SAMPLE

**8**

# oxford
# big ideas
# humanities

## VICTORIAN CURRICULUM

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# contents

## PART 1
## Geography

## Chapter 6

# PART 2
# History

## Chapter 7

## Chapter 8

## Chapter 9

## Chapter 10

SAMPLE

SAMPLE

# PART 3
# Economics and business

# PART 4
# Civics and citizenship

# contents by skill

## Geography skills

## History skills

# Economic and business skills

# Civics and citizenship skills

*Oxford Big Ideas Humanities* is a brand-new series developed and written to provide complete coverage of the Victorian Curriculum: Humanities – Geography, History, Economics and Business, and Civics and Citizenship – across Years 7–10.

## Focus on inquiry

Each chapter of *Oxford Big Ideas Humanities* is structured around key inquiry questions from the Victorian Curriculum. Each unit of the text supports teachers and students as they adopt an inquiry-based approach to the key learning areas in the Humanities.

The learning sequence in each chapter is clearly set out under key inquiry questions. Students are encouraged to use their prior knowledge and make predictions at the start of each new topic.

Stunning full-colour photography generates discussion and interest.

## Focus on engagement

Each unit of the Student book combines a range of engaging source materials – such as photographs, videos, data tables, graphs and illustrations – with supporting questions and activities.

Source materials – such as photographs, infographics, political cartoons, graphs – simplify difficult concepts and engage reluctant learners.

**Check your learning** activities accompany every unit, allowing students to consolidate and extend their understanding. These are graded according to Bloom's Taxonomy – catering for a range of abilities and learning styles.

# Focus on concepts and skills

Complete coverage of all concepts and skills provided in stand-alone reference 'toolkits'. All of these concepts and skills are also integrated throughout the text so students can see them at work in context.

**Rich task** activities encourage students to apply the knowledge and skills they have learned in each chapter to a new and interesting case study, event or issue.



**Skill drill** activities guide and support students step by step as they learn and apply key skills.

**Extend your understanding** activities challenge students to conduct further research, or complete group work, to deepen their understanding of an issue or skill being investigated.

# Digital support

## obook assess

**Student obook assess** provides a fully interactive electronic version of the print Student book in an easy-to-read format. A host of additional resources for students – such as videos, worksheets, interactives objects, online quizzes and multimedia links – are linked to each unit in the book making them easier to access than ever before.

**obook assess** is compatible with laptops, iPads, tablets and IWBs, and access to content is provided online and offline.

## TEACHER obook assess

Teacher support is offered in digital format via **Teacher obook assess**. Teacher notes, answers, tests, additional worksheets, lesson ideas, planning tips and assessment advice are provided for every unit. **Teacher obook assess** allows teachers to manage their classes by assigning work, tracking progress and planning assessment.
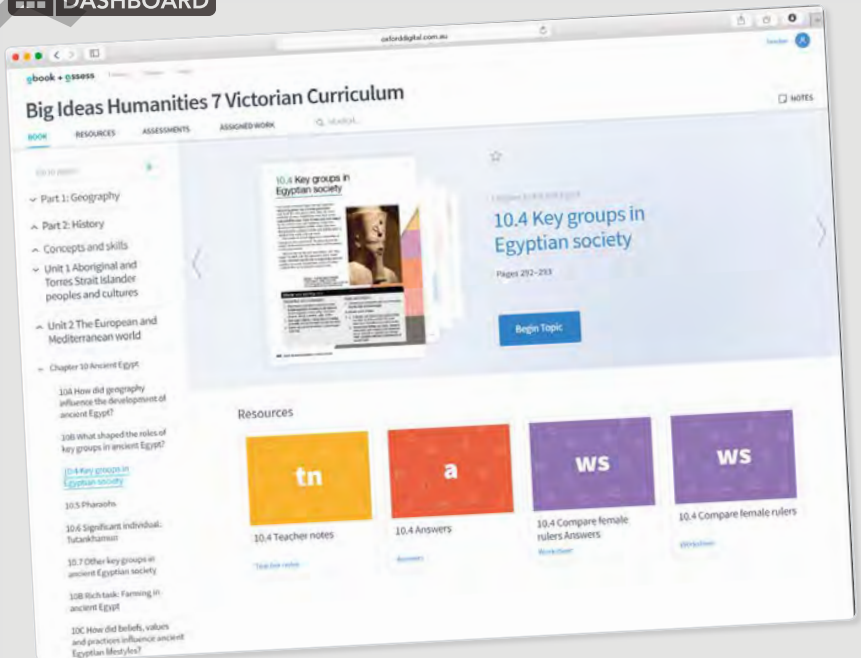
# The Earth's landscapes and landforms

The Earth's surface is made up of a vast number of elements that have been brought together to create amazing shapes and formations. To study and understand all these formations, geographers organise them into groups based on characteristics that are similar. These different groups are referred to as landscapes. There are many different types of natural landscapes on Earth – including mountain landscapes, coastal landscapes and riverine landscapes. Landscapes created by people are called human landscapes.
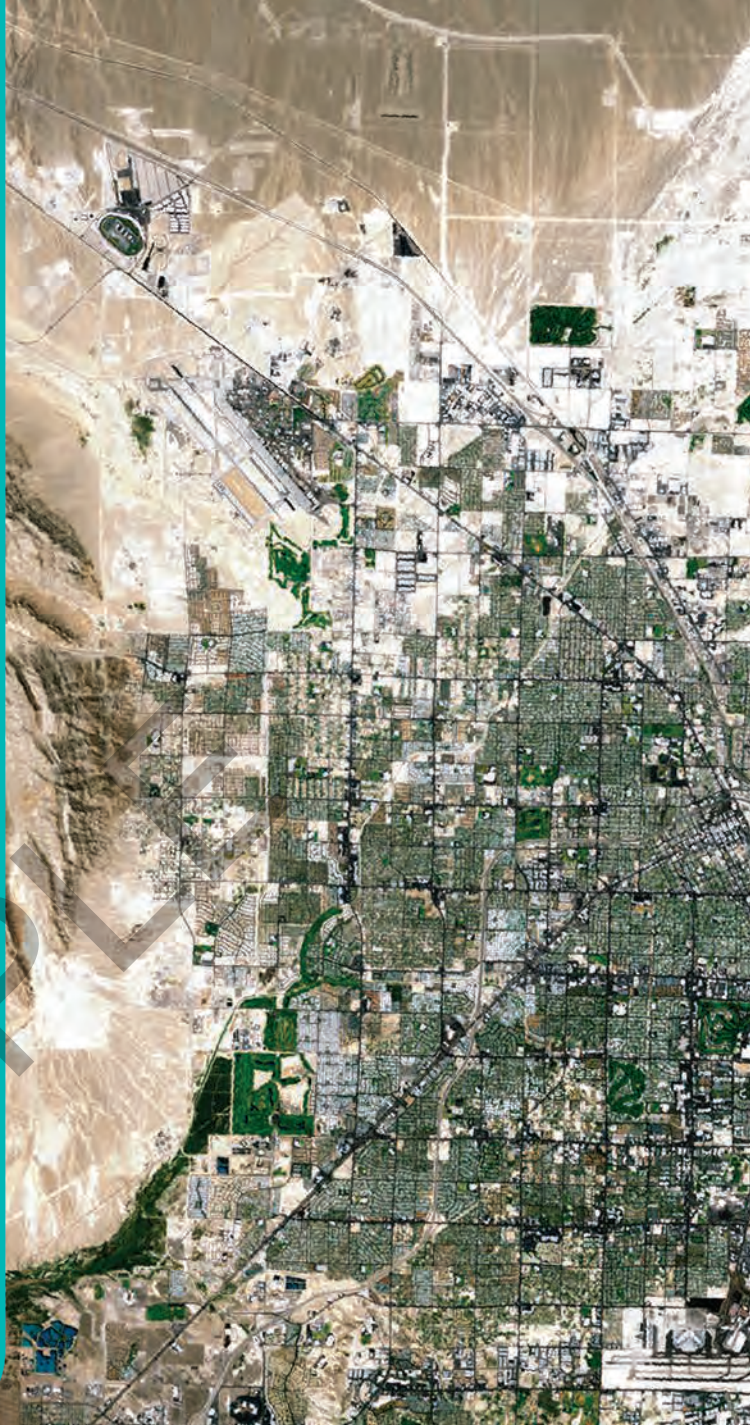
# 2A

## What are landscapes and landforms?

1  Use Source 1 to identify two different landforms and two types of landscapes.

2  Think about the place in which you live. Can you identify two different landforms and two types of landscapes that you see every day?

chapter

2

Source 1 This satellite image of Las Vegas shows many different landscapes and landforms.

# 2.1 The Earth's landscapes

A **landscape** is part of the Earth's surface. It consists of a variety of geographical features that are characteristic of an area. Landscapes are divided into two main categories – natural and human. Natural landscapes (for example, mountains and deserts) are mainly unaffected by human activity and are typical to particular areas of the world. Human landscapes (for example, cities and farms) have been created and modified by people. Human landscapes are sometimes also referred to as cultural landscapes. Some different types of landscapes are described below.

WORLD: EXAMPLES OF DIFFERENT LANDSCAPES

5 Karst

1 Mountain

6 Human

2 Coastal

Arctic Circle

Tropic of Cancer

Equator

Tropic of Capricorn

N

0   1500   3000 km

4 Desert

Antarctic Circle

3 Riverine

Source 1

Source: Oxford University Press

**Source 2** The Himalayas in Asia are an example of a mountain landscape.

# 1 Mountain landscapes

Mountain landscapes are formed by **tectonic plates** on the Earth's surface pushing against each other. This movement and pressure causes the shape of the land to change. The land is pushed up in a vertical direction and over time forms mountains. Mountains rise high above their surroundings. Mountains can stand alone, be grouped in ranges, or form ridges. We will explore mountain landscapes in more detail in Chapter 3.

# 2 Coastal landscapes

The coast is where a land mass meets the sea. Coastal landscapes are shaped by the natural forces of the wind and waves. These geographical forces erode (wear away) or construct (build up) the natural environment, constantly changing its shape. Features of coastal landscapes include beaches, dunes, bays, cliffs, platforms, spits and lagoons. We will explore coastal landscapes in more detail in Chapter 4.



**Source 3** Peggy's Cove in Nova Scotia, Canada, is an example of a coastal landscape.

**Source 4** The Whanganui River system in New Zealand is an example of a riverine landscape.

## 3 Riverine landscapes

A riverine is a landscape formed by the natural movement of a water system such as a river. A riverine landscape includes the **ecosystems** (all living things including plants and animals) in and around the area of a river. A riverine may also be defined as a network of rivers and the surrounding land. Riverine landscapes are excellent for agricultural uses such as farming because the land is rich and fertile. They are a valuable resource for growing food.

**Source 5** The Sahara desert in North Africa is an example of a desert landscape.

## 4 Desert landscapes

A desert is defined as an area of land which receives no more than 250 millimetres of rain per year. Deserts cover about one-third of the Earth's surface and contain some of the most uninhabitable regions on Earth. There are two types of deserts – hot deserts and cold deserts. Hot deserts are located along the tropics of Cancer and Capricorn (the latitude lines to the north and south of the Equator). Cold deserts are located closer to the Arctic and Antarctic Circles (the circles of latitude in the far north and far south). Because of the lack of rain they have little vegetation (plant life). Instead deserts are characterised by sand dunes, rock and gravel.

# 5 Karst landscapes

A karst landscape is formed when easily dissolvable bedrock (the rock below the surface of the land, such as limestone) is worn away by slightly acidic water, from an underground source or a source on the Earth's surface. These flows of water form unique features such as caves, stalactites, springs and sinkholes. Karst landscapes are extremely unstable areas of land. Sinkholes are formed when rock beneath the Earth's surface has eroded away and sections of land on the surface collapse. Sinkholes can range in size from a few metres to over 1 kilometre deep and have been known to occasionally collapse, swallowing up everything on the surface including cars and buildings.



**Source 6** The Skocjan Caves in Slovenia are an example of a Karst landscape.

# 6 Human landscapes

Unlike the types of naturally occurring landscapes described above, human landscapes are created by people. Human landscapes provide evidence of human settlement and occupation of an environment. Features of human landscapes include elements of infrastructure such as buildings, roads, transport, energy, sewerage and telecommunication systems. The construction of human landscapes often results in the damage or destruction of natural landscapes but commonly incorporates some natural geographical features in its design; for example, harbours and mountains.



**Source 7** The capital city of China, Beijing, is an example of a human landscape.

## **Check** your learning 2.1

### Remember and understand

1 What is the meaning of the geographical term 'landscape'?
2 Which types of landscape are found around the Tropics of Cancer and Capricorn?
3 Why do you think human landscapes are included in the definition of the word 'landscape'?

### Apply and analyse

4 Look carefully at Source 1.
  a How many different types of landscapes are shown on this map?
  b What types of landscapes can you identify in Australia?

c Write a description of the location of desert landscapes. Give possible reasons to explain why they are found there.

### Evaluate and create

5 Research one landscape that interests you. Your chosen landscape might be on the World Heritage List (such as karst in The Skocjan Caves Regional Park) or in your local area. Investigate what makes this landscape unique, and provide information about how it is used. Present your research in the form of a brochure, poster or webpage.

# 2.2 The Earth's landforms

You have already discovered that the Earth has a great range of natural landscapes, including mountain, desert, coastal and riverine. Within these landscapes, distinctive landform features can be found. A **landform** is a specific shape or physical feature of the Earth's surface which has been produced by a **natural process**. Examples of landforms include valleys, cliffs, beaches, sand dunes and plateaus. Geomorphic processes can include **erosion**, **deposition** and **tectonic activity**.

mountain range

mountain

ridge

V-shaped valley

volcano

cirque

glacier

watershed

drainage basin

gorge

headland

river

waterfall

tributary

floodplain

meander

lake

oxbow lake

bay

delta

estuary

wadi

oasis

inselberg

mesa

beach

hamada

butte

desert dune
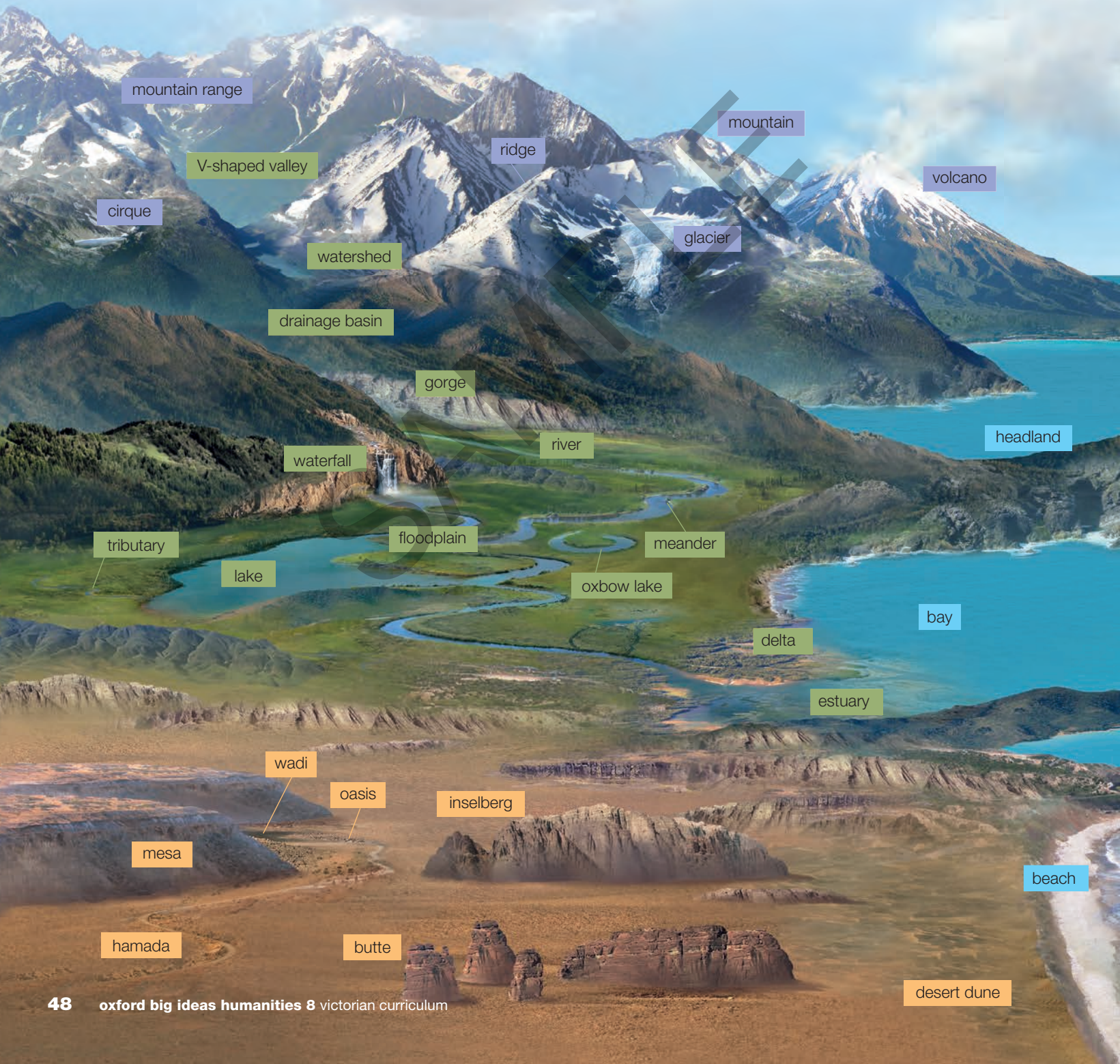
## COASTAL LANDSCAPES

**Atoll**
Ring-shaped coral reef or a string of closely spaced small coral islands encircling a shallow lagoon

**Archipelago**
Group or chain of islands

**Bay**
Broad, curved indentation in the coastline

**Beach**
Deposited rock particles – such as sand, gravel or pebbles – along the coastline

**Cliff**
Steep rock face formed by the action of the waves

**Coral reef**
Underwater ridge formed by the growth and deposit of coral

**Headland**
Narrow, high land jutting out from a coastal cliff into the sea

**Island**
Area of land surrounded by water

**Isthmus**
Narrow strip of land or sand that connects an island to the mainland

**Spit**
Narrow strip of sand protruding into the sea

**Stack**
Tall pillar of rock formed by wave action eroding a cliff

## MOUNTAIN LANDSCAPES

**Mountain**
Steep-sided, lone peak rising over 600 metres above the surrounding land

**Mountain range**
Chain of connected mountains

**Volcano**
Opening in the Earth's crust where molten rock, ash and gas can escape

**Glacier**
Large frozen river of ice that slowly moves down a valley in response to gravity

**Cirque**
Bowl-shaped hollow at the head of a valley or on a mountainside formed by glacial erosion

**Ridge**
Long, narrow elevation of land

## RIVERINE LANDSCAPES

**Delta**
Fan-shaped, low-lying area of deposits at the mouth of a river

**Drainage basin**
Area providing water to a river system

**Estuary**
River mouth broadening into the sea

**Floodplain**
Flat area over which water spreads in times of flood

**Gorge**
Deep, narrow, steep-sided valley

**Lake**
Large body of water surrounded by land

**Meander**
Bend in a river

**Oxbow lake**
Crescent-shaped lake on a river floodplain

**River**
Natural waterway that takes water downhill by gravity to the sea

**Tributary**
Small river that joins a larger river

**V-shaped valley**
Narrow, steep-sided valley carved out by the upper reaches of a river

**Waterfall**
River-water spill over resistant rock

**Watershed**
High point from which water flows into a drainage basin

## DESERT LANDSCAPES

**Desert dune**
Wind-blown particle formation

**Mesa**
Flat-topped, steep-sided plateau

**Butte**
Flat-topped hill

**Oasis**
Desert area with a water supply provided by groundwater

**Wadi**
Dry watercourse in a narrow valley that divides a plateau

**Inselberg**
Isolated, steep-sided hill of resistant rock on a plain

**Hamada**
Area covered in boulders and large stones
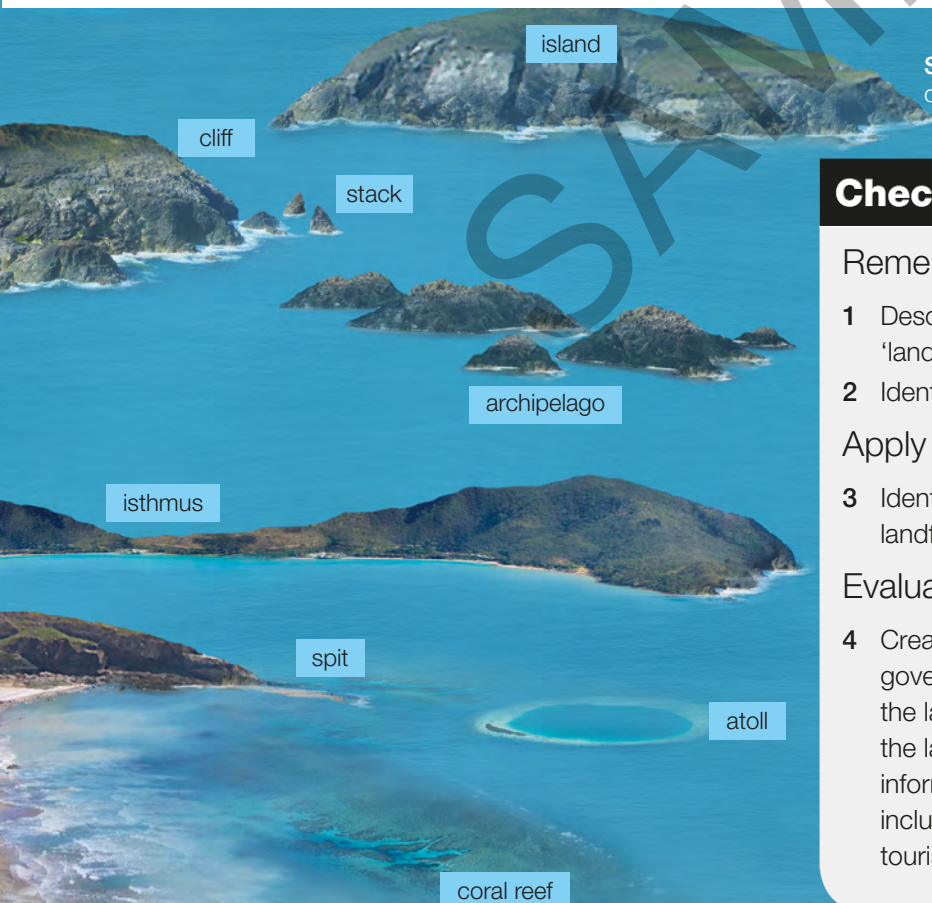


**Source 1** Some common landforms found in different natural landscapes

## Check your learning 2.2

### Remember and understand

1 Describe the meaning of the geographical term 'landform'.
2 Identify four geomorphic processes.

### Apply and analyse

3 Identify an Australian example of at least five of the landforms described in Source 1.

### Evaluate and create

4 Create a travel brochure for the Victorian government tourism agency promoting one of the landforms shown in Source 1. Investigate the landform and provide a description including information about how it was formed. You should include persuasive text that aims to encourage tourists to visit your chosen landform.

# 2.3 Valuing landscapes and landforms

Landscapes and landforms around the world are valued by many different people for many different reasons. Some people may feel a deep personal connection to a particular landscape, while others are more interested in the money that can be earned from it. The value a person attaches to a particular landscape often depends on factors such as their age, occupation, education, cultural background and experiences. In general, geographers divide the ways in which people value landforms and landscapes into four categories:

- cultural value
- spiritual value
- aesthetic value
- economic value.

## Cultural value

Cultural value is linked to the importance of landforms and landscapes as expressed by people through creative means such as poetry, literature, art and films. Australia's landscapes and landforms have shaped Australian culture and identity. The film *Australia*, shown in Source 1, was a box-office hit in Australia. Set in northern Australia at the start of World War II, the film features the vast, unforgiving landscapes of the outback, as well as the tropical landscape of the Far North. These unique landscapes have a transformative effect on the English Lady Sarah Ashley, and by the end of the film she feels Australian.

Aboriginal Australians express the importance of the land to them through Dreaming stories, song and dance, and their art. Nearly all Aboriginal art relates to the landscape and maps the landscape and the landforms of importance to the Aboriginal community.



Source 1 This poster for the film *Australia* reflects the colours of the Australian outback. It is an example of how the Australian landscape has cultural value.



Source 2 Karlu Karlu (also known as The Devil's Marbles) is sacred to Aboriginal Australians. This is an example of how landforms can have spiritual value.

## Spiritual value

For Aboriginal Australians the spiritual value of land is expressed through the concept of 'Country'. Aboriginal peoples believe that the myths of their Dreaming bind them to the land. They also believe that their ancestors live on through the land and ensure their continued connection with it. Landscapes contain many sacred sites of spiritual importance. Uluru, for example, is a sacred place to the Anangu people who live in the area. They believe that in the Dreaming, a great sand hill was transformed into this rock along with the Kunia people who lived there.

Source 3 Unique and beautiful landscapes along the Australian coast are an example of aesthetic value.



Source 4 Landscapes with high mineral and metal deposits are an example of economic value.

## Aesthetic value

The aesthetic value of a landscape is closely linked to its beauty and uniqueness. The aesthetic value attached to a place is always subjective (personal). People are drawn to places for many reasons. Being surrounded by the beauty of the landscape may give someone a sense of freedom, stability and wellbeing. An individual might be drawn to a particular landform because of its overwhelming majesty, creating a personal connection to that place.

The aesthetic value of the landscape to the community has been recognised through the creation of national parks, where land has been set aside for the public's use and enjoyment. The first national park in Australia, the Royal National Park, south of Sydney, was established in 1879. There are now 516 national parks.

## Economic value

Economic value is a measurement of how financially important landscapes and landforms are. Economic value is particularly relevant to the tourism and mining industries in Australia. Tourism Victoria, for example, wants regular visitors to its state because people who travel spend money on accommodation, transport, food, souvenirs and activities. This money provides income for the tourism and hospitality industries and the state of Victoria. The Great Ocean Road is a landscape in Victoria with a high economic value due to its popularity with tourists.

Mining is the process of extracting natural resources from within the earth. These resources are sold, processed and used to manufacture a variety of goods – from jewellery to toys, to construction materials. The mining industry attaches economic value to landcapes that contain sought-after metals and minerals like coal and gold.

## Competing values

The same landscape can be valued by different people for different reasons. To a mining corporation, the economic value of a landscape might be most important. To an Indigenous Australian community, however, the spiritual value may be most important. Then again, an artist might appreciate the aesthetic value of a landform. All these values are important to consider when deciding on how a landscape is best put to use.

### Check your learning 2.3

#### Remember and understand

1 Describe the concept of 'value'.
2 What does it mean for a landscape to have aesthetic value?
3 What does it mean for a landscape to have cultural value?

#### Apply and analyse

4 Look carefully at Source 4.
   a Which value is being attached to this source?
   b What groups of people are most likely to have a different opinion as to the value of this landscape? Create a table to show the groups and their possible opinions.
   c What reasons might you list to account for, or explain, these differences of opinion?

#### Evaluate and create

5 Research a book, poem, movie or website that has cultural value for Australia, or a country or place that you feel connected to. Create a digital poster on Glogster (http://edu.glogster.com/) or use another design program to present your findings. Include the title of the work, its author, a blurb about it and an image to represent it. Most importantly, provide three reasons why you feel it has particular cultural significance.

# 2.4 Human impacts on landscapes

The Earth is dynamic. It is constantly moving and changing, transforming landscapes and landforms. The characteristics of most places are influenced by a combination of environmental processes, such as flooding and earthquakes, and human processes, such as mining and construction of cities. Some of these changes are very slow and take place over millions of years; for example, the formation of the Grand Canyon in the US state of Arizona. Other changes take place very quickly, as did the formation of a new island in the South Pacific, just four months after the eruption of an underwater volcano in Tonga.

## Humans change landscapes

Without doubt the most constant force of change is us. Humans have been changing landscapes to obtain food and other essential elements for thousands of years. We clear forests and change the shape of the land to graze animals and grow crops. We move mountains and divert rivers to build cities and towns. We even create new land from the sea in coastal areas. In fact, humans have transformed their landscapes so much that today very few truly natural landscapes remain. As world population increases, so too does our demand for resources from the land.



**Source 1** The Grand Canyon in Arizona, United States, is thought to have taken over 17 million years to form as we see it today.



**Source 2** In 2015, a new island formed in the South Pacific, 45 kilometres north-west of Tonga's capital, Nuku'alofa, four months after the eruption of an underwater volcano.



**Source 3** The rice terraces of Luzon Island in the Philippines are a World Heritage site. Built by the native Ifugao people, some of the terraces are more than 2000 years old.



**Source 4** Palm Jumeirah is an artificial island on the coast of Dubai, United Arab Emirates, constructed from dredged sand and rock breakwaters.

**Source 5** The Ranger Uranium Mine in the Northern Territory provides a clear example of the way in which places are changed and managed by humans. Here, uranium (used to fuel nuclear power plants) is mined and sold to countries across Asia, Europe and North America. Although the mine is technically separate from Kakadu, it is surrounded by the park on all sides.

## Land degradation

**Land degradation** affects 33 per cent of the Earth's land surface. It reduces the quality of the land and its capacity to produce food. Human activities are the main cause of land degradation. Overgrazing, crop growing without resting the fields, deforestation and land clearing, collection of wood for fuel, and industrialisation including mining are all examples of human activities that cause land degradation. According to the United Nations Food and Agriculture Organization (FAO), the world on average has just 60 more years of growing crops if we do not modify our current practices. To keep up with the global food demand the FAO estimates 6 million hectares of new farmland will be needed each year. Instead, 12 million hectares a year are lost through land degradation.

Through the ages, people have extracted minerals from rocks (ores) to use for different purposes. The discovery of ores, and people's ability to extract the metals within them, has been crucial for technological development. Today our modern technology and lifestyles depend on the use of a large range of minerals; for example, glass is made from silicates and feldspar and steel is made from iron ore. All these minerals come from the rock in the Earth's crust. If the rock containing the mineral is close to the Earth's surface it can be dug up by open-cut mining (see Source 5). Mining and the processes used to extract minerals from the ore damage our environment. Even where mining occurs underground, crushed rock is dumped in piles around the mine after the valuable minerals have been extracted from it.

## Check your learning 2.4

### Remember and understand

1 Explain why land degradation is an important issue.

2 Is land degradation inevitable?

3 List some of the human activities responsible for land degradation.

### Apply and analyse

4 Look carefully at Source 5. Create and complete the following table by considering:

  a the environmental impacts of the mining activities

  b how the impacts could be minimised.

| Mining activity | Potential environmental impacts | Minimisation of impacts |
|---|---|---|
| Using local roads | | |
| Clearing Kakadu bushland | | |
| Using large, heavy machinery | | |
| Removing topsoil | | |
| Dumping crushed rock (mine waste) | | |
| Using explosives to remove material | | |

5 How can humans accelerate the process of erosion?

6 Identify a natural landscape that has not been changed by humans. Explain why this is possible.

### Evaluate and create

7 Of the 35 countries most dependent on mining, all but Australia and South Korea are developing countries. Account for two advantages and two disadvantages of this dependence on mining to a developing country.

# 2.5 Causes of land degradation

All around the world natural landscapes are being transformed by humans, which can cause land degradation. Natural vegetation is cleared and replaced with crops and pastures for grazing. Trees are cut down for fuel, paper and building material. Soil is damaged by overfarming and other poor agricultural practices, affecting its ability to support plants and animals. Water diverted from rivers and underground sources to grow crops and raise animals may become polluted through the use of fertilisers and pesticides. Soil erosion, desertification and **salinity** are three common forms of land degradation brought about by land clearing and farming. The five main causes of land degradation around the world are overgrazing (35%), deforestation (30%), crop growing (28%), collection of firewood for fuel (6%) and industrialisation (1%).

## Soil erosion, desertification and salinity

### Soil erosion

Soil erosion is the removal of topsoil faster than the soil-forming processes can replace it. Natural vegetation protects the soil. When land is cleared for farming it loses topsoil easily, often resulting in a lowering of soil nutrients and productivity. Each year, 5 to 7 million hectares of farmland are lost to soil erosion worldwide.

**Source 1** Soil erosion



BEFORE
rain clouds
Natural vegetation
Trees protect the soil from heavy rain, bind it together with their roots and provide organic matter

AFTER
Natural vegetation has been cleared
Heavy rain washes the soil, causing gullies
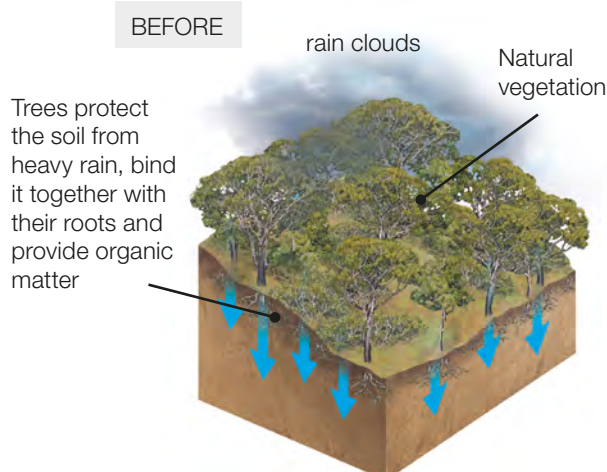
## Desertification

Desertification is the transformation of fertile land into dry, desert-like areas. Human activities such as deforestation, overgrazing and poorly managed agriculture can cause desertification. Unprotected, dry soil surfaces blow away with the wind or are washed away by rain, leaving infertile lower soil layers that are unproductive.

**Source 2** Desertification



BEFORE
rain clouds
wind
village
Transpiration through natural vegetation aids the formation of rain-producing clouds.
Productive agricultural field
grazing

AFTER
wind
dust storm
The village has grown into a town.
Natural vegetation has been removed and rainfall has decreased.
agricultural field has become dry and unproductive
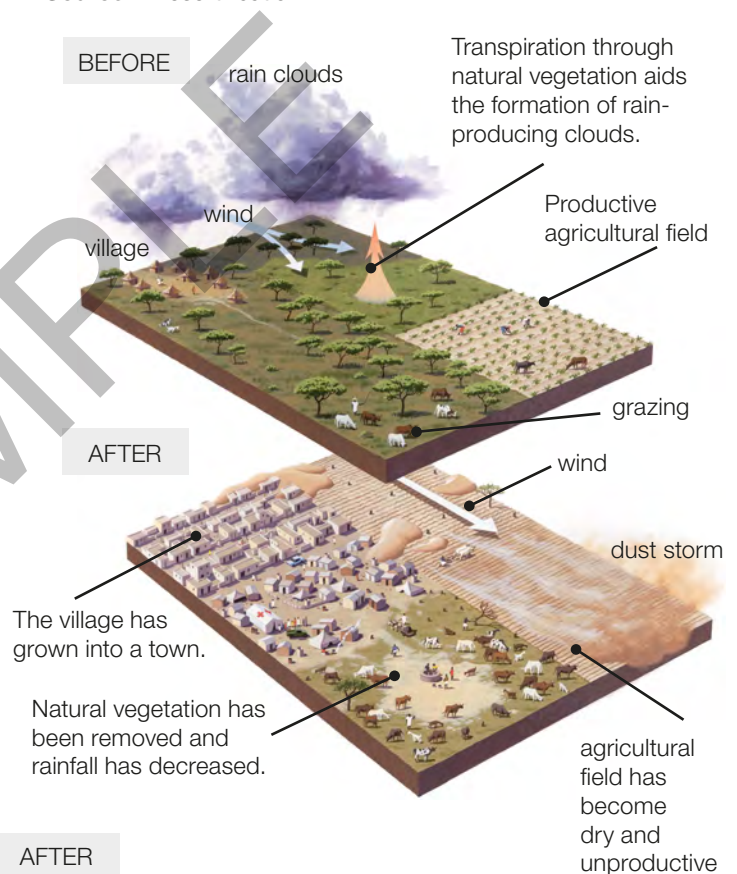
## Salinity

Salinity refers to a high level of salt in the soil, which kills plants. Salt in the underground water is forced to rise when we remove trees with deep root systems that keep the water table low in the ground. This is known as dryland salinity. When extra water from irrigation enters the ground it also forces the water table to rise. This is known as irrigated salinity.

BEFORE

trees absorb groundwater

agricultural land

salt dispersed in soil

water table low        groundwater

AFTER

no trees – infiltration increased

agricultural land lost

salt pans

erosion

salt brought to the surface

water table high
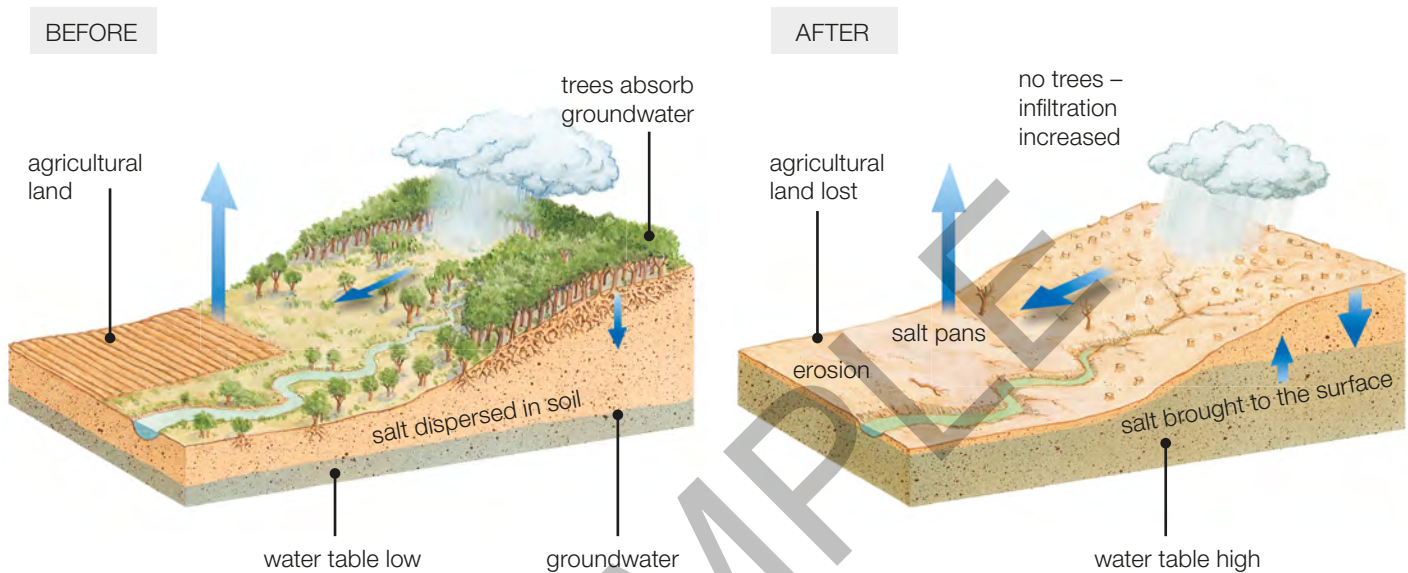
**Source 3** Salinity

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## Check your learning 2.5

### Remember and understand

1  Why is soil important?
2  Where does the soil that is eroded away end up? Describe how it got there.
3  What is desertification? Identify the three main human activities that can cause desertification.
4  What is salinity? Distinguish between dryland salinity and irrigated salinity.

### Apply and analyse

5  Construct a pie chart to illustrate the causes of degradation.

### Evaluate and create

6  You are a journalist trying to create greater awareness of the perils of land degradation. Consider the following statements and explain their meaning in your own words. Then propose another newspaper headline worthy of informing the reader of the importance of soils and the risks of land degradation.
   a  'We're treating soil like dirt. It's a fatal mistake, as our lives depend on it.'
   b  'Soil erosion threatens to leave the world hungry.'
   c  'From dust bowl to bread basket.'

# Uluru–an iconic Australian landform

Uluru is an iconic symbol of the Australian outback and one of the most visited landforms in Australia. Part of the desert landscape and close to the continent's geographical centre, Uluru attracts around 200 000 visitors a year.

Uluru rises approximately 348 metres above the ground and measures about 10.6 kilometres around its base. It is a sacred place for the local Aboriginal people, the Anangu.

Although the Northern Territory has the smallest population of any Australian state or territory, it has by far the highest percentage of Indigenous Australians. Around one in three people there (33 per cent) are of Indigenous heritage.



**Source 1** Uluru is Australia's most recognisable landform.

## Constructing a population pyramid

In order to better understand a group of people living in the same place (i.e. a population), geographers often need to analyse and compare the different groups within that population (for example, the number of men versus women, or young people versus old people). They do this by representing population data visually on a population pyramid.

Although population pyramids are a type of bar graph, they are a little different. While standard bar graphs have one horizontal axis (or x-axis) and one vertical axis (y-axis), population pyramids have one y-axis and two x-axes, like graphs back to back. The y-axis runs vertically through the middle separating the data for males on the left and females on the right.

Rather than show the actual numbers of men and women at each age group, population pyramids show each of these groups as a percentage of the total population. This makes it easier for geographers to identify trends and changes in different areas of the population.

Population pyramids are created from a table of data. Source 2 is the data for the Northern Territory's Indigenous Population and Source 3 is the population pyramid. For more information on population pyramids refer to page 29 of 'The geography toolkit'.

**Source 2** The Northern Territory's Indigenous population

| Northern Territory | Indigenous population % | |
| --- | --- | --- |
| Age group (years) | Males | Females |
| 0–4 | 6.2 | 5.9 |
| 5–9 | 6.1 | 5.7 |
| 10–14 | 5.7 | 5.4 |
| 15–19 | 5.3 | 5.0 |
| 20–24 | 4.7 | 4.8 |
| 25–29 | 4.0 | 4.3 |
| 30–34 | 3.9 | 4.1 |
| 35–39 | 3.5 | 3.7 |
| 40–44 | 2.9 | 3.0 |
| 45–49 | 2.3 | 2.5 |
| 50–54 | 1.7 | 2.0 |
| 55–59 | 1.1 | 1.4 |
| 60–64 | 0.8 | 1.1 |
| 65–69 | 0.5 | 0.7 |
| 70–74 | 0.3 | 0.5 |
| 75+ | 0.3 | 0.6 |

**Source 3** Population pyramid for the Northern Territory's Indigenous population
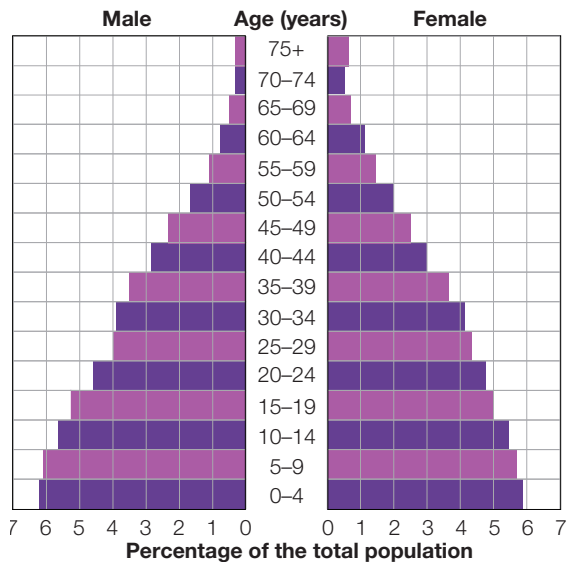


The steps to construct a population pyramid using the statistics in Source 2:

**Step 1** Using 5 mm grid paper, rule your axes as follows:

Vertical y-axis: There are 16 age groups in our example. The age groups start at the bottom, with the 0–4 age group, and finish at the top with the 75+ age group. Keep this in mind while completing your y-axis, because the table shows the age groups from lowest to highest going down the page. However, the population pyramid shows the age groups from lowest to highest going up the page.

Label the top of your y-axis, 'Age (years)'.

Horizontal x-axes (left and right): Find the highest percentage of both Males and Females. In our example, this is 6.2. Round this up to the nearest whole number, which is 7. Use two 5 mm grids per unit to create two 7 cm axes. Rule your x-axes with a scale from 0 to 7 from each side of the central y-axis to the left and right.

Label the left side 'Male' and the right side 'Female' and write 'Percentage of the total population' along the bottom.

**Step 2** Using a sharp lead pencil, create your bar graphs for each gender – first Males, then Females. Be as accurate as you can, and use the millimetre marks on a clear plastic ruler. First draw 5 mm high vertical strokes to end each individual bar. You can rule up the horizontals of each bar later.

**Step 3** Choose two different colours; alternate with one colour and then the other. This makes it easier to read the graph.

**Step 4** Give your population pyramid a title.

## Apply the skill

1 Construct a population pyramid using the second set of data (Source 4) on Northern Territory's non-Indigenous Population, following steps 1–4.

**Source 4** The Northern Territory's non-Indigenous population

| Northern Territory | Non-Indigenous population % | |
| --- | --- | --- |
| Age group (years) | Males | Females |
| 0–4 | 3.5 | 3.3 |
| 5–9 | 3.4 | 3.1 |
| 10–14 | 3.4 | 3.2 |
| 15–19 | 3.2 | 2.9 |
| 20–24 | 3.9 | 3.5 |
| 25–29 | 4.3 | 4.2 |
| 30–34 | 4.6 | 4.3 |
| 35–39 | 4.6 | 4.2 |
| 40–44 | 4.6 | 4.0 |
| 45–49 | 4.4 | 3.9 |
| 50–54 | 4.0 | 3.5 |
| 55–59 | 3.7 | 2.8 |
| 60–64 | 2.4 | 1.7 |
| 65–69 | 1.5 | 1.0 |
| 70–74 | 0.7 | 0.5 |
| 75+ | 0.8 | 0.8 |

## Extend your understanding

1 Use your population pyramid to answer the following questions:

a Which age group has the largest percentage for both males and females?

b Which is the smallest age group for each gender?

c What is the total percentage for the 0–4 age group?

d What is the total percentage for the 35–39 age group?

e What is the total percentage for the 70–74 and 75+ age groups?

SAMPLE

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