social conscience if you have a social conscience, you worry about people who are poor, ill, old and so on, and try to help them

socialism a political doctrine sympathetic to working people and proposing that the production and distribution of goods and wealth should be shared collectively by society

stalemate a situation in which armies have attacked each other but failed to achieve a definite victory for either side, and have settled down into defensive positions such as trenches

stockade a rough wooden fort

stormtrooper a highly trained and aggressive soldier, equipped to sneak across no man's land and to launch lightning raids on enemy trenches, inflicting as many casualties as possible

sue for peace request a peace settlement, usually by a losing side in a war

surveyor an individual who maps the land

tariffs fees or customs charges paid by merchants to governments on imports and exports

terra nullius the British legal term meaning land that did not belong to anyone

tincture a plant or animal extract that has been dissolved in ethyl alcohol for use as a medicine

total war a war that is no longer limited to the traditional battlefield but extends to attacks on civilians in cities and involves civilians in the making of ammunition

trade deficit a situation where a country's imports are greater than its exports

Treaty of Versailles the treaty signed at the end of World War I that specified the terms of the peace

turnpike a main road that you have to pay to use

undulating moving up and down like waves

urbanisation the growth of cities

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usurp to take a position of power, especially without having the right to

utopia a perfect society in which everyone is happy

war of attrition after the development of stalemate, enemy armies stop trying to win a decisive victory and just attempt to wear down their opponents by killing as many men as possible, hoping that the casualty rate and the psychological effect might cause an enemy's war effort to collapse

Geography

adaptation the process of change where an organism becomes better suited to its environment

agriculture the process of growing crops and raising animals for human use and food

aquifer an underground layer of rock that holds and stores water

aspect the direction that a slope faces

biodiversity the variety of plant and animal life found in a place

biome a large naturally formed community of plants and animals found in a place

circumnavigation sailing or travelling all the way around something

crop yield the amount of produce that is grown on a piece of land

decomposition the process of being broken down to smaller pieces by bacteria and fungi

deforestation clearing a large area of trees

domestication growing and adapting wild plants for human use

drawing down carbon or **carbon sequestration** where carbon dioxide is taken out of the atmosphere and stored in liquids or solids on Earth

evaporation the process of a liquid becoming a gas when heated

export sell and send goods to another country

feed lots a place where livestock are fed to gain weight quickly

fertile soil that is capable of producing a lot of crops

food supply chain the process of getting food from the farm to the plate

fossil fuels natural fuel, such as coal or gas, made from the remains of living organisms

GDP per capita the gross domestic product divided by the amount of people in that country

goods items for sale that can be moved

gross domestic product (GDP) the total value of goods and services produced by a country in one year

humus the organic part of soil that is formed when microorganisms break down plant material

import bring goods in from another country

indigenous naturally existing in a specific place

input what is brought into a farm or farming system (e.g. water, machinery, chemicals)

less economically developed country a low-income country that is struggling to develop in a sustainable way. Such countries are very vulnerable to economic and environmental challenges.

livestock animals used for work, food or produce

living wage an income that is high enough to live a normal standard of life

marine dead zone an area that has a reduced level of oxygen in the water that can cause organisms to die

market forces economic factors that affect the price, demand and availability of a product

microclimate the climate of a very small area that is different from the surrounding climate

natural characteristics the natural qualities of a place

occupy move into a place and take up room

pasture grassed land suitable for grazing animals

permafrost permanently frozen soil, mostly found in the polar and tundra biomes

phenomenon a fact or situation that exists or happens (plural: phenomena)

poverty cycle the continuation of poverty, often from one generation to another due to the impact of certain factors

poverty line the minimal amount of money needed to afford the basic necessities of life

precipitation liquid or frozen water that forms in the atmosphere and falls to Earth (e.g. rain, snow)

project (verb) estimate what will happen in the future based on what has happened in the past

remote an isolated area very far away from urban centres

riparian the area where the land and river meet

soil moisture content the amount of water in a sample of soil

staple a food that is eaten so often that it is one of the main parts of a person's diet

subduction a process where one tectonic plate moves under another tectonic plate and sinks into the mantle

surplus more than you immediately need

terracing sloped land that has been cut into flat platforms for farming

till dig or loosen the soil to prepare it for planting

topography the shape of the land's surface, which includes landforms such as hills, plateaus and valleys

transpiration the process of a plant absorbing water through its roots and releasing water vapour through pores in its leaves

tributary a small river that feeds its water into a bigger river

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urban relating to a city or large town

urban sprawl the ongoing spread of roads, houses and infrastructure over a vast area

weathering the process of breaking down or dissolving rocks and minerals

Economics and Business

appreciation increase in price, value and so on

Bitcoin a type of cryptocurrency (see *cryptocurrency*)

brand value the financial value of having customers who will pay more for a particular brand

capital improvement an addition or change made to land, equipment or a building that increases its value or the profit it produces

central bank a bank that provides services to a national government, puts the official financial plans of that government into operation and controls the amount of money in the economy

commodity a substance or product that can be traded, bought or sold

comparative advantage an advantage a country has over another country because it can produce a particular type of product more efficiently

consumer a person who buys goods or services for their own use

credit a method of paying for goods or services at a later time, usually paying interest as well as the original money

credit limit the largest amount of money that a bank allows you to spend using a credit card

cryptocurrency a digital currency produced by a public network, rather than any government, that uses cryptography to make sure payments are sent and received safely

cryptocurrency exchanges a place where digital currencies are bought and sold

decentralised used to describe organisations or their activities that are not controlled from one central place but happen in many different places

depreciation the process of losing value

discretionary spending money spent by consumers on things other than necessary things such as food, clothes and fuel

dividends part of the profit of a company that is paid to the people who own shares in it

economic agent a person, company or organisation that has an influence on the economy by producing, buying or selling

economic growth an increase in the economy of a country or an area, especially of the value of goods and services the country or area produces

export to send goods to another country for sale

fair trade a way of buying and selling products that makes certain that the people who produce the goods receive a fair price

fiat money legal tender whose value is backed by the government that issued it

foreign reserve currency a particular currency that is held by many countries that use it to make payments to other countries. The US dollar is effectively the reserve currency of the world.

fraud the crime of getting money by deceiving people (e.g. credit card fraud)

free trade international buying and selling of goods, without limits on the amount of goods that one country can sell to another and without special taxes on the goods bought from a foreign country

globalisation the increase of trade around the world, especially by large companies producing and trading goods in many different countries

gross domestic product (GDP) the total value of goods and services produced by a country in one year

hard currency money that is valuable and can be exchanged easily because it comes from a powerful country

import to buy or bring in products from another country

interest money that is charged by a bank or other financial organisation for borrowing money

investing to put money, effort, time and so on into something to make a profit or get an advantage

investment the act of putting money, effort, time and so on into something to make a profit or get an advantage, or the money, effort, time and so on used to do this

labour-intensive production industries and methods that are labour-intensive need a lot of workers

liberalising measures removing or softening barriers between trading nations

literacy rates the percentage of people who are able to read and write

material living standards material living standards include tangible goods and services (e.g. cars, health cover)

means or factors of production something that is needed in order to make a particular product (e.g. labour, land, materials)

money coins or banknotes that are used to buy things, or an amount of these that a person has

multinational corporations (MNCs) involving several different countries, or (of a business) producing and selling goods in several different countries

non-material living standards can be hard to measure, since they are made up of intangible things (e.g. environment, freedom of speech, free elections, crime rates, time off work)

quota a fixed, limited amount or number that is officially allowed

recession a period when the economy of a country is not successful and conditions for business are bad

return to give a particular amount of profit

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risk the possibility of something bad happening

savings the money you keep, especially in a bank or other financial organisation

scam an illegal plan for making money, especially one that involves tricking people

shareholder a person who owns shares in a company and therefore gets part of the company's profits and the right to vote on how the company is controlled

standard of living the amount of money and comfort people have in a particular society

stock exchange a place where shares in companies are bought and sold, or the organisation of people whose job is to do this buying or selling

supply chain the system of people and things that are involved in getting a product from the place where it is made to the person who buys it

sustainable growth economic development that attempts to satisfy the needs of humans but in a manner that sustains natural resources and the environment for future generations

tariff a charge or list of charges either for services or on goods entering a country

tax money paid to the government that is based on your income or the cost of goods or services you have bought

trade route a route, often covering a long distance, that people buying and selling goods often used in the past

Civics and Citizenship

alliances formal agreements between countries to support each other in times of war

ANZUS Treaty the Australia, New Zealand, United States Security Treaty; an alliance where each country agrees to assist the others if they are involved in an armed conflict

authoritarian a government that uses force to prevent dissent and remain in power

bicameral a parliament with two chambers, usually a lower house and an upper house

bilateral agreement a formal agreement between two countries

coalition a formal agreement between two political parties to operate together in parliament

communism the belief in a society without different social classes in which the methods of production are owned and controlled by all its members, and everyone works as much as they can and receives what they need

communist a political system where all property and businesses are owned and controlled by the state (government), promoting an equal and classless society

constitutional monarchy a system in which the king's or queen's power is severely limited, because they act only on the advice of the politicians who form the government

dissent displaying dissatisfaction with a government's laws or policies

Enlightenment a movement of European philosophers in the eighteenth century who argued for the importance of reason, logic and freedom of thought

fake news deliberately misleading or false news reports

federal a system of government where power is shared between a central, national government and regional governments

foreign aid resources and assistance given by one country to help another country

free enterprise a belief that businesses should operate with limited regulation by governments

government the leadership of a country (or state) responsible for its day-to-day administration

ideology a set of beliefs on how a country is best run and its political system organised

institution an organisation used by political leaders to gain power or rule a country (e.g. a public service department, police or the courts)

interest/pressure groups groups of people formed to promote change to the law in a particular area or issue

international organisations organisations with a membership of two or more countries established to manage and resolve international issues

liberal democracy a system of government that is a representative democracy and follows the rule of law. Most liberal democratic countries are former colonies of Great Britain, including Australia, Canada, New Zealand and the United States

media organisations that publish or broadcast information

party platform an outline of a political party's aims, values and the policies they intend to implement if elected to government

peacekeeping a military mission tasked with maintaining or enforcing peace in a country or region

police state a government that uses police and intelligence agencies to monitor its citizens, eliminate dissent and to maintain power

politburo the leadership committee of a communist government

political revolution a dramatic upheaval where a country's system of government is abolished and replaced with a completely different one

system of government how the institutions used to gain power and rule a country are organised. There are many different systems of government, including *democratic* and *authoritarian* governments.

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CHAPTER 3

China (1750–1918)

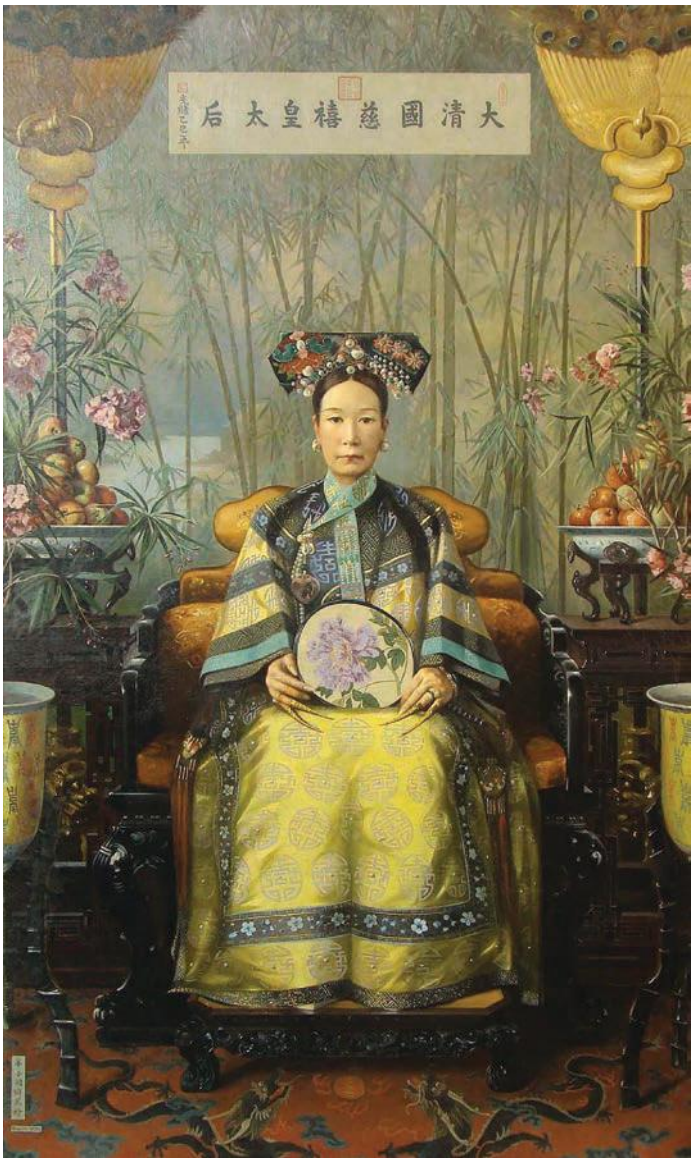
Setting the scene: the death throes of the empire

When the Empress Dowager Cixi of the Qing dynasty ordered the murder of her adopted son, the Guangxu Emperor, in November 1908, she was nearly 73 years old and was on her own deathbed.

A visit from the thirteenth Dalai Lama had taken up most of Cixi's time the week before the assassination order. The relationship between the Dalai Lama and Chinese rule was a contentious issue. But it was often the symbolic formalities around this relationship that took up the most time and effort – for instance, whether the Dalai Lama would be required to kneel before the throne. If he was forced to kneel, it could upset the Tibetan Buddhists, who might feel that it was humiliating for their religion. If the Dalai Lama remained standing like a foreigner, it might suggest to the visiting leaders from Mongolia that Tibet was no longer part of the Chinese Empire. Cixi cleverly solved the problem by providing a low throne for the Dalai Lama on which he could sit cross-legged.

Tedious matters like this had been a part of the Empress Dowager's life for the previous 47 years. She had been the power on the throne, or the power behind it, since the death of her husband, the Xianfeng Emperor, in 1861. At his death, power passed to their five-year-old son, who became the Tongzhi Emperor. Cixi ruled as **regent** for him until he took up rulership in his own right in 1873.

After the Tongzhi Emperor died at the age of 19, his three-year-old cousin became the Guangxu Emperor, and Cixi once again ruled as regent. There were rumours that Cixi may have murdered her own son, the Tongzhi Emperor, in order to retain power.



▲ **Source 3.1** *Empress Dowager Cixi* by Hubert Vos, 1905

KEY TERM

regent a person who rules a state or country because the emperor is too young or ill

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KEY TERM

abdication to give up rule from a powerful position

Forensic tests undertaken in the early 2000s found that the Guangxu Emperor had indeed died of acute arsenic poisoning. While there is no conclusive proof that Cixi was responsible for the poisoning, there are few other candidates who had the opportunity or desire to ensure he did not outlive his adoptive mother.

In 1898, disturbed at the radical reforms the Emperor was attempting to implement, Cixi emerged from retirement to retake control of the government. She believed that the pace of change was too rapid and was concerned that Japanese influences were gaining too much power over the Emperor. It may have seemed to her that eliminating the Guangxu Emperor before she died was necessary to save the Qing dynasty and the empire.

If that was her hope, it was a vain one. In February 1912, less than four years after the death of the Guangxu Emperor, the empire came crashing down with the forced **abdication** of the last Emperor of China, six-year-old Pu Yi.

So how did the Qing dynasty fail? How did 3000 years of empire come to an end in the winter of 1912?

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LA MORT DES SOUVERAINS CHINOIS

Les corps de l'impératrice Tseu-Si et de l'empereur Kouang-Siu exposés dans le pavillon de la Longévité impériale

◄ **Source 3.2** The cover of *Le Petit Journal* from November 1908 depicting the funeral of Empress Dowager Cixi and the Guangxu Emperor at the Pavilion of Imperial Longevity

MAKING THINKING VISIBLE 3.1

Think, puzzle, explore

1. After reading this story, what do you know about Empress Dowager Cixi and the final dynasty of the Chinese Empire?
2. What questions do you have about China in the nineteenth and twentieth centuries?
3. What can you do to explore this topic further?

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Chapter overview

Introduction

The Qing dynasty (1644–1912) was the last in a long tradition of imperial rule in China. For over 3000 years, ruling families had come and gone as they gained and lost their **Mandate of Heaven**. At the beginning of the Xia and Shang dynasties, China occupied modest territory on the banks of the Yellow River. However, by the late eighteenth century, when the Qing dynasty was at its high point, the Chinese Empire had grown to control vast swathes of East Asia. The Chinese people proved themselves to be skilful craftspeople and inventors. They invented gunpowder, fireworks, compasses, paper and printing. They also produced many items that were not readily available anywhere else, which meant they were lucrative to trade. Such items included silk, tea, china and spices.

KEY TERM

Mandate of Heaven a Chinese belief that heaven gives authority to a dynasty to rule and may revoke this authority if the dynasty is immoral or incompetent

In the 1490s, during the reign of the Yongle Emperor of the Ming dynasty, it is believed that a Chinese admiral, Zheng He, reached the distant shores of Australia. This was long before Captain Cook landed at Botany Bay in 1770. But after the death of the Yongle Emperor, the long-range sailing ships were burned and contact with foreign lands was discouraged. The Chinese nation began to look more inwards. The Chinese believed that they had everything they could possibly want within their country. There was no need for trade and diplomacy with foreign powers. By the early Qing dynasty, European traders were confined to the port of Canton if they wished to buy tea and silk. They also had to pay in silver because the Chinese didn't want to trade for any of their goods. This determination to isolate China would eventually lead to conflict. It would ultimately cause great loss both for the empire and the Chinese people.

Learning goals

After completing this chapter, you should be able to answer these questions:

- What were the key cultural and social features of China between 1750 and 1918?
- What was the political and economic structure of China?
- What contact did the Chinese have with European powers?
- How did economic factors influence the relationship between China and the European powers?
- How did conflict with the West shape China's political landscape?
- What attempts were made at reform by the Qing to modernise China and to what extent were they successful?
- What factors led to dissatisfaction and ultimately rebellion against the Qing rule?
- What was the state of China by 1918, and how did it attempt to set itself up on the world stage?

Historical skills

After completing this chapter, you should be able to:

- Explain what 'chronology' and 'continuity and change' mean in the study of history
- Understand and evaluate different historians' points of view
- Develop historical empathy with people in the past
- Interpret primary sources in both print and visual form
- Evaluate the reliability of primary sources
- Correctly use special terms specific to the topic under study
- Use factual evidence (dates, statistics, examples) to substantiate an argument.

► French political cartoon from 1898. It is meant to represent the tendencies of foreign nations towards China during a decade of political turmoil. A pie represents 'Chine' (French for China) and is being divided between caricatures of Queen Victoria of the United Kingdom, William II of Germany, Nicholas II of Russia, who is eyeing a particular piece, the French Marianne (a typical representation of France), and a samurai representing Japan, carefully contemplating which pieces to take. A stereotypical Chinese official of the Qing dynasty throws up his hands to try to stop them, but is powerless.

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Timeline of key events

What came before this topic?

- The last of China's imperial dynasties was established by the Manchus in 1644 when they conquered Beijing and ejected the Ming.
- The Qing dynasty reached its height under the leadership of the Qianlong Emperor in the eighteenth century.

A painting of the Qianlong Emperor in ceremonial armour on horseback from 1758

Early 1700s
Portuguese traders begin buying opium from India and selling it in China

1729
The Youngzheng Emperor prohibits the sale and smoking of opium

1757
The Qianlong Emperor issues a decree confining all foreign trade to Guangzhou (then called Canton)

1773
The British become the leading smugglers of illegal opium to China

1793
Britain attempts to establish official diplomatic and trade relations by sending Sir George Macartney to China. The Qianlong Emperor responds to King George III with a blunt refusal.

1795–1804
The White Lotus Rebellion. High taxes and corrupt officials prompt the White Lotus Society to rebel against the Qing.

1796
The Jiaqing Emperor bans the importation and cultivation of opium

1839–1942
The First Opium War. The Qing attempt to enforce restrictions on opium and the British respond by sending in the navy. The Chinese are defeated and forced to sign the humiliating Treaty of Nanking.

1850
The Taiping Rebellion begins

1856–60
The Second Opium War. The Chinese are again defeated, this time by an alliance of the British and the French. They are forced to sign the Convention of Peking and legalise the opium trade.

1861
The Self-Strengthening Movement begins

Timeline questions

1 What can you tell about the challenges China faced during this era just from the information in the timeline?

2 What do you think the White Lotus Rebellion might have been about? Research it and write a short summary of its key features.

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What came after this topic?

- The Republic of China continued under a series of presidents, most notably Jiang Jieshi (Chiang Kai-shek). The republic faced many challenges in the following years: the threat of regional warlords, Japanese invasions and the eventual rise of the Chinese Communist Party in 1949.

Chairman Mao Zedong helped lead China to a communist revolution in 1949

Sun Yixian, born in 1866, would go on to become China's first president in 1912

1861
Empress Dowager Cixi takes control of China through her five-year-old son when he is named the Tongzhi Emperor

1864
The Taiping Rebellion ends

1866
Birth of Sun Yixian, the father of modern China

1894–95
The Sino-Japanese War. The Chinese suffer a humiliating defeat in their war with Japan over control of Korea.

1898
The Hundred Days' Reform

1899–1901
The Boxer Rebellion

1908
Empress Dowager Cixi dies at 72, 24 hours after the death of the Guangxu Emperor

1911
The Wuchang Uprising begins the Xinhai Revolution, ending the Qing dynasty's rule of China

1912
Emperor Pu Yi is forced to abdicate. The Republic of China is established with Sun Yixian as the first president, though he is soon replaced by Yuan Shikai.

1913
Democratic elections are held and the Guomindang win a significant victory

1915
Yuan Shikai revives the monarchy with himself at the head and styles himself the Hongxian Emperor

1916
Widespread condemnation forces Yuan Shikai to abandon his imperial pretentions. He dies a few months later.

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Pinyin or Wade-Giles?

The Chinese language is written in characters rather than letters. For this reason, it has long been challenging for people of non-Chinese backgrounds to read and interpret. The Wade-Giles system of **romanisation** was developed to help communication. It was created in the 1860s by Thomas Wade, who was a Chinese scholar and British ambassador to China. It was then refined in the 1890s by British diplomat Herbert Giles and his son Lionel. It became the standard system until 1958, when it was replaced in China with the Hanyu Pinyin system. The Hanyu Pinyin system was accepted as an international standard in 1982, though Taiwan continued to use the Wade-Giles system until 2009.

KEY TERM

romanisation to turn a traditional language, such as Chinese, into the Latin or Roman alphabet

As the move from the Wade-Giles to Pinyin systems has happened relatively recently, you will find that many books contain very different versions of Chinese names and places. For example, the word 'emperor' is 'qianlong' in the Pinyin system and 'ch'ien-lung' in the Wade-Giles system. Where practical, this textbook uses Pinyin. But some places and people are so well known in their Wade-Giles form that it would be confusing to use the Pinyin. For example, 'Hong Kong' is the city name in the Wade-Giles system but is 'Xianggang' in Pinyin.

Chinese pronunciation guide

Pronouncing Chinese words can be a real challenge for English speakers because there are sounds in Chinese that aren't in English. Pinyin will help English speakers sound out many words. But Chinese words that contain speech sounds that do not easily translate into roman letters can be extra challenging. Below is a quick guide to how Pinyin letters translate into approximate English sounds.

c 'ts' as in 'lots'
j 'j' as in 'jet'
q 'ch' as in 'chop'
r 'z' as in 'haze'
x 'sh' as in 'shop'
z 'ds' as in 'woods'
zh 'j' as in 'job'

So, Qing is pronounced 'Ching', Empress Cixi is pronounced Empress 'Tsee-shi' and Guangxu is pronounced 'Gwang-shoo'.

◄ **Source 3.3** The Guangxu Emperor as a child ruler in 1875, the year he ascended to the throne

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3.1 China from 1750

FOCUS QUESTIONS

- What were the key cultural and social features of China between 1750 and 1918?
- What was the political and economic structure of China?

▲ **Source 3.4** The Qianlong Emperor gives a banquet at the Chengde Mountain Resort in 1754

The Qing dynasty

The final era of imperial China began in 1644 when the Ming dynasty was overthrown by the warriors of Manchuria. The Manchu warriors established themselves as the Qing dynasty. The Ming were ethnic Han, like the majority of the Chinese population, while the Qing were ethnic Manchu tribes from Manchuria, to the north of the Great Wall. The Qing were the second non-Han rulers of China (the first were the Mongols in the thirteenth and fourteenth centuries). The Qing moved into the imperial palaces of Beijing and kept much of the **bureaucracy** that had existed there for at least 1000 years. But the Manchus also established their authority through a series of changes.

KEY TERMS

bureaucracy a system of government where unelected officials carry out the main functions

literati the educated or scholar class

They made all men wear their hair in the traditional Manchu style, which was having a shaved head except for a long braid called a queue. They forbade marriage between Manchu and Han people. They also only allowed Manchu people into Manchuria. In addition, Manchu officials were placed in many of the highest offices in the bureaucracy. This caused some resentment among the Han **literati** but did solidify the Manchus' control over the government.

The first 100 years of Qing rule was a time of success and prosperity for China. The early Qing emperors enjoyed long reigns. They also often chose to pass their thrones on to the most promising of their sons rather than just the eldest son. Emperors of the Qing were known by their era names, rather than personal names. So, the fourth emperor is known as the Kangxi Emperor, rather than by his personal name Aisin Gioro Xuanye, and never as Emperor Kangxi.

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▲ **Source 3.5** Chinese men with the required Manchu hairstyle – a shaved forehead with a long braid called a queue, circa 1900

Geography

In the years following the fall of the Ming dynasty, China expanded significantly. It reached the borders we know today towards the end of the Qing era and **annexed** Tibet in the 1750s. The border of the Himalayan mountains made it extremely difficult to go any further. Deserts in the north and north-east also halted expansion in these directions.

The two main rivers, the Yellow and the Yangtze, flow from the Tibetan plateau through central China before emptying in the East China Sea. They are important for both the water they provide and as a means of transport. Much of the best agricultural land surrounds these rivers. This includes

KEY TERM

annex to take possession of an area of land or a country, usually by force or without permission

▲ **Source 3.6** Key geographical features of China during the Qing dynasty

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▲ **Source 3.7** China during the Qing dynasty

the North China plain, around the Yellow River, and a wide crescent that stretches through the south-eastern regions around the Yangtze River. From north to south, China stretches over 49° of latitude (for more on latitude, see Chapter 5). Consequently, there are profound differences in climate between China's different regions. Provinces like Yunnan and Guangzhou in the south have tropical climates with monsoons, while in the cold temperate zones north of the Great Wall snow falls in winter and temperatures average many degrees below zero.

Under the Qing, China was divided into 18 provinces, each of which was controlled by a governor or viceroy. These officials were responsible for ruling their provinces in the name of the emperor and forwarding taxes to Beijing, the Qing capital.

The central government and the examination system

The emperor was assisted in running China by a vast bureaucracy of civil servants. The government was divided into six main ministries: Civil appointments, Revenue, Rites, War, Punishment, and Works. Being appointed as a government official was a great honour and could be a great financial assistance to a man and his family.

All but the poorest classes of men in China were permitted to apply for entrance into the government bureaucracy. However, they had to pass a set of strict examinations to prove their worth. This meant that in practice most officials came from families where there was enough money to afford years of education fees to prepare effectively for the task. The examination system of the Qing had been inherited from the Ming, who had themselves taken it from previous dynasties. Women were not permitted to undertake the necessary examinations. While officials were not paid a great deal, they were allowed to accept gifts to fulfil their duties or provide favours.

FAMOUS FACE

CONFUCIUS

Confucius was a political thinker, philosopher and teacher during what is known as the Spring and Autumn period (551–479 BCE). His writings and teachings have long been central to the development of Chinese culture and the workings of government. While the influence of his ideas had diminished during the Song era, by the time of the Qing they had regained their prominence. Confucian thought focuses on questions of morality or ethics, and the provision of effective and stable societies and government to promote moral harmony.

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The examinations were very narrow in scope. They primarily tested knowledge of the four classics of Chinese literature and required candidates to write what was called the eight-legged essay. This was a highly structured essay of eight parts that considered an element of Confucian thought. The very **formulaic** nature of the essay gave rise to the criticism that this element of the examination system led to the **stagnation** of thought and progress in Qing China. Whatever the cause, this stagnation was to prove disastrous in the nineteenth century.

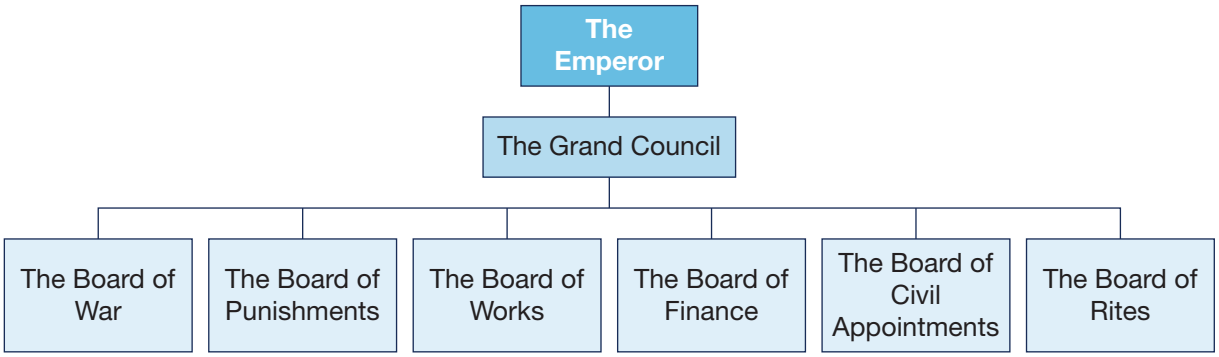
KEY TERMS

formulaic containing or consisting of fixed and repeated groups of words or ideas

stagnation a situation where development or progress becomes inactive

Amazing but true …

In the Qing bureaucracy, the emperor was absolute ruler of China. While the emperor's position was inherited, the rest of the government was made up of officials who had passed the examination system. They had to rise through the ranks of the bureaucracy to reach important positions rather than relying only on their family connections.



▲ **Source 3.8** Candidates for the civil service crowd around a wall where examination results are been posted. Attributed to Qiu Ying, sixteenth century.

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MAKING THINKING VISIBLE 3.2

Claim support question

1. What do you think are the advantages and disadvantages of the Chinese examination system?
2. What evidence or reasoning can you provide to support your claims?
3. What other factors might have played a part in the stagnation of thought and progress in Qing China?

Women under the Qing

Women did not occupy high social status during the Qing dynasty. They had fewer rights under the law than men and no legal rights to property other than their **dowries**. They were subject to Confucian principles that enforced a strict **patriarchy** and required adherence to the Three Obediences: women must obey their father when a child, their husband when a wife and their sons when a widow.

KEY TERMS

dowry money and property a woman's family provides upon marriage

patriarchy a society in which power and privilege are held mostly or entirely by men

concubines women who are taken as extra or second-class wives by wealthy men

eunuchs male palace officials and servants who have been castrated so they cannot father children

The chief role of women was to be wives and mothers, and they were expected to work in the home. Marriages were usually organised by matchmakers. If there were problems in a marriage, it was always considered the wife's responsibility.

Men in wealthy families could also take **concubines**, women who were in effect additional, second-class wives. They were expected to bear children for the man and could be promoted to wife on the death of the original wife. Like wives, concubines were expected to remain single after the death of their husband.

Amazing but true ...

Did you know that an emperor could have thousands of concubines? The Qing emperors all had large *hougong* (rear palaces) where their wives and concubines lived.

There was an elaborate ranking system and the concubines could number in the thousands. The *hougong* was attended by **eunuchs** to ensure the royal line, and concubines who gave birth to male children were able to rise in the ranks.

While there were many restrictions on the lives of these women, some managed to establish successful power bases and achieve significant control over the emperor and the country. As discussed at the start of the chapter, a concubine of the Xianfeng Emperor called Yehe Nara Xingzhen became one of the most successful concubines of Chinese history. She is better known by her later title, Empress Dowager Cixi.

▲ **Source 3.9** A photograph of a Manchu woman in her wedding dress taken by Scottish traveller John Thomson, 1871

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ACTIVITY 3.1

Using historical sources as evidence

According to historian Robert W. Strayer, the most well-known advocate for women in China at the time was Qiu Jin (1875–1907). Born into an affluent and liberal-minded family, she pursued an extensive education, started a women's magazine and became active in revolutionary circles. The extract that follows comes from her most famous appeal for the rights of women, from 1904.

> Alas! The greatest injustice in this world must be the injustice suffered by our female population of two hundred million. If a girl is lucky enough to have a good father, then her childhood is at least tolerable. But if by chance her father is an ill-tempered and unreasonable man, he may curse her birth: 'what rotten luck: another useless thing.' Some men go as far as killing baby girls while most hold the opinion that 'girls are eventually someone else's property' and treat them with coldness and disdain. In a few years, without thinking about whether it is right or wrong, he forcibly binds his daughter's soft, white feet with white cloth so that even in her sleep she cannot find comfort and relief until the flesh becomes rotten and the bone is broken. What is all this misery for? Is it just so that on the girl's wedding day friends and neighbours will compliment him, saying, 'your daughter's feet are really small'? Is that what the pain is for?
>
> ...
>
> After her marriage, if the man doesn't do her any harm, she is told that she should thank heaven for her good fortune. But if the man is bad or mistreats her, she is told that her marriage is retribution for some sin committed in her previous existence. If she complains at all or tries to reason with her husband, he may get angry and beat her. When other people find out they will criticise, saying, 'that woman is bad; she doesn't know how to behave like a wife.' What can she do? When a man dies, his wife must be in morning for three years and never remarry. But if the woman dies, the husband only needs to tie his queue with a blue thread.
>
> ...
>
> When heaven created people it never intended such injustice because if the world is without women, how can men be born? Why is there no justice for women?

▲ **Source 3.10** Qin Jin, 'An address to two hundred million fellow country women', 1904, translated by Nancy Gibbs, in Patricia Buckley Ebrey, *Chinese Civilization: A Sourcebook*, 1993, pp. 342–3

Responding to the source

1. Describe this source. What is it, and when was it created?
2. What, according to the source, are the possible consequences of a girl having an 'ill-tempered' father?
3. What value is placed on bound feet?
4. What does the source suggest would happen if a woman complained that her husband was violent or mistreated her?
5. What does this document tell us about inequality between men and women in Chinese society at this time and the methods people used to deal with their grievances?

Footbinding

The custom of footbinding originated sometime during the Song dynasty (960–1279 BCE). Small feet were considered to be particularly beautiful and were known as 'lotus feet' or 'lily feet'. While initially only women of high social class had their feet bound, the practice eventually spread to the other levels of society. Bound feet came to be considered necessary for marrying women off successfully.

Pre-pubescent girls would have their feet broken by having their toes bent underneath their feet and the heel pressed forwards and under, then tightly bound with strips of wet cotton cloth. As the cotton dried, it tightened, compressing the feet and breaking the bone. This process would be repeated regularly to restrict the foot further and keep the dressings clean.

Women with bound feet were often severely restricted in movement and freedom. They found it difficult to walk long distances and many could only walk at all while wearing shoes to support their misshapen feet. The ability to run away from violent husbands was also restricted.

Infection was common and lack of circulation due to tight bindings could lead to **necrosis** and even toes dropping off. It is believed that up to

KEY TERM
necrosis death of cell tissues

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one in 10 women with bound feet died of **sepsis** due to complications of the process. As they aged, women continued to face elevated health risks, including from falls caused by trying to balance on three-inch bound feet. Once binding had taken place, there was no easy way to undo the damage and women had to continue to bind their feet for the rest of their lives.

Footbinding was a Han custom not practised by the Manchus, and they did not adopt it when they took control of China. It was seen by many Han women as a symbol of their separate identity from their Manchu rulers. Despite this, there were attempts to discourage the practice from at least the late nineteenth century. Christian **missionaries** preached against the evils of footbinding and the members of the Taiping Heavenly Kingdom (1851–64) were forbidden to bind their feet. In the 1880s, Kang Youwei, a noted scholar and reformer, formed the Anti-Footbinding Society of Canton. Eventually, in the same law that **revoked** the ban on Han and Manchu intermarriages, Empress Dowager Cixi ordered the practice of footbinding to stop. Despite this, it continued in some provinces until as late as the 1940s.

KEY TERMS

sepsis a severe medical condition in which bacteria enters the bloodstream after an operation or accident

missionaries people who travel to foreign countries to convert others to their religion

revoke to say officially that an agreement, permission, a law and so on is no longer in effect

► **Source 3.11** The unwrapped feet of a woman who has had her feet bound

►**Source 3.12** Han style women's shoe from the late nineteenth century

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▲ **Source 3.13** Manchu style women's 'flower bowl' shoes from the court of the Qianlong Emperor

MAKING THINKING VISIBLE 3.3

See, think, wonder

Look carefully at the images in Sources 3.11, 3.12 and 3.13.

1. What do you see in these images?
2. What do you think about the things that you see? What comparisons can you make to things you might see today?
3. What does it make you wonder about the role of women in Han and Manchu society?

ACTIVITY 3.2

Using historical sources as evidence

The following extract comes from the 'Selected rules and regulations on marriage' from the Anti-Footbinding Society of Hunan in 1898.

1 The purpose of organising this society is to provide opportunities for members to arrange marriages for the children so that girls who do not bind their feet will not become social outcasts. For this reason, society members must register the names and ages of all their children, and this information will be made available to all members in their selection of mates for their children.

3 In selecting mates for their children, members must observe strict compatibility of age and generation. Furthermore, no match can be made unless both families agree to it. No member is allowed to coerce, intimidate, or use any other forms of undesirable persuasion in arranging a marriage.

8 The clothing worn by members' daughters should conform with the accepted style. However, their footwear should conform to the style of their brothers. There should be no exceptions because other styles of footwear may be shocking and offensive to other Society members, thus injuring the girl's chances for marriage.

9 If people want to have worthy daughters, then they must promote women's education. If men want their wives to be worthy, then they must donate money to establish local women's schools. The size of the school is determined by the amount of the contribution. By helping other people's daughters learn, one also helps one's own wife because only after women's education has been popularised can the foundations of a marriage be solid.

▲ **Source 3.14** Selected rules and regulations on marriage from the Anti-Footbinding Society of Hunan in 1898, translated, in Patricia Buckley Ebrey, *Chinese Civilization: A Sourcebook*, 1993, p. 342

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Responding to the source

1 Describe this source. What is it, and when was it created?
2 According to Rule 1, what is the purpose of the Anti-Footbinding Society of Hunan?
3 What is the purpose of Rule 3?
4 What does Rule 9 suggest is necessary for a solid marriage?
5 What does this source suggest about changing attitudes to footbinding and women in the late Qing era?

Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 3.1

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Where did the Qing come from originally?
2 What are the main rivers of China?
3 How did the Chinese Government choose its officials?
4 What were the Three Obediences?
5 How did Han women practise footbinding?

Interpret

6 What problems did differences between the Han and Manchu people cause?
7 What problems were caused by the rigidity of the examination system?

Argue

8 Many people believe that footbinding was a method designed by a patriarchal society to control and oppress women. To what extent do you think this is true? Use evidence to support your answer.

Extension

1 Research the roles of men and women in Chinese society during this period (Source 3.15 depicts men and women from this period). Make a comparison of the different rights and responsibilities each had.

▲ **Source 3.15** These drawings from the book *Harmsworth History of the World, Volume 1,* published in 1907, depict the dress of famous men and women from the Qing period

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3.2 Causes and effects of European contact and settlement

FOCUS QUESTIONS

- What contact did the Chinese have with European powers?
- How did economic factors influence the relationship between China and the European powers?
- How did conflict with the West shape China's political landscape?

Early trade with the Europeans

Trade between China and Europe had existed since around 130 BCE, primarily along a series of overland routes known collectively as the Silk Road. Tea, silk, spices, ivory and china (cups, bowls, vases) were valuable commodities in Europe and they traded for a high price. In return, the Chinese purchased horses, animal furs, honey and glassware from European merchants.

This trade was disrupted when the Ottoman Empire prevented merchants from travelling through their lands from 1453 BCE and effectively closed the Silk Road. The curtailment of Silk Road trade forced European merchants to look for alternative routes to the East in order to maintain their profitable businesses, and many took to the oceans with this aim. The Age of Discovery was thus sparked by a need to re-establish trade routes to the East.

The Spanish and Portuguese were some of the earliest and most enthusiastic explorers, laying claim to large sections of the Americas before arriving in China in the early sixteenth century. Between 1517 and 1535, the Portuguese set up their own port in Macau. While they agreed to pay customs dues and rent, the Portuguese began to treat Macau as a colony. Meanwhile, the Spanish set up a base in Keelung, Taiwan, until they were ousted by the Dutch. English and French merchants also attempted to establish footholds in China, and, in 1685, the Chinese agreed to open customs houses in four places, most notably in Canton (Guangzhou).

The Qing allowed foreign trade through several ports until the 1750s. In 1757, the Qianlong Emperor decreed that the northern ports were out of bounds for European merchants. In 1759, a British merchant named James Flint attempted to test this order by landing at the port of Ningbo but was rejected. In response, he went to Tianjin to complain about the bribery and corruption at the port of Canton. He ended up in prison for three years, and the Emperor declared that Canton was the only port foreign merchants could use from then on.

▼ **Source 3.16** A Chinese tea set by Swiss artist Jean-Étienne Liotard, 1781–89. The Europeans had an insatiable appetite for Chinese porcelain and tea.

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▲ **Source 3.17** The *Cutty Sark*, a British tea clipper built in 1869. Tea clippers were merchant ships designed to be very fast in order to deliver tea to Europe as rapidly as possible.

The Canton system

From 1759 until the end of the First Opium War in 1842, foreign traders to China were confined to the port of Canton (Guangzhou). They were not permitted to land at any other ports and were prohibited (forbidden) from travelling very far inland. The attitude of the Emperor and his government to foreign trade was unenthusiastic. They believed that their Middle Kingdom (how the Chinese referred to their country, believing themselves to be the centre of the world) provided everything that they could possibly want. Foreign trade therefore was granted as a privilege to Europeans and could be withdrawn at any time.

Culturally, the Europeans saw trade very differently. The British, in particular, were very taken with the work of Scottish economist and moral philosopher Adam Smith, who has been described as the founder of free-market economics. In his book *The Wealth of Nations* (1776), Smith argued that competition and self-interest would inevitably lead to economic prosperity. The British believed they had a moral right to pursue trade wherever they chose. This clash of cultural attitudes soon led to problems.

▼ **Source 3.18** The foreign factories at Canton Harbour, 1805

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MAKING THINKING VISIBLE 3.4

Think, puzzle, explore

1. What do you think about the Chinese decision to restrict trade with foreigners and the Europeans' decision to try to force trade?
2. What questions do you have about these choices?
3. What can you do to explore this topic further?

The Canton system suited the Chinese Government because it controlled and narrowed contact with the outside world. Thirteen commercial firms, known as **hang** or 'cohong', were chosen as the only authorised agents of trade with the foreigners. These merchants gained their position through large contributions to the Qing court. Foreign merchants were restricted to the factories or warehouses located outside of the city walls on the Pearl River. There they would negotiate cargo prices with the Chinese merchants.

The European merchants were unhappy about the restrictions and heavy taxes levied by the Chinese, and they complained to their own governments. However, as there was no official relationship between the British Government and the Chinese, there was no effective way for the British authorities to deal with merchants' grievances. In an attempt to establish a diplomatic relationship between the two governments and negotiate more favourable trading conditions, the British sent more than one delegation to the Chinese court.

▲ **Source 3.19** George, Lord Macartney, King George III's envoy to China in 1793

The Macartney envoy

The first British attempt to establish an embassy in China was an unfortunate failure. The embassy sailed from England in December 1787 but its progress was hindered by storms, poor wind and dysentery (intestinal infection). In June 1788, before the embassy had even reached the Chinese coast, the ambassador, Colonel Charles Cathcart, died of tuberculosis (lung disease) and the mission was abandoned.

It was not until 1793 that another attempt was made. The Crown appointed Lord Macartney, Irish peer and former governor of Granada and Madras, to the role of ambassador. He was accompanied by his friend Sir George L. Staunton, who was to serve as second-in-command and alternate if Macartney were not to reach China safely, so as to avoid the fate of the first mission. They departed Southampton in September 1792 with presents and a plan.

KEY TERM

hang Chinese merchants authorised to trade with foreigners, often called 'cohong' by the Westerners

More than £15 000 was spent on gifts for the Emperor and Chinese court. These gifts included a planetarium, mathematical and other scientific instruments, silver and copper goods, and Wedgwood pottery. The plan included a list of objectives for Macartney to achieve, which amounted to the complete opening up of China to British trade and establishment of a permanent diplomatic embassy in Beijing.

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▲ **Source 3.20** The Chinese military come out to greet the arrival of the Macartney envoy. An ink and watercolour image by draftsman William Alexander in 1973.

Macartney arrived in Canton in June 1793 and was permitted to travel first to Beijing and then to Chengde, where the Qianlong Emperor was spending the summer. The visit was presented to the Emperor as being a tribute from the English King on the Chinese sovereign's 83rd birthday.

KEY TERM

kowtow to kneel and bow, touching one's forehead to the ground

There was a great deal of negotiation between English and Chinese officials before the delegation arrived, as Macartney was unwilling to perform the **kowtow**. In the end, the Chinese agreed that he could kneel on one knee, which was the same respect he would give the English King.

◄ **Source 3.21** *The Reception,* a caricature by James Gilray depicting Lord Macartney kneeling before the Qianlong Emperor in his role as first British envoy to China in 1792. Note that Gilray was not there to witness this himself.

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The long-awaited audience with the Qianlong Emperor took place on 14 September 1793. Macartney and Staunton dressed themselves in elaborate official costumes and presented the Emperor with the gifts they had brought and a letter from King George III. The emperor in turn gave gifts to the English delegation, including a jade sceptre and carved agates (ornamental stones). A banquet was held in honour of the visitors. Over the next few days, Macartney was taken sightseeing, given tours of the Imperial Gardens, invited to see a puppet show, given further audiences with the Emperor and introduced to Manchu **courtiers**.

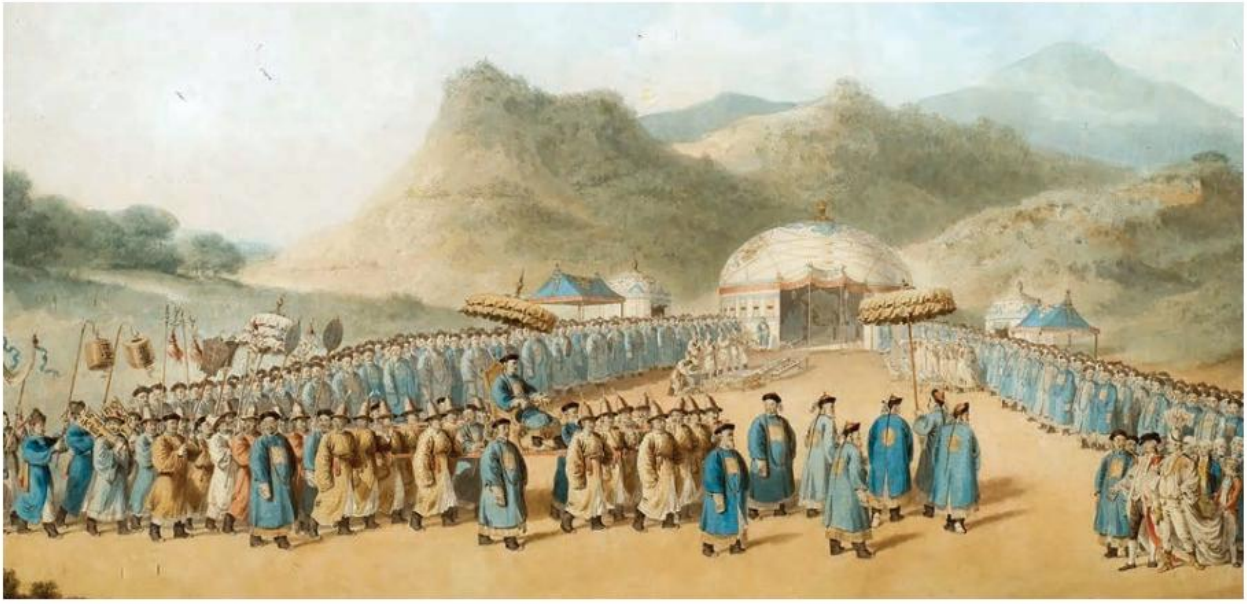
Repeated attempts by Macartney to open up trade and diplomatic negotiations during this time were rebuffed by the Chinese grand councillor. When pressed, the grand councillor finally agreed to allow Macartney to present his requests in a letter, and he did so on 3 October.

KEY TERMS

courtier a person who attends the court of a king or emperor

tariffs fees or customs charges paid by merchants to governments on imports and exports

In the name of the Crown, Macartney asked for British traders to be allowed to use various ports in addition to Canton and to be given small parcels of land in key trading cities to set up English warehouses. He also asked for the abolition or reduction of **tariffs** between Macau and Canton and high duties on English merchants.



▲ **Source 3.22** An ink and watercolour image of the Emperor approaching his tent in 1793 by the Macartney Envoy's draftsman, William Alexander

ACTIVITY 3.3

Using historical sources as evidence

The following are excerpts from the diary of St George Macartney from 1793.

Saturday, September 14 –

This morning at 4:00 AM we set out for the Court … I proceeded in great state with all my train of music, guards, palanquins, and officers and gentlemen of the embassy on horseback. Over a rich embroidered velvet I wore the mantle of the Order of the Bath, with the collar and diamond badge and a diamond star. Sir George Staunton was dressed in a rich embroidered velvet also, and, being a Doctor of Laws in the University of Oxford, wore the habit of his degree, which is of scarlet silk, full and flowing. I mentioned these little particulars to show the attention I always paid, when a proper opportunity offered, to Oriental customs and ideas.

… [The Emperor's] manner is dignified, but affable and condescending, and his reception of us has been very gracious and satisfactory. He is a very fine old gentleman, still healthy and vigorous, not having the appearance of a man of more than 60 …

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Thursday, October 3 –

… It is now beyond a doubt, although nothing was set upon the subject, that the Court wishes us to be gone, and if we do not take the hints already given, they may possibly be imparted to us in a broader and coarser manner, which would be equally unpleasant to the dignity of the embassy and to the success of its objects. That no time might be lost or advantage taken, I have dispatched the note to the Minister which he had desired me this morning to send to him. It consists of six principal articles extracted from my instructions, and compressed into as narrow a compass as possible …

Monday, December 23 –

… After maturely considering all the circumstances before me, I have now, however painful to me, been obliged to dismiss from my mind many flattering ideas which I had entertained at the commencement of my embassy, of distinguishing it by some happy discovery, some signal and brilliant success, in the prosecution of our political and commercial interests in these distant parts of the world …

▲ **Source 3.23** Helen Henrietta Macartney Robbins, *Our First Ambassador to China: An Account of the Life of George, Earl of Macartney*, 1908, Nineteenth Century Collections Online

Responding to the source

1. Describe this source. What is it, and when was it created?
2. Why does Macartney describe his and Staunton's clothing in such detail?
3. What impression did Macartney develop of the Emperor at their first meeting?
4. What consequences does Macartney fear if his embassy refuses to take the hints to leave? How does he attempt to salvage the mission?
5. What realisation has Macartney come to in the December diary entry?
6. What do these diary entries tell us about the attitudes of the British and of their understanding of Chinese culture?

The Chinese court was unimpressed with Macartney's letter and believed diplomatic negotiations were inappropriate for a tribute mission as the British had claimed theirs to be. Macartney was given no direct reply to his letter. However, the grand councillor began dropping heavy hints that it was time for the English to move on. In his diary, Macartney reflected on his disappointment at the failure of his mission.

The Chinese response, when it came, was a letter from the Qianlong Emperor to King George III in which he unequivocally refused every request made by the British. He suggested that, as the Chinese were uninterested in foreign goods, the Europeans should feel grateful to the Chinese that they were permitted to trade with them at all.

◄ **Source 3.24** A painting of the Qianlong Emperor by Italian court painter Giuseppe Castiglione, 1750s

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ACTIVITY 3.4

Using historical sources as evidence

The following are excerpts from the Qianlong Emperor's letter to King George III in 1793.

You, O King, live beyond the confines of many seas, nevertheless, impelled by your humble desire to partake of the benefits of our civilisation, you have dispatched a mission respectfully bearing your memorial. Your Envoy has crossed the seas and paid his respects at my Court on the anniversary of my birthday …

… In consideration of the fact that your Ambassador and his deputy have come a long way with your memorial and tribute, I have shown them high favour and have allowed them to be introduced into my presence. To manifest my indulgence, I have entertained them at a banquet and made them numerous gifts …

As to your entreaty to send one of your nationals to be accredited to my Celestial Court and to be in control of your country's trade with China, this request is contrary to all usage of my dynasty and cannot possibly be entertained [considered] …

… Europe consists of many other nations besides your own: if each and all demanded to be represented at our Court, how could we possibly consent? The thing is utterly impracticable. How can our dynasty alter its whole procedure and system of etiquette, established for more than a century, in order to meet your individual views? …

… Hitherto, all European nations, including your own country's barbarian merchants, have carried on their trade with our Celestial Empire at Canton. Such has been the procedure for many years, although our Celestial Empire possesses all things in prolific abundance and lacks no product within its own borders. There was therefore no need to import the manufactures of outside barbarians in exchange for our own produce. But as the tea, silk and porcelain which the Celestial Empire produces, are absolute necessities to European nations and to yourselves, we have permitted, as a signal mark of favour, that foreign hongs [merchant firms] should be established at Canton, so that your wants might be supplied and your country thus participate in our beneficence …

… Should your vessels touch the shore, your merchants will assuredly never be permitted to land or to reside there, but will be subject to instant expulsion. In that event your barbarian merchants will have had a long journey for nothing …

▲ **Source 3.25** Excerpts from the Qianlong Emperor's letter to King George III, 1793.

Source: E. Backhouse and J.O.P. Bland, Annals and Memoirs of the Court of Peking, 1914, pp. 322–31

Responding to the source

1. Describe this source. What is it, and when was it created?
2. Why does the Qianlong Emperor believe that the British should feel grateful to him?
3. What objections does the Qianlong Emperor have to the idea of a British embassy in Beijing?
4. What does the Qianlong Emperor believe about the different attitudes to trade that the Europeans have?
5. What do you think the reaction of King George and the British Government would have been to this letter?

The trade deficit

In addition to the restrictions placed on trade by the Chinese, the English had another problem in their dealings with China. While the Qianlong Emperor's letter to King George had seemed arrogant, he was correct when he said that the English were more interested in Chinese goods than the Chinese were in English goods.

In order to obtain enough tea, silk, spices and china to satisfy the English appetite for these goods, merchants had to spend vast quantities of silver rather than trading for woollens, cotton and Sandalwood from their Indian territory. This created a significant **trade deficit** as huge quantities of silver flowed out of England into China through traders. The trade deficit began to cause problems in the English economy and a frantic search was begun to find a product that the Chinese could not turn away. They found it in opium.

KEY TERM

trade deficit a situation where a country's imports are greater than its exports

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▲ **Source 3.26** A painting of How Qua, who was the head of the hang merchants in Canton, by George Chinnery, circa 1830

Opium

The British did not introduce the Chinese to opium. However, they significantly increased supply of the drug and created a very rich and profitable trade that shifted the balance in their favour.

KEY TERMS

narcotic a psychoactive drug that changes brain functions to alter mood, perception or behaviour

tincture a plant or animal extract that has been dissolved in ethyl alcohol for use as a medicine

Opium is a **narcotic** drug derived from unripe poppy seedpods. Raw opium is a white liquid substance that congeals and turns brown when exposed to the air. In its raw form, it can be ground into powder to be smoked in pipes or mixed in liquid to make a **tincture**. It was a useful substance that was prescribed by doctors to manage a variety of symptoms, most commonly and effectively, pain. It is, however, highly addictive and can be fatal in large doses.

In England, opium was most commonly used in liquid form as a medicine and called laudanum. Recreational use was prohibited as the government recognised the negative physical and social effects long-term use could have. Similarly, the Chinese Yongzheng Emperor banned the smoking and sale of opium in the 1730s, and his grandson, the Jiaqing Emperor, banned its cultivation and importation as well.

Nevertheless, English merchants saw the economic possibilities of opium and realised that it was an opportunity to shift the balance of trade. The East India Company began cultivating large quantities of opium in India, where they forced Indian farmers to grow opium poppies instead of cotton. This had the dual benefit of protecting their own cotton manufacturing industry and providing a lucrative product for the Chinese market.

It has been estimated that between two million and ten million Chinese were addicted to opium by 1838, including up to 20 per cent of government officials. This was beginning to cause serious problems for the Qing dynasty. Addicts enjoyed the euphoria associated with smoking opium. However, if they could not obtain or afford the drug, withdrawal was crippling. Addicts would go to extreme lengths to avoid withdrawal, including going without food to afford opium or turning to crime.

The opium trade caused more than social problems for the Chinese. The currency market was destabilised and there were shortages of money for investment. Prices for goods went up and down, and revenue declined as silver began to flow out of China. This affected the financial stability of the Chinese Government as tax income dropped.

▲ **Source 3.27** Raw opium latex dripping from a poppy seedpod

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▲ **Source 3.28** Opium smoking with hookah pipes in Hong Kong

END-OF-SECTION REVIEW 3.2

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What types of items were traded on the Silk Road between Europe and China?
2 What reasons did the Qianlong Emperor give for refusing all of the Macartney embassy's requests?
3 Why was the trade deficit a problem for the British?
4 What are the typical physical and social effects of opium?

Interpret

5 Why were the Chinese so determined to limit trade with the Europeans?
6 Why did the Europeans feel justified in forcing trade on the unwilling Chinese?

Argue

7 'The failure of the Macartney embassy was primarily due to a lack of cultural understanding between the parties'. To what extent do you agree or disagree with this opinion? Use evidence to support your answer.

Extension

1 Research why Macartney was reluctant to perform the kowtow to the Chinese emperor, and why the Chinese were so determined that he should. Research the rules of etiquette in British and Chinese society and make a comparison of the similarities and differences.

Digital quiz
Please see the Interactive Textbook to access digital activities

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3.3 Significant events and ideas that shaped society

FOCUS QUESTIONS

- How did conflict with the West shape China's political landscape?
- What attempts were made at reform by the Qing to modernise China and to what extent were they successful?

Video
The Opium Wars & Taiping Rebellion

The First Opium War

By the 1830s, the Daoguang Emperor and Chinese court began to look for solutions to deal with the economic and social crisis brought on by the illegal opium trade. At first, requests were made to attempt to persuade the foreigners to stop selling opium. Repeated appeals to the British Government to halt the trade were ignored.

The Emperor decided that he needed to take stronger measures to stop the flow of opium. He appointed an official called Lin Zexu to the position of Imperial Commissioner of Canton and ordered him to end the trade in opium. Lin developed a plan that included on one hand attempting to rehabilitate Chinese addicts through medical support and jobs programs, while on the other hand actively enforcing the ban that already existed on trade in opium.

▲ **Source 3.29** Commissioner Lin Zexu

▼ **Source 3.30** Qing official Lin Zexu supervises the destruction of opium in 1839

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The second half of this plan was put into stunning effect in the spring of 1839. Lin **blockaded** the factories of the foreign traders on the Pearl River for six weeks until the British surrendered approximately 20 000 of the chests of opium they had stored there. These were publicly destroyed, but the British refused to sign an agreement promising that they would stop importing opium in the future. In return, Lin threatened to ban all foreign trade from China.

On 13 December 1839, the Qing issued an **edict** banning all British trade in China. The British merchants were outraged at their treatment by the Chinese and demanded that the British Government compensate them for the loss of the opium and force the Chinese to allow the trade to continue.

KEY TERMS

blockade a situation in which a country or place is surrounded by soldiers or ships to stop people or goods from going in or out

edict an announcement of a new rule or law

DEVELOPING HISTORICAL CONCEPTS AND SKILLS 3.1

Evaluating and comparing historical sources as evidence

One key skill of the historian is to compare and contrast historical sources. Often, subtle truths can be revealed by reading between the lines.

Source A: Letter from Commissioner Lin Zexu to Queen Victoria, 1839

All those people in China who sell opium or smoke opium should receive the death penalty. If we trace the crime of those barbarians who through the years have been selling opium, then the deep harm they have wrought and the great profit they have **usurped** should fundamentally justify their execution according to law. We take into consideration, however, the fact that the various barbarians have still known how to repent their crimes and return their allegiance to us by taking the 20 183 chests of opium from their store ships and petitioning us, through their consular officer (superintendent of trade), Elliot, to receive it. It has been entirely destroyed and this has been faithfully reported to the throne in several memorials by this Commissioner and his colleagues.

Fortunately we have received a specially extended favour from his Majesty the Emperor, who considers that for those who voluntarily surrender, there are still some circumstances to palliate [make less severe] their crime, and so for the time being he has magnanimously excused them from punishment. But for those who again violate the opium prohibition, it is difficult for the law to pardon them repeatedly. Having established new relations, we presume that the rule of your honourable country, who takes delight in our culture and whose disposition is inclined towards us, must be able to instruct the various barbarians to observe the law with care. It is only necessary to explain to them the advantages and disadvantages and then they will know that the legal code of the Celestial Court must be absolutely obeyed with awe.

▲ **Source 3.31** Letter regarding the illegal trade in opium, translated, in A.J. Koutsoukis, *From Manchu to Mao: A History of Modern China*, 1992, p. 19

KEY TERM

usurp to take a position of power, especially without having the right to

Source B: Letter from Lord Palmerston to the Daoguang Emperor, 1840

If the Chinese government had suddenly determined that the law against the importation of opium should be enforced, instead of remaining, as it long has been, a dead letter, that the government should have begun by punishing its own officers who were the greatest delinquents in this matter, because it was their special duty to execute [perform] the law of their own sovereign. But the course pursued by the Chinese government has been the very reverse; for they have left unpunished their own officers, who were most to blame, and they have used violence against foreigners, who were led into transgression by the encouragement and protection afforded to them by the governor of Canton and his inferior officer. Still, however, the British government would not have complained, if the government of China, after giving due notice of exalted intentions, had proceeded to execute the law of the Empire, and had seized and confiscated all the opium which they could find within the Chinese territory and which had been brought into that territory in violation of the law. The Chinese government has the right to do so, by means of its own officers, and within its own territory.

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But for some reason or other known only to the government of China, that government did not think proper to do this. But it determined to seize peaceable British Merchants, instead of seizing the contraband opium; to punish the innocent for the guilty, and to make the sufferings of the former, the means of compulsion upon the latter; and it also resolved to force the British superintendent, who is an officer of the British Crown, to become an instrument in the hands of the Chinese authorities for carrying into execution the laws of China, with which he had nothing to do.

▲ **Source 3.32** Letter regarding the illegal trade in opium, translated, in A.J. Koutsoukis, *From Manchu to Mao: A History of Modern China*, 1992, p. 19

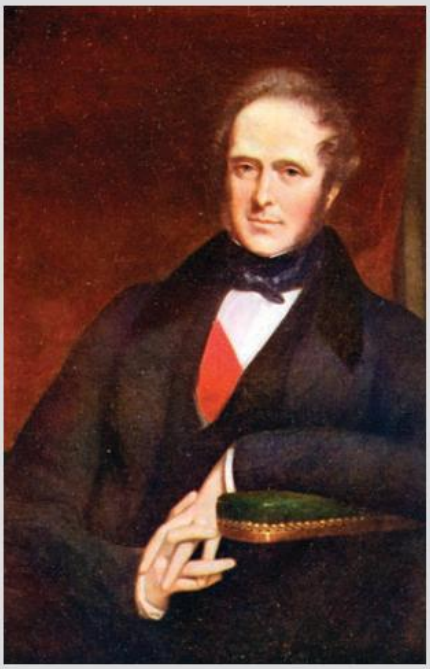
Responding to the sources

1. Describe each source. What are they, and when were they created?
2. What does Lin Zexu believe the punishment for opium dealing should be?
3. What does Lin Zexu suggest the Emperor will do for those who voluntarily surrender their opium?
4. What benefits does Lin Zexu suggest 'barbarians' would receive for obeying the legal code of the Celestial Court?
5. How does Lord Palmerston justify the British trade of opium in China?
6. Who does Lord Palmerston believe is really to blame for the sale of opium in China? Why?
7. How does Lord Palmerston suggest the Chinese should have acted to enforce the law?
8. Compare the arguments made by Lix Zexu and Lord Palmerston. What similarities and differences can you see between the two officials' methods of persuasion?

MAKING THINKING VISIBLE 3.5

Circle of viewpoints

1. **Discuss:** Lord Palmerston said that if the Chinese Government had warned British merchants, that if they had given 'due notice' that they intended to enforce the law against opium and only seized that which they could find within Chinese territory, then the British Government would not have complained.
2. **Brainstorm:** What evidence or reasoning can you provide to support or challenge Lord Palmerston's claim? Could the Chinese have got rid of opium and avoided the First Opium War?
3. **Dramatise:** Choose a viewpoint – Chinese, British or other foreign merchant in Canton. Imagine the stance a person from this viewpoint would be likely to take. Would they think the claim is true? False? Uncertain? Why? Go around in a circle and dramatically speak from the viewpoint.
   - My viewpoint is …
   - I think this claim is true/false/uncertain because …
   - What would convince me to change my mind is …
4. **Stand back:** Now step back from the circle of viewpoints and take everything into account. What is your conclusion? What new ideas or questions do you have?



▲ **Source 3.33** Henry John Temple, Third Viscount Palmerston

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In June 1840, British forces commanded by Rear Admiral George Elliot arrived at the Chinese coast. These reinforcements consisted of 16 warships, 32 assorted troopships and at least 4000 soldiers. The British saw this war as a necessary step to maintain both national honour and the ability to trade with China, whether the Chinese wanted it or not. The British navy proved far superior in battle to the Chinese war **junks** and Elliot was able to blockade key ports without difficulty. At the Hai River near the port of Tianjin, Elliot delivered the letter to the Emperor from Lord Palmerston, which responded to Lin's letter and made a list of demands.

As the British travelled north along the Chinese coast, ever closer to the capital, Emperor Daoguang became increasingly concerned about the threat they posed. Lin lamented to the Emperor that had China used one-tenth of the customs duties for making gunboats they would have been able to repel the British. The Emperor was unimpressed and declared that he had lost trust in Lin. He authorised another Qing official named Qishan to replace Lin and ordered him to fix the situation with the British. Qishan met with Elliot and convinced him that the emperor had sent a delegation to Canton to investigate the British merchants' grievances and that he should return there to negotiate with them.

Elliot agreed and returned to Canton, only to find out that Qishan had been bluffing. There was no delegation. The British, dismayed by Admiral Elliot's falling for so easy a trick, replaced him with his cousin Captain Charles Elliot. Negotiations between Captain Elliot and Qishan began in Canton in December 1840, but no agreement was forthcoming.

In January 1841, Captain Elliot attacked the forts at Chuenpi and threatened further attacks or invasion if the Chinese would not agree to a treaty. The Convention of Chuenpi was drafted and agreed, including the reopening of trade through Canton for the British and the **cession** of Hong Kong. Neither country was happy with the terms of the treaty, and the Emperor refused to sign it.

KEY TERMS

junk a Chinese ship with a flat bottom and square sails

cession surrendering of land to another country

After the repudiation of the Chuenpi Convention, conflict between the British forces and the Chinese continued until August of the following year. By that point, it had become clear that the British forces were technologically far superior to the Chinese and there was no prospect of the Chinese winning the war. Sir Henry Pottinger, who had replaced Captain Elliot in August 1841, compelled the Chinese to sign the Treaty of Nanjing on 29 August 1842.

ACTIVITY 3.5

Using historical sources as evidence

The following extract comes from the Treaty of Nanjing of 1842.

> Her Majesty the Queen of the United Kingdom of Great Britain and Ireland, and his Majesty the Emperor of China, being desirous [wanting something] of putting an end to the misunderstandings and consequent hostilities which have arisen between the two countries, have resolved to conclude a treaty for that purpose …
>
> **Article 1**
>
> There shall henceforward be peace and friendship between her Majesty the Queen of the United Kingdom of Great Britain and Ireland, and his Majesty the Emperor of China, and between their respective subjects, who shall enjoy full security and protection for their persons and the property within the dominions of the other.
>
> **Article 2**
>
> His Majesty the Emperor of China agrees that British subjects, with their families and establishments, shall be allowed to reside, for the purpose of carrying on their mercantile pursuits, without molestation or restraint at the cities and towns of Canton, Amoy, Foochow-fu, Ningpo, and Shanghai, and her Majesty the Queen of Great Britain, et cetera, will appoint superintendents or consular offices to reside at each of the above named towns or cities, to be the medium of communication between the Chinese authorities and the said merchants …

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KEY TERMS

careen to ground a ship on its side in order to repair damage to the hull

redress compensation for an injustice

plenipotentiary a diplomat authorised to represent a ruler or government in negotiations

Article 3

It being obviously necessary and desirable, that British subjects should have some port where they may **careen** and refit their ships, when required, and keep stores for that purpose, his Majesty the Emperor of China cedes to her Majesty the Queen of Great Britain, et cetera the island of Hong Kong, to be possessed in perpetuity by her Britannic Majesty, her heirs and successors, and to be governed by such laws and regulations as her Majesty the Queen of Great Britain et cetera shall see fit to direct.

Article 4

The Emperor of China agrees to pay the sum of 6 millions of dollars as the value of opium which was delivered up at Canton in the month of March 1839, as a ransom for the lives of her Britannic Majesty's superintendent and subjects, who had been imprisoned and threatened with death by the Chinese high offices.

Article 6

The government of her Britannic Majesty having been obliged to send out an expedition to demand and obtain **redress** for the violent and unjust proceedings of the Chinese high authorities, the Emperor of China agrees to pay the sum of 12 millions of dollars on account of the expenses incurred …

Done at Nanking and signed and sealed by the **plenipotentiaries** on-board her Britannic Majesty's ship Cornwallis, this 29th day of August, 1842, corresponding with the Chinese date, 24th day of the seventh month in the 22nd year of Taou Kwang …

▲ **Source 3.34** Excerpt from the Treaty of Nanjing, 1842

Responding to the source

1. Describe this source. What is it, and when was it created?
2. What benefit do you think the Chinese were likely to receive from the first Article?
3. Which terms of the treaty are most similar to the requests made by George Macartney in 1793? What does this tell you about British aims with the treaty?
4. Which terms of the treaty do you think the Chinese would have resented most? Explain your answer.

Extension

1. This treaty marks the point where the Island of Hong Kong is first given over to the British. Do some research to find out how the transfer of Hong Kong in the Treaty of Nanjing led to the situation of Hong Kong as it is now in the twenty-first century.

▼ **Source 3.35** The signing and sealing of the Treaty of Nanjing aboard the British ship HMS *Cornwallis*, Nanking, 29 August 1842

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The Century of Humiliation

The beginning of the First Opium War is viewed by many Chinese as the beginning of the Century of Humiliation. It was a period of military weakness, humiliation by foreign powers and internal upheaval that did not end until the establishment of the People's Republic of China in 1949.

The Treaty of Nanjing sparked French and American traders to demand their own treaties. The Chinese gave into these demands to avoid further shameful military defeats. However, the terms of these treaties only intensified their problems.

There were three terms in these treaties that caused them particular harm. First, fixed tariffs limited the revenue the Chinese Government could collect from foreign trade. Second, foreigners were not to be subject to Chinese laws. Third, the 'most favoured nation clause' meant that any benefit given to another country must also be given to all of the others.

The treaty also addressed none of the economic or social problems caused by the revived trade in opium. Silver continued to drain out of China, causing escalating financial difficulties. Opium addiction grew further, leading to social decay, loss of productivity and crime.

▲ **Source 3.36** Queen Victoria of Great Britain

ACTIVITY 3.6

Using historical sources as evidence

The following text was found on a sign posted in front of the 13 factories in Guangzhou on 18 December 1845.

> We, the literati and righteous people of Guangzhou, … publish these instructions to let the barbarian merchants of all nations understand our intentions.
>
> The injuries, deceits, cruel deeds, and evil acts of the English resident barbarians are as innumerable as the hairs of the head. Now they plot to coerce [put pressure on] our high authorities. They have long wished to enter the city; and our superiors, from the depths of their virtue and the greatness of their benevolence, have given in and issued a **proclamation** granting permission to enter the city. They have not considered that the English barbarians, born and raised in **noxious** regions beyond the bounds of civilisation, having the hearts of wolves, the visage of tigers, and the cunning of foxes, plan to take possession of our province and only desire to enter the walls so that they may spy out the land. Now having received a proclamation allowing the entrance, they will not only exercise violence and usurpation, but will insult and injure the people to an unspeakable degree.
>
> Therefore, we, the literati and the people of Guangzhou, however small a strength, have prepared ourselves for the contest. We declare that sooner than obey the proclamation and suffer these wild barbarians, we will act in opposition and adhere to the old regulations of our government. In public assembly, we decided to await the day they enter the city, then exterminate their odious race and burn their houses. With united hearts, we will destroy them in order to display celestial vengeance and manifest public indignation.

▲ **Source 3.37** A sign posted in front of the 13 factories in Guangzhou on 18 December 1845, translated, in Patricia Buckley Ebrey, *Chinese Civilization: A Sourcebook*, 1993, p. 311

KEY TERMS

proclamation an official document or announcement

noxious harmful or dangerous

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Responding to the source

1. Describe this source. What is it, and when was it created?
2. What do the literati accuse the 'English resident barbarians' of doing?
3. What do the Chinese literati think of the character of the English?
4. What do the literati and people of Guangzhou promise to do when the English enter the city?
5. What is the purpose of this sign?

► **Source 3.38** An auction of English goods in Canton, 1858

The Second Opium War

The Second Opium War began just 14 years after the end of the First Opium War. The Chinese were deeply unhappy with the terms of the treaty and openly hostile at many of the ports opened up in the agreement. At Guangzhou, in particular, foreigners were prevented from entering the city and met with violence if they tried.

The event that sparked the Second Opium War became known as the *Arrow* incident. In October 1856, the cargo ship *Arrow* was seized by Chinese authorities on suspicion of smuggling and piracy.

► **Source 3.39** Chinese officials remove the British flag and arrest sailors for smuggling on the *Arrow*, a British trade ship

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Its crew of 12 Chinese sailors was detained. The ship was flying a British flag and was registered in Hong Kong, so the British demanded the release of the ship and sailors as well as an apology for the indignity done to the flag.

The Chinese Commissioner, Ye Mingchen, released nine of the 12 sailors but refused Britain's other demands. Negotiations stalled and the British began to attack Guangzhou. They managed to capture several forts in the city but had to retire to Canton to wait for reinforcements.

After almost a year of delays due to British elections, the Indian mutiny and negotiations with France, a joint British–French delegation presented a list of demands to the Emperor in December 1857. The Emperor did not respond, so the British sent in the Royal Navy. With the assistance of the French, they captured the port city of Tianjin, which is just over 100 kilometres from Beijing.

The Chinese **sued for peace**, but ultimately the court would not **ratify** the punitive Treaty of Tianjin and the war continued. By 1860, the Emperor and his court were forced to flee Beijing for the Manchu resort at Chengde. In their absence, Lord Elgin marched his troops into Beijing to loot and burn the Summer Palace to the ground.

KEY TERMS

sue for peace request a peace settlement, usually by a losing side in a war

ratify the official approval of an act already agreed by a lesser authority

The Emperor's brother, Prince Gong, had remained in Beijing to meet with the British. He was ultimately forced to agree to obey the terms of previously agreed treaties and to ratify the Convention of Beijing. The terms of these agreements were financially crushing but also humiliating for the Chinese people and the Qing Dynasty in particular. The government was now so weakened that, when it was threatened by internal strife, foreign forces were needed to support the regime.

ACTIVITY 3.7

Using historical sources as evidence

◄ **Source 3.40** A cartoon published in *Punch* on 4 September 1858 on the Second Opium War

Responding to the source

1. Describe this source. What is it, and when was it created?
2. Who do the three figures represent? What are the clues to their identities?
3. Why is the standing figure holding a teapot shaped like a cannon?
4. What is the cartoonist trying to say about the outcome of the Second Opium War? How do you know?
5. Is the cartoonist sympathetic or hostile towards the Chinese? Justify your response with evidence from the image.

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Responding to the source

1. Describe this source. What is it, and when was it created?
2. Who does the figure on the horse represent?
3. Who or what does the dragon in the foreground represent?
4. What is the cartoonist trying to say about the outcome of the Second Opium War? How do you know?
5. Is the cartoonist sympathetic or antagonistic towards the Chinese? Justify your response with evidence from the image.

► **Source 3.41** A cartoon published in *Punch* on 22 December 1860

▲ **Source 3.42** A Chinese depiction of the Battle of Fatsham Creek on the Canton River during the Second Opium War. This battle took place on 1 June 1857 when the British Royal Navy destroyed the Chinese fleet before advancing on Canton.

The Taiping Rebellion

The Taiping Rebellion was a significant internal crisis that nearly brought down the Qing government. It raged between 1850 and 1864 in south-eastern China. Ultimately, the rebellion grew out of dissatisfaction with the Qing Dynasty. After years of humiliating concessions to foreigners, many felt the Qing had lost their Mandate of Heaven.

Difficult social and economic conditions associated with a population explosion and poor management of resources were worsened by a series of natural disasters throughout the 1840s, including floods and famines. The opium trade continued to harm even those Chinese who chose not to use it. The flood of silver into the pockets of foreign opium traders drove up the value of silver, which was the required form of tax collection from peasants. Silver became harder to come by and peasants' taxes rose significantly at a time when they could least afford to pay. The Qing seemed to be doing little to try to relieve the misery of their people.

The leader of the Taiping Rebellion was a man called Hong Xiuquan, a Guangdong native from a poor Hakka family. The Hakka are a subgroup of the Han who have a different language and distinct social and cultural practices. Hakka women, for example, never bound their feet.

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Hong aspired to become a government official, but while he had passed the qualification exam, he was not able to pass the examination to reach the first degree. After his second failure, Hong became ill and had a feverish dream in which he was introduced to his 'father' and 'elder brother,' both of whom were blond and bearded. He was told it was his destiny to destroy the 'demons'. After he recovered from his illness, Hong attempted the examinations one last time, in 1843. Again he failed, and this time he was left bitter, believing that officials were conspiring against him.

On his return home, Hong read some of the religious leaflets he had been given by Christian missionaries in the city. It was then he had his revelation. Hong realised that the father in his dream was in fact God, and his elder brother was Jesus Christ. He had a new mission now, to rid China of the demons, who he interpreted to be the Manchu Qing. Hong did study the religious beliefs of the Christian missionaries, but he formulated his own version of the religion and began preaching it to others.

Hong preached that he had been chosen by God to establish the Kingdom of God on Earth in China by removing the Manchu Qing from power. His followers grew rapidly in number as he travelled through the provinces of the south-east gathering converts. His interpretation of Christianity included many traditional Christian beliefs, including baptism and the Ten Commandments, but did not include ideas of mercy or forgiveness.

▲ **Source 3.43** Hong Xiuquan (1814–1864) the instigator of the Taiping Rebellion (left) with a copy of the edict that he issued (right)

ACTIVITY 3.8

Using historical sources as evidence

The following extract comes from the Hong Xiuquan, leader of the Taiping Rebellion.

> Our Heavenly Prince has received the Divine Commission to exterminate the Manchus – to exterminate all idolaters [people who worship images of gods] generally, and to possess the Empire as its True Sovereign. It and everything in it is his, its mountains and rivers, its broad lands and public treasuries: you, and all that you have, your family, males and females from yourself to your youngest child, and your property from your **patrimonial estates** to the bracelet on your infant's arm. We command the services of all, and we take everything. All who resist us are rebels and idolatrous daemons, and we kill them without sparing; but whoever acknowledges our Heavenly Prince and exerts himself in our service shall have full reward – due honour and station in the armies and court of the Heavenly Dynasty.

▲ **Source 3.44** Hong Xiuquan, leader of the Taiping Rebellion, translated, in A.J. Koutsoukis, *From Manchu to Mao: A History of Modern China*, 1992, p. 26

KEY TERM

patrimonial estates property inherited by a son from their father

Responding to the source

1. Describe this source. What is it, and when was it created?
2. What does Hong Xiuquan say he has been given 'Divine Commission' to do?
3. What does Hong Xiuquan say he owns?
4. What will happen to people who resist Hong Xiuquan?
5. What rewards does Hong Xiuquan promise to those who follow him?
6. What does this source suggest about the origins of the Taiping Rebellion?

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▲ **Source 3.45** The Taiping's areas of control

The first clash between Hong's followers and Qing troops occurred in July 1850, and it was a great success for the rebels. The Manchus were particularly unpopular in the south, and many other anti-Qing groups joined Hong's followers to oppose them.

In September 1851, Hong declared the establishment of a new dynasty, the Tai Ping Tian Guo, or the Heavenly Kingdom of Great Peace, and proclaimed himself the Heavenly King. In this new kingdom, which was to be ruled on moral lines, women and men would be equal, wealth would be shared and suffering in the form of slavery, footbinding, opium smoking and corruption by officials would be eliminated. In 1852, after claiming control of significant areas in the south-eastern provinces, Taiping forces began to head north with the aim of capturing Beijing.

While they never did reach Beijing, the Taiping forces captured Nanjing in 1853 and at least 600 walled cities. Qing soldiers defeated a Taiping force that was sent north in 1855, and internal power struggles weakened the Taiping leadership. However, the rebellion continued.

The British and other Europeans had initially looked on the Taiping with some favour for their Christian values; however, it soon became clear that the Taiping version of Christianity was not consistent with the Westerners' version. It was decided that assisting the Qing dynasty, over whom they had a great deal of influence, would be more beneficial in the long run.

Between 1860 and 1864, Western forces joined with the Qing to fight against the Taiping, though they played a relatively small part in the war. In July 1864, the Taiping were finally defeated in Nanjing. Hong himself committed suicide, but the rest of the Taiping fought to the death; none were captured.

The 14 years of the Taiping Rebellion took a devastating toll on China. Most accounts put the death toll at 20–30 million; however, if you count those who died from floods, disease and famine worsened by the war, the figure is likely much higher.

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▲ **Source 3.46** A painting of a battle during the Taiping Rebellion

ACTIVITY 3.9

Using historical sources as evidence

The Xiamen Small Sword Society was a secret society that joined with the Taipings to take control of several cities in the early 1850s.

The Grand Marshal Huang of the Ming dynasty and the Han people, in order to safeguard the lives of the commoners and merchants, proclaims **martial law**:

I have heard that heaven and earth change the course of order: after a time of great prosperity, there must follow a period of chaos and after a period of great turmoil, there must arise a general desire for peace.

The Qing dynasty has been governing China for more than 200 years. Corruption of officials and oppression of the people clearly indicate that its mandate has come to an end. I now lead the righteous and benevolent army to save the people and to punish those who have been cruel. I have ordered that my soldiers shall pillage neither the merchants nor the common people nor shall they rape women. The arrival of my armies will not cause the slightest disturbance to the people. If any soldier disobeys my orders I shall punish him in accordance with martial law, permitting no favouritism. You the merchants and the people, should apply yourselves to your tasks and should not be frightened. I am strict in abiding by my words and enforcing my orders. You should obey them unerringly.

10th of April 1853

▲ **Source 3.47** Martial law proclamation of Grand Marshal Huang, translated by Jeh-hang Lai, in Patricia Buckley Ebrey, *Chinese Civilization: A Sourcebook*, 1993, p. 319

KEY TERM

martial law when a military force is given direct authority over normal civilian functions

Responding to the source

1. Describe this source. What is it, and when was it created?
2. What does Grand Marshal Huang claim the Qing have done wrong?
3. Why do you think Grand Marshal Huang claims to be of the Ming dynasty?
4. How does Grand Marshal Huang propose to keep control of his army?
5. Why do you think a promise like this would have been necessary?

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Digital quiz
Please see the Interactive Textbook to access digital activities

END-OF-SECTION REVIEW 3.3

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 What was Lin Zexu's plan to eliminate opium from China?
2 Who did Lord Palmerston suggest was really to blame for the sale of opium in China?
3 What were the key British demands of China in the Treaty of Nanjing?
4 What events began the Second Opium War?
5 Who was the leader of the Taiping Rebellion and who did he believe he really was?
6 What were the key goals of the Taiping Rebellion?

▲ **Source 3.48** Opium poppies were cultivated in India and the opium was sold in China for silver

Interpret

7 Why did the Chinese wish to prevent opium being shipped in by the foreigners?
8 Why did the British refuse to stop selling opium?
9 Why did Chinese people begin to believe the Qing had lost the Mandate of Heaven?
10 Why did the Westerners decide to side with the Chinese Government over the Taiping rebels?

Argue

11 'The British decision to use military force to protect an illegal trade in opium was hypocritical and morally corrupt.' To what extent do you agree or disagree with this opinion? Use evidence to support your answer.

Extension

1 Research the 'Century of Humiliation' and make a timeline of the events between 1839 and 1949 that you believe led to this era being given this title.

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3.4 Continuity and change in life in China

FOCUS QUESTIONS

- What attempts at reform were made by the Qing to modernise China and to what extent were they successful?
- What factors led to dissatisfaction and ultimately rebellion against the Qing rule?

The Self-Strengthening Movement

Despite victory against the Taiping in 1864, China found itself at a low point. The need for reform was clear to many who realised that some of the crises they had suffered in the previous decades were a direct result of China's refusal to progress and make use of knowledge from the Westerners, particularly regarding military armaments. A conservative Confucian mindset or worldview was still the standard among Chinese officials, so only military and technological progress was considered.

Lin Zexu, the official who had sparked the First Opium War, had warned the Emperor at the time that the Chinese navy was ill-equipped and ill-prepared to face the British. He recommended adopting Western military technology and spending imperial funds on the navy rather than new palaces. Other officials, including Li Hongzhang, Zeng Guofan and Prince Gong, agreed that change was needed and worked to convince the regents of the then four-year-old Tongzhi Emperor that it was unavoidable. In 1862, the Tongwen Guan, a school for teaching Western languages and later science, was opened in Beijing. Similar schools were opened in Guangzhou and Fuzhou in the following years.

A military college was established in Tianjin, with the German army acting as a model for the new Chinese forces. Young men were also sent overseas to study military subjects at foreign colleges. Factories were set up to begin to produce Western-style armaments, and arsenals were constructed in Shanghai Fuzhou in Nanjing.

An effective navy was a key desire of the Chinese, as their war junks had proven worthless against Western forces. At first, they employed French engineers to assist in the building of ships in Fuzhou, but unfortunately this relationship broke down and they had to turn to the British. They purchased ships and contracted British naval instructors to teach them to use them.

Transportation and communication in a country as large as China was always going to be a challenge, but the reform efforts in this area were most disappointing. It took until 1879 before the first telegraph line was established, linking the cities of Taku and Tianjin. The line was extended to Shanghai two years later. Several short sections of railway were constructed, but these were unpopular and it was not until the 1890s that more railways were constructed under foreign ownership.

On balance, the Self-Strengthening Movement is usually considered a failure. The slow pace of change ended up satisfying no one. The reformers wanted everything done more quickly, while the conservatives preferred no change at all. Funding was largely provided on a provincial level, which meant there was little central direction to the reforms. Projects were delayed by corruption and inefficiency, and deeply conservative peasants pushed back against the change, at times violently.

However, while it did not fix everything, it did put China on a path towards catching up with the West eventually, and it edged China closer to becoming a modern state. Some argue that without the Self-Strengthening Movement the empire may have ended decades earlier than it eventually did.

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▲ **Source 3.49** Prince Gong

▲ **Source 3.50** Li Hongzhang

ACTIVITY 3.10

Using historical sources as evidence

The following extract is from Li Hongzhang on the need for self-strengthening.

> The Westerners particularly rely upon the excellence and efficacy of their guns, cannon, and steamships, and so they can overrun China. The bow and spear, small guns, and native made cannon which have hitherto been used by China cannot resist their rifles, which have their bullets fed from the rear opening. The sailing boats, rowboats, and the gunboats which have been hitherto employed cannot oppose their steam-engine warships. Therefore, we are controlled by the Westerners.
>
> To live today and still say 'reject the barbarians' and 'drive them out of our territory' is certainly superficial and absurd talk. Even though we wish to preserve the peace and to protect our territory, we cannot preserve and protect them unless we have the right weapons. They are daily producing their weapons to strive with us for supremacy and victory, pitting their superior techniques against our inadequacies, to wrangle with and to affront us. Then how can we get along for one day without weapons and techniques?
>
> The method of self-strengthening lies in learning what they can do, and in taking over what they rely upon, moreover, their possession of guns, cannons, and steamships began only within the last hundred years or so, and their progress has been so fast that their influence has spread into China. If we can really and thoroughly understand their methods – the more we learn, the more we improve – and promote them further and further, can we not expect that after a century or so we can reject the barbarians and stand on our own feet?

▲ **Source 3.51** Li Hongzhang on the need for self-strengthening in 1872, translated, in Su-Yu Teng, John K. Fairbank et al., *China's Response to the West: A Documentary Survey* 1939–1923, 1975, p. 109

Responding to the source

1. Describe this source. What is it, and when was it created?
2. What advantage does Li Hongzhang suggest the Westerners have in war?
3. Why does Li Hongzhang suggest it is absurd to talk of 'rejecting the barbarians'?
4. What, according to Li Hongzhang, did the Chinese need to do to self-strengthen?
5. What does Li Hongzhang suggest is the ultimate aim?

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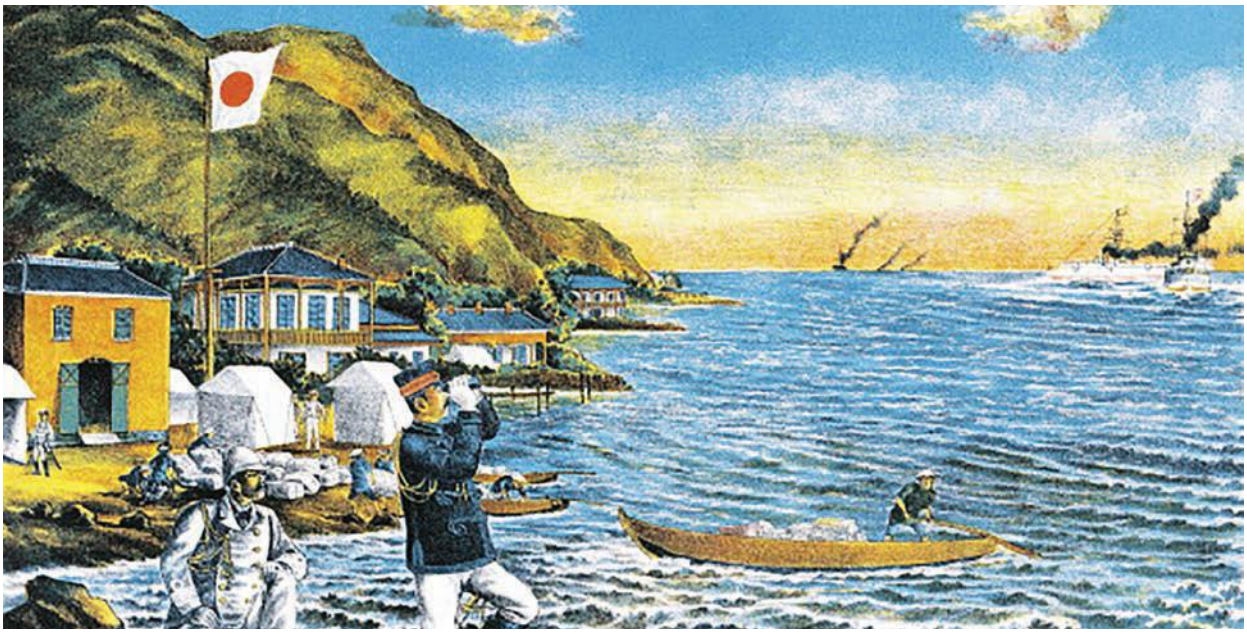
Amazing but true …



▲ **Source 3.52** The Japanese occupying Formosa (Taiwan), February 1895

The origins of the Sino-Japanese War (1894–95) lay in a struggle between China and Japan for control of Korea. Despite expectations of a Chinese military victory, the contest was one-sided. The Japanese defeated Chinese forces at Pyongyang, in present-day North Korea, then decisively won a naval battle in September 1894. China was forced to sign the Treaty of Shimonoseki, recognising Korean independence and ceding Taiwan to Japan.

Empress Cixi and the Hundred Days Reform

The most powerful member of the Qing court during its final half-century was not an emperor, but a former concubine. Empress Dowager Cixi had entered the palace as 16-year-old in 1851 and risen to higher status in 1856 when she gave birth to the Xianfeng Emperor's only surviving son.

In her position of favourite and educated in the Chinese language, Cixi took an active role in the affairs of state, taking on more responsibility as the Emperor sickened. When the Xianfeng Emperor died in 1861, his five-year-old son became the Tongzhi Emperor. Cixi was granted the title of Empress Dowager, but not initially appointed as a regent. Instead, she had to conspire with the previous Emperor's brother, Prince Gong, to have the eight chosen regents arrested and imprisoned. Cixi and the Empress Dowager Cian (Empress Consort – that is, wife – of the Xianfeng Emperor), became co-regents to the new child Emperor.

For the next 47 years, Cixi spent most of her time ruling China as a regent or manipulating events

▲ **Source 3.53** Empress Dowager Cixi

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in the background. Though she was politically conservative, the reforms of the Self-Strengthening Movement largely took place under Cixi's rule.

Cixi's son, the Tongzhi Emperor, took up rulership in his own right in 1873, but was dead of either syphilis or smallpox just two years later without an **heir**. Cixi's sister's son was enthroned as the Guangxu Emperor and, as he was only four years old at the time, Cixi and Cian resumed their roles as regents. After the death of Empress Dowager Cian in 1881, Cixi ruled as sole regent.

KEY TERM
heir a person who inherits the property and title of another

The Guangxu Emperor came of age in 1887. However, Empress Dowager Cixi bowed to pressure from several courtiers to remain regent, and it took a further two years until she decided to retire. Even from retirement Cixi played an active role in government. The Emperor consulted her regularly and was intensely aware of the influence she still held over the court and government. During royal audiences, Cixi sat behind a decorative screen to listen to and observe the Emperor's discussions.

In 1898, the Guangxu Emperor attempted to institute a series of genuinely radical reforms over a short period of time. Part of the plan involved the forceful removal of Empress Dowager Cixi. Unfortunately for the Guangxu Emperor, his plan was betrayed and Cixi acted first.

On 21 September 1898, 103 days into the Emperor's reform program, the Imperial Palace was raided by conservative officials and eunuchs under the orders of Cixi. All of the documents and orders related to the reformation were confiscated. The Guangxu Emperor was placed under house arrest in a palace near Beijing, and Cixi announced to the court and country that he was unwell. Naturally, with the Emperor removed from power, Cixi had to step up and rule again as regent.

The Guangxu Emperor's attempt to drag the country forward became known as the Hundred Days' Reform in reference to its short duration. While all of the key reform orders were withdrawn in the days after Cixi took back power, some of them re-emerged 10 years later as part of Cixi's New Policies.

The legacy of Empress Dowager Cixi in the dying years of the empire is hotly argued. Some historians describe her as a very conservative ruler who was willing to use any underhand means to gain and maintain power while attempting to keep China firmly in the past. Others paint a more complimentary picture and suggest that her leadership kept the empire functioning much longer than it otherwise would have. It was her gradual introduction of reforms that was ultimately more effective than any of the proposed or attempted radical reformations.

ACTIVITY 3.11

Using historical sources as evidence

The following is a reform edict from Dowager Empress Cixi in 1901.

> All human rules must be subject to alteration. It is not foolish to put fresh strings in a musical instrument; nor is it unwise to change laws made by men. When necessary, our ancestors introduced change. Most laws in time become out of date. The entire system of government must be reorganised so that China will again be rich and strong. The Empress Dowager has stressed the urgent need to adopt the good methods followed in other lands. Our past errors will help us to act more wisely in the future. We must no longer distinguish between Chinese ways and foreign ways. So far, we have occupied only the outer clothes of the West. We must go further. We must revise ancient methods, stamp out abuses in our system of government and reform completely. When reforms are introduced, it will be essential to choose honourable and competent men for public office.

▲ **Source 3.54** Cixi's reform edict of 1901, translated, in A.J. Koutsoukis, *From Manchu to Mao: A History of Modern China*, 1992, p. 56

Responding to the source

1. Describe this source. What is it, and when was it created?
2. How does Cixi justify the need for reform?
3. Why does Cixi refer to the actions of their ancestors?
4. What does Cixi say that the Chinese must do now?

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The Boxer Rebellion

The Society of Righteous and Harmonious Fists, or 'Boxers' as they were known in the West, emerged in Northern China as a secret society focused on ridding the country of the foreigners. Their slogan, 'protect the Qing, destroy the foreigners', spelt out their aims explicitly. They were called Boxers by the Europeans because they practised a form of weaponless martial arts.

Since the Conventions of Beijing in 1860, European missionaries were no longer restricted to the concessions and had been flooding into the interior of China, eager to save the **pagan** masses. While they did manage to convert some, the vast majority of Chinese were unwilling to abandon their own beliefs. They did not like the demand to drop their worship of the ancestors, and they believed that Christian church steeples were too high and ruined the harmony of the villages. They were contemptuous of converts who accepted charity from missionaries, calling them 'rice Christians'. The Boxers found it easy to recruit members from among the peasants, but they also attracted members of the literati and scholar classes who resented the foreign intrusions.

KEY TERM

pagan a person who has no religion or a religion other than Christianity, Judaism or Islam

▲ **Source 3.55** European forces advance towards the Boxer army outside the imperial castle, Beijing

▲ **Source 3.56** Photograph of Boxer Rebels

ACTIVITY 3.12

Using historical sources as evidence

The following was the First notice from the Boxers in 1900.

> Attention: all people in markets and villages of all provinces in China – now, owing to the fact that Catholics and Protestants have vilified [mocked] our gods and sages [scholars], have deceived our emperors and ministers above, and opposed the Chinese people below, both our gods and our people are angry at them, yet we have to keep silent. This forces us to practise the I-ho magic boxing so as to protect our country, expel the foreign bandits and kill Christian converts, in order to save our people from miserable suffering. After this notice is issued to instruct you villagers, no matter which village you are living in, if there are Christian converts, you ought to get rid of them quickly. The churches which belong to them should be unreservedly burnt down. Everyone who intends to spare someone, or to disobey our order by concealing Christian converts, will be punished according to the regulation when we come to his place and he will be burnt to death to prevent him impeding [interfering with] our program. We especially do not want to punish anyone by death without warning him first. We cannot bear to see you suffer innocently. Don't disobey this special notice!

▲ **Source 3.57** First Boxer notice c.1900, translated, in A.J. Koutsoukis, *From Manchu to Mao: A History of Modern China*, 1992, p. 46

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Responding to the source

1. Describe this source. What is it, and when was it created?
2. What crimes are the Catholics and Protestants accused of committing?
3. What does this notice suggest should be done to Chinese people who have converted to Christianity?
4. What is the purpose of this notice, according to its author?

▲ **Source 3.58** The erosion of China's frontier system by four powerful nations

There had already been many independent peasant attacks on the foreigners, including six between 1896 and 1897 in central Chinese provinces. The coordinated attacks by the Boxers began in 1898 with attacks on Christian missions and telegraph lines. The violence spread and, by June of 1900, the Boxers had reached the city of Beijing. There they destroyed everything associated with foreigners, including churches, railways, telegraph lines and Chinese Christians, before turning their attention on the foreign concessions. These were reasonably well protected with walls and armaments, so the Boxer forces besieged them.

There was a great deal of sympathy within the Chinese court for the Boxers, as the foreigners were only ever tolerated. Empress Dowager Cixi decided that she could use the Boxers for her own ends and allowed Qing troops to help the Boxers attack the foreign legations.

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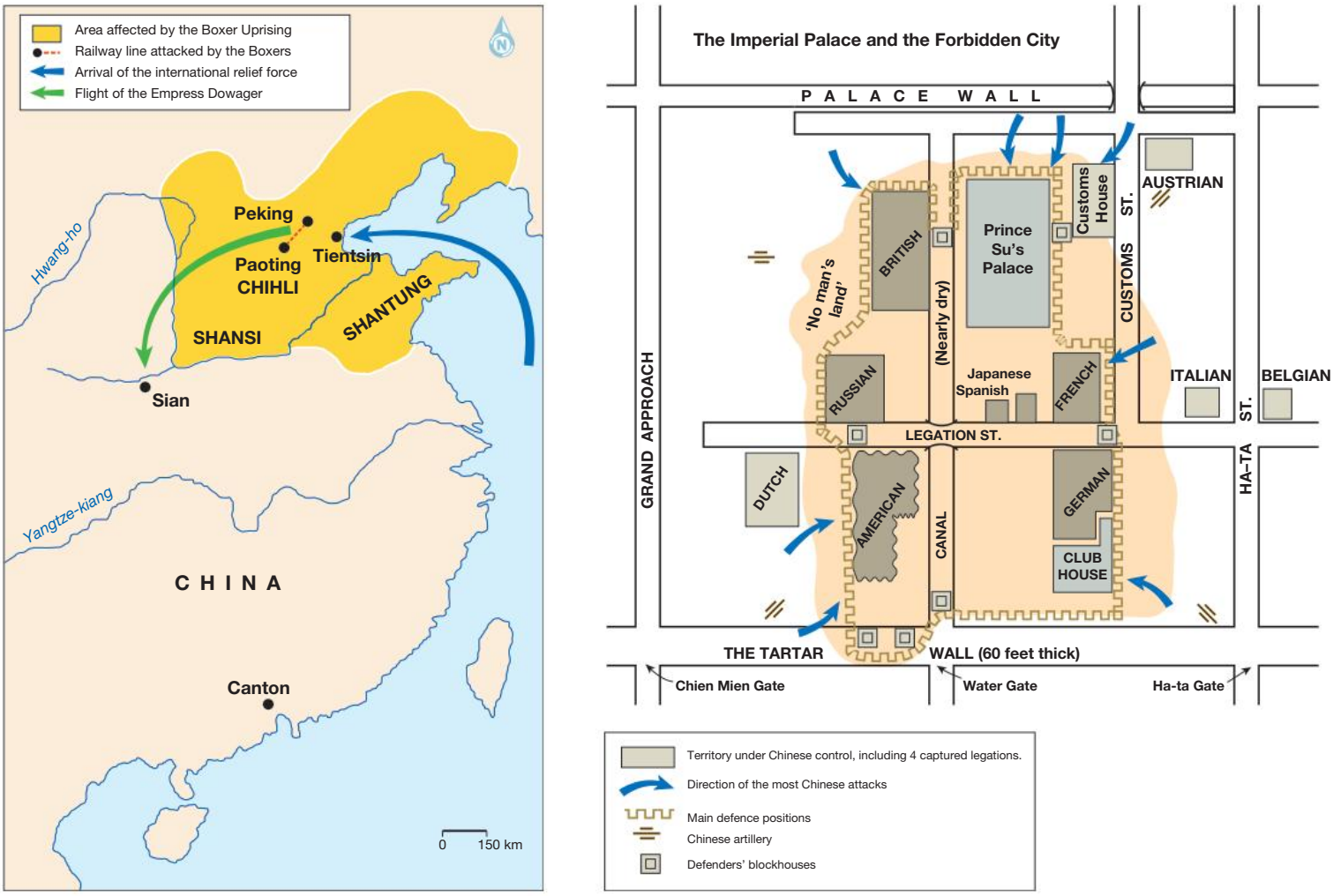

▲ **Source 3.59** The location of the Siege of the Legations during the Boxer Rebellion

On 21 June 1900, Cixi declared war against all the foreign powers that had treaty contracts with China and demanded they leave Beijing. An international squadron made up of eight foreign powers who had diplomats in danger landed in Tianjin in July and headed for Beijing.

On 14 August, the foreign force fought off about 20 000 men and made their way into Beijing to rescue the diplomats and Chinese Christians who had been barricaded in the legation quarters. The Siege of the Legations had lasted for 55 days and killed around 250 foreigners.

▲ **Source 3.60** Fierce fighting during the Boxer Rebellion

The eight-nation alliance

Eight foreign nations that had financial interests in China formed a military alliance in order to protect the legations and resist the Qing's attempt to force them out of the country. The members of the alliance were:

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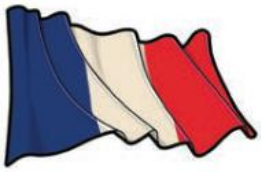
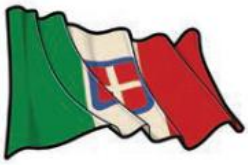
Empire of Japan		United Kingdom	
Russian Empire		French Republic	
United States of America		Kingdom of Italy	
German Empire		Austria-Hungary	

ACTIVITY 3.13

Using historical sources as evidence

FAKE NEWS! The following account of the Boxer Rebellion was printed in the *Daily Mail* newspaper in Britain in 1901 and is entirely fictional. There was no 'Peking massacre'. While the legation quarter in Beijing (Peking) was besieged by Boxer rebels for 55 days, they were never overrun and most residents of the legations survived to be relieved by the international force in August 1901.

> The Europeans fought with calm courage to the end against overwhelming hordes of fanatical barbarians thirsting for their blood. While the ammunition lasted they defied Chinese rifle and artillery fire and beat back wave after wave of their assailants. When the last cartridge had gone their hour had come. They met it like men. Standing to their battered defences they stayed the onrush of the Chinese, until, born down by sheer weight of numbers they perished at their posts. They have died as we would have had them die, fighting to the last for the helpless women and children who were to be butchered over their dead bodies … Of the ladies, it is enough to say that in this awful hour they showed themselves worthy of their husbands. Their agony was long and cruel, but they have borne it nobly, and it is done.

▲ **Source 3.61** A fictitious account of the 'Peking massacre' from the *Daily Mail*, a London newspaper, 1900, in Ian Copeland, *The Burden of Empire: Perspectives on Imperialism and Colonialism*, 1990, p. 43

Responding to the source

1. Describe this source. What is it, and when was it created?
2. What does this report suggest about the actions and behaviour of the Chinese?
3. What does this report suggest about the actions and behaviour of the Europeans?
4. What could be the reasons for a fictional account of the events in Beijing (Peking) like this appearing in a European newspaper as if it were true?
5. What would the likely effect of a report like this be on the attitudes of Europeans towards the Chinese?

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The aftermath of the Boxer Rebellion was devastating for China and the Qing. A day after the foreigners entered Beijing, Empress Dowager Cixi and the Guangxu Emperor fled the city dressed as peasants, leaving Li Hongzhang to negotiate the end of hostilities.

The final agreement, called the Boxer Protocol, took a year to arrange and was signed on 7 September 1901. Many of the Chinese officials who had supported the Boxers were forced to commit suicide, and thousands of members of the uprising were executed. Special envoys had to be sent to Japan and Germany to apologise for the diplomats who had been killed. Examinations for the civil service were suspended for five years in provinces that had supported the Boxers. Several important fortifications around Beijing were destroyed and the foreign legations were now permitted to have their own troops stationed with them for self-defence. The Chinese were also forced to pay an **indemnity** of 450 million ounces of silver; an amount that was not paid off until 1940.

KEY TERM

indemnity protection via a payment against future loss (such as insurance)

The rebellion may have been started by hatred of the foreigners, but the Chinese people had much more to despise them for afterwards. Many channelled this anger towards their Manchu Qing overlords, who had again proven themselves weak and ineffectual.

ACTIVITY 3.14

Using historical sources as evidence

▲ **Source 3.62** A British cartoon from *Puck* magazine in 1900 on the Boxer Rebellion

Responding to the source

1 Describe this source. What is it, and when was it created?
2 Who do the animals represent?
3 Why is the dragon labeled 'China' asleep or unconscious?
4 What does the cartoonist suggest will happen when China wakes up?

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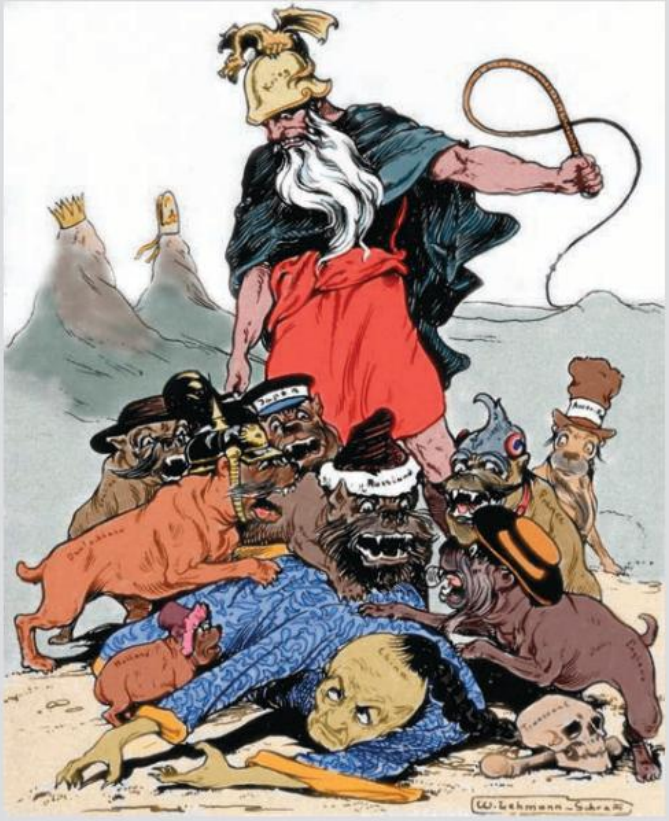
Responding to the source

1. Describe this source. What is it, and when was it created?
2. What is happening in the cartoon?
3. Why do you think the foreign powers are being portrayed as dogs?
4. Does the cartoonist agree with the foreign powers' treatment of China? How do you know?



► **Source 3.63** A German cartoon from 1901. The spirit of war (Krieg) invites the foreign powers to eat the fallen Chinese Empire

▼ **Source 3.64** Representatives of the German, British, French, Italian, American and Russian military forces who combined to defeat the Boxer Rebellion

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◄ **Source 3.65** Leaders of the Boxer Rebellion were executed after the defeat

END-OF-SECTION REVIEW 3.4

Review questions

Answer these questions on paper or in the Interactive Textbook.

Digital quiz
Please see the Interactive Textbook to access digital activities

Recall

1. Why did the Chinese officials decide that change was necessary in China?
2. What was the purpose of learning Western languages?
3. What difficulties did the Chinese face in replicating Western military technology?
4. How did Empress Dowager Cixi gain power in 1861?
5. Who were the Boxers?
6. What were the aims of the Boxer Rebellion?
7. What were the consequences of Qing support of the Boxers?

Interpret

8. How was Empress Dowager Cixi able to maintain power in China for so long?
9. Why did the Boxers hate the Europeans so much?
10. Why did Empress Dowager Cixi support the Boxers?

Argue

11. 'The failure of the Self-Strengthening Movement was largely due to China's focus on the West's weaponry and technology rather than its ideas'. To what extent do you agree or disagree with this opinion? Use evidence to support your answer.

Extension

1. Research the role of Australia and Australians in the Boxer Rebellion. Write a short report detailing Australia's part in the conflict.

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3.5 Chinese society in global context by 1918

FOCUS QUESTION

What was the state of China by 1918 and how did it attempt to set itself up on the world stage?

Sun Yixian and the Tongmenhui

The Qing dynasty had managed to retain its control on China for over 250 years despite disastrous rebellions and damaging foreign **incursion**. In the early twentieth century, that changed. The leader of the revolutionary movement that ultimately managed to overthrow the Qing was a medical doctor called Sun Yixian.

KEY TERMS

incursion a sudden attack into enemy territory

republican government a form of government where the power is held by the people rather than rulers who inherit it

Dr Sun was born in Guangdong province in 1866 and educated in China and abroad. He converted to Christianity in 1883 and studied medicine at the Presbyterian Hospital in Guangzhou and later in Hong Kong. Here he associated with several anti-Manchu societies as he had grown to believe that China needed significant change to set it on a more successful path for the future.

In 1894, he sent an official petition to Li Hongzhang, one of the proponents of the Self-Strengthening Movement, with a plan for the modernisation of China. Li's refusal to meet with Sun or accept his petition convinced Sun that only overthrowing the Qing could create real change.

Over the next 17 years, he worked tirelessly to encourage and prepare for a revolution to remake China. He developed his three principles of the people to identify the key aims of a new society: nationalism, democracy and livelihood. In September 1905, Sun created a new organisation called the Tongmenhui, with the stated plan of removing the Qing and creating a **republican government**.

He travelled widely through Europe and the Americas learning about other governments and raising money for the resistance movement. It was while he was on one of these lecture tours that the revolution accidentally began without him.

▲ **Source 3.66** Sun Yixian

MAKING THINKING VISIBLE 3.6

Think, puzzle, explore

1. What do you think you know about the revolutionaries of late Qing China?
2. What questions do you have about these people and groups?
3. What can you do to explore this topic further?

The Wuchang Uprising and the Xinhai Revolution

In September 1911, a bomb exploded accidentally inside the headquarters of a revolutionary group allied with Sun in the Russian concession at Hankou, at least a week before a planned uprising. Hankou police descended on the headquarters, arresting 32 of Sun's supporters, seizing weapons and bombs, and discovering documents that identified a number of underground revolutionaries who had infiltrated Qing military forces.

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With their identities now uncovered, the revolutionaries in the army stationed in Wuchang decided to act immediately. They began by mutinying against the Qing Garrison and attacking the palace of the governor of Hankou, who panicked and fled. The revolutionaries had gained control of the city by the following day. And with that, the revolution had begun.

The Xinhai Revolution sparked by the Wuchang Uprising lasted only four months and two days. It was a short conflict that ended the 3000-year-old imperial system. News of the successful uprising spread rapidly throughout China and prompted revolutionary groups in all of the key cities to launch their own campaigns.

Within just a few weeks, 15 out of the 18 provinces were in rebel hands. In December 1911, representatives of the various revolutionary groups met in Beijing to declare the country a republic and appoint Sun Yixian, who had only just returned to China, the provisional president.

▲ **Source 3.67** Children wearing revolutionary costumes perform in a musical play on the 100th anniversary of the Wuchang Uprising, 2011

▼ **Source 3.68** A wax recreation of the Chinese United League meeting to plan the revolution

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The path forwards

Despite all of the hope and trust placed on the new republic for a better China, the early years were difficult and marked by conflict. The six-year-old Xuantong Emperor was forced to abdicate on 12 February 1912. Yuan Shikai, a Qing military and government official, had been recalled from retirement to negotiate terms between the Qing revolutionaries. He was a crafty operator who managed to negotiate himself into the position of president of the new republic in exchange for arranging the Qing's handover of power. Sun Yixian was forced to step aside, but it turned out the new president had even larger ambitions.

Conflict between the revolutionaries and the new president began almost immediately. Sun Yixian transformed his revolutionary society into a political party called the Guomindang and with them held a majority of seats in the new National Assembly. There were arguments as to whether the capital of the republic should be Nanjing or Beijing, which Yuan won with Beijing. He then passed unpopular loans through the assembly by waiting until parliamentarians were away campaigning for election. Yuan began replacing military leaders with ones who were sympathetic to him. In March 1913, a leading opponent of Yuan was assassinated. While Yuan denied any part in the death, few believed him. An attempt to overthrow Yuan in August 1913 failed miserably. In January the following year, Yuan dissolved the National Assembly and declared the Guomindang illegal.

KEY TERMS

fiefdoms areas of land controlled by independent rulers, like the estate of a feudal lord

Treaty of Versailles the treaty signed at the end of World War I that specified the terms of the peace

▲ **Source 3.69** Yuan Shikai

Japan attempted to take advantage of China's weakness and its own World War I alliance with the Allies. Japanese forces attacked and took over German concessions in Shandong province. In January 1915, the Japanese Government delivered its infamous Twenty-One Demands. The highly provocative list included demands that China replace all foreign influences with Japan's, give Japan control of parts of Manchuria and the Yangtze Valley, and rely on Japan alone for political and military advice. Unsurprisingly, the Chinese were outraged by the demands. However, after four months of unsuccessful negotiation, Yuan was forced to agree to most of the demands in May 1915. This solidified hatred of the Japanese but also diminished the standing of Yuan in China.

Yuan's ambitions became clear in late 1915 as he attempted to make himself Emperor. He declared that from 1 January 1916, he would become the Emperor Hung Hsien. This proved a step too far. Widespread revolts in the southern provinces, as well as threats from the military governors, forced Yuan to reconsider. In March 1916, he announced that China would remain a republic. He died the following month.

After the death of Yuan Shikai, a series of presidents followed. However, in the new constitution, real power was held by the Prime Minister. The republican government by this time had little control over the country as a whole. Military commanders were becoming known as 'warlords', creating their own separate **fiefdoms** and ignoring instructions from Beijing. The coming years would see further challenges from Japan, disappointments in the **Treaty of Versailles**, an ongoing power struggle between the warlords and the inexperienced nationalist government and, from its establishment in 1920, the challenge of the Chinese Communist Party.

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END-OF-SECTION REVIEW 3.5

Digital quiz
Please see the Interactive Textbook to access digital activities

Review questions

Answer these questions on paper or in the Interactive Textbook.

Recall

1 Why did Sun Yixian believe the Qing needed to be overthrown?
2 What were Dr Sun's three principles?
3 What event sparked the Wuchang Uprising?
4 Why did Yuan Shikai turn out to be an unfortunate choice for president?

Interpret

5 What do you think were Yuan Shikai's original aims when he agreed to negotiate between the Qing and the revolutionaries?
6 Why do you think the revolutionaries found it so difficult to establish an effective government early on?

Argue

7 'The Qing dynasty's inability to undertake any serious reform was the key cause of its downfall.' To what extent do you agree or disagree with this opinion? Use evidence to support your answer.

Extension

1 Research the origins of the Chinese Communist Party in China. Write a paragraph describing relations between the communists and the nationalists prior to the Shanghai massacre of 1927.

Conclusion: why does it matter today?

After working through this chapter, what do you think are the key factors that led to 3000 years of Chinese Empire ending in 1912?

The twentieth century was even more turbulent for China than the nineteenth century had been. Since 1949, China's official name has been the People's Republic of China and the country has been ruled by the Communist Party, which wields great power over its people.

While the party has overseen rapid economic development in recent years, any opposition is suppressed quickly and sometimes violently, as it was during the Tiananmen Square massacre of 1989. Access to the internet is strictly controlled by the Chinese Government.

In the last few years, the government has begun to roll out a social credit system, which is expected to be fully implemented by 2020. This system is intended to track every citizen and business in China so they can be punished or rewarded based on the government's assessment of their behaviour.

The China that has emerged in the twenty-first century is one that will not be ignored. Despite years of the One Child Policy, China has the world's largest population at just over 1.4 billion people. The economy continues to grow at a rapid rate and most forecasts suggest it will overtake the United States sometime before 2030. China has become a hub of

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manufacturing, producing everything from iPhones to bobble heads, and is becoming a popular tourist destination for Australians.

China has made little secret of its global ambitions. It has demonstrated its military and economic power in conflicts over control of the South China Sea and ownership of the Senkaku Islands, and has repeatedly threatened war over Taiwan. In 2018, China demanded that Qantas change its description of Taiwan on its booking system to identify it as part of China.

To counter the hard image created by this conflict, the Chinese Government has begun to employ 'soft power' techniques to improve its influence, such as opening Confucius Institutes all over the world, and encouraging foreign students with scholarships to study in China. Chinese president Xi Jinping said in 2014 that this was intended to 'give a good Chinese narrative, and better communicate China's message to the world'.

Empress Dowager Cixi, the last real ruler of Imperial China, did attempt to introduce some reforms to the government, but was very opposed to foreign interference. What do you think she would make of the country China has become today?

▲ **Source 3.70** Mao Zedong, Chairman of the Communist Party, announces the establishment of the People's Republic of China in 1949

◄ **Source 3.71** Not all old wounds have healed. British Prime Minister David Cameron, seen here with Chinese Premier Wen Jiabao, wore a poppy in his lapel as a tribute to World War I Armistice Day in November 2008 during a tour of China. The Chinese requested he remove it as it was to them a reminder of the Opium Wars, but he refused.

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End-of-chapter activities

1 Self-assessment

That just about wraps up this topic. How did you feel you went working through the chapter? Before you attempt the following activities, visit the Interactive Textbook to rate your confidence with this topic either online or via a downloadable checklist.

2 Making thinking visible

True for who?

Claim: Empress Dowager Cixi was a powerful reformer rather than a murderous despot.

1 **Discuss:** What arguments might be made to support this claim? What evidence can we find of reforms? What contradictions might be proposed?
2 **Brainstorm:** Make a list of all the different points of view from which you could look at this claim. Who might agree or disagree with this claim and why?
3 **Dramatise:** Choose a viewpoint to embody and imagine the stance a person from this viewpoint would be likely to take. Would he or she think the claim is wrong? Right? Uncertain? Why? Write a short speech from the perspective of this person. Say:
   - My viewpoint is …
   - I think this claim is wrong/right/uncertain because …
   - What would convince me to change my mind is …
4 **Share** your viewpoint with the group and listen to others' viewpoints.
5 **Stand back:** Step outside of the circle of viewpoints and take everything into account. What is your conclusion or stance? What new ideas or questions do you have?

3 Key terms and names

For each of the following key terms from the chapter, write a sentence explaining its significance:

1 opium
2 trade deficit
3 tariffs
4 dynasty
5 barbarians
6 legation
7 footbinding.

4 Extended-response question

Task: Research the factors behind China's choice to ignore the changes going on in the world beyond its borders and therefore miss out on the technological developments that may have helped it resist foreign aggression. Explain the reasons for Chinese insularity and the consequences it had on the success and stability of the Chinese Empire over the nineteenth century. In your response, support your argument by providing key names, dates and evidence.

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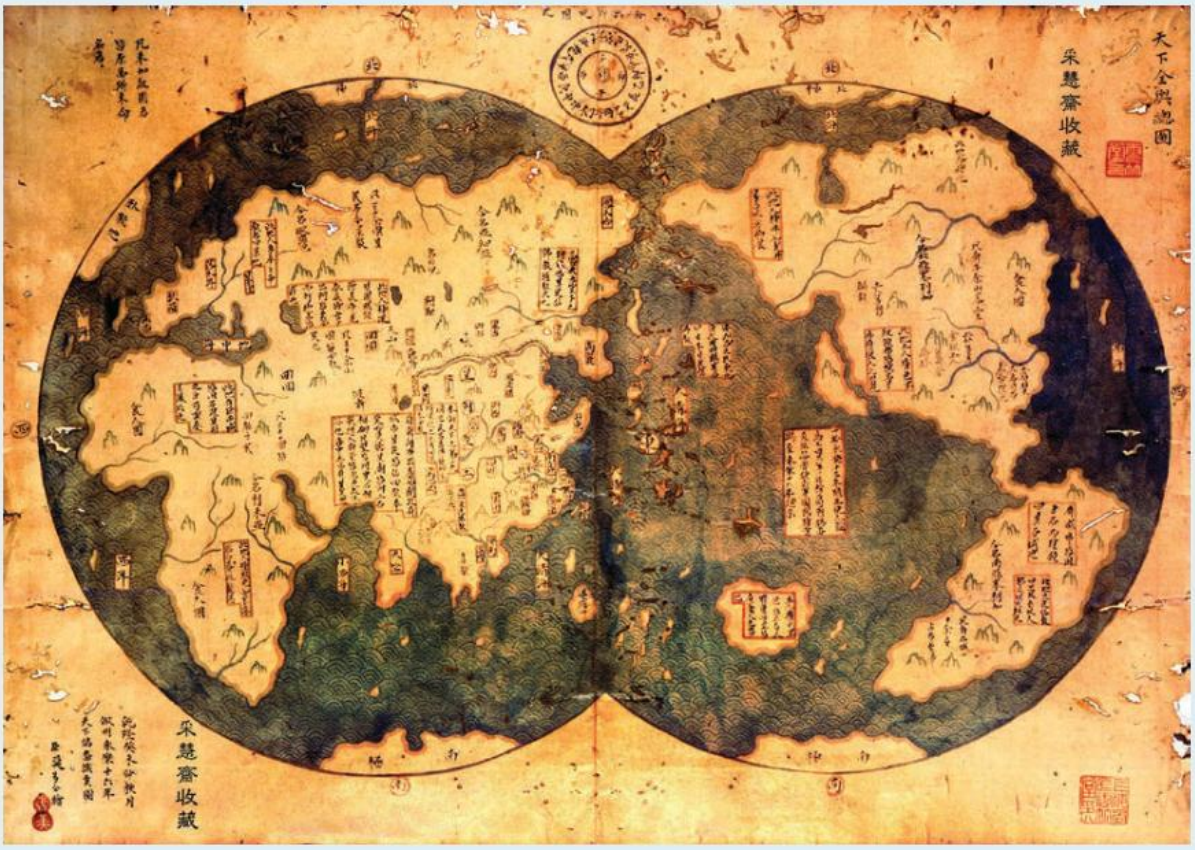

▲ **Source 3.72** A 1763 copy of map of the world drawn by Chinese explorer Zheng He from around 1421 BCE, before the Chinese Government decided that too much contact with the outside world was unnecessary and undesirable. This suggests the possibility that He may have 'discovered' America before Christopher Columbus in 1492.

5 Digital resources

Visit the digital version of the text to access:

- Victorian Curriculum Capability Project
- Interactive chapter Quiz
- Interactive Scorcher Quiz
- Google Earth tour of key locations in this chapter
- Videos, image galleries and other extra materials.

Video
Five interesting facts about Chinese history

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