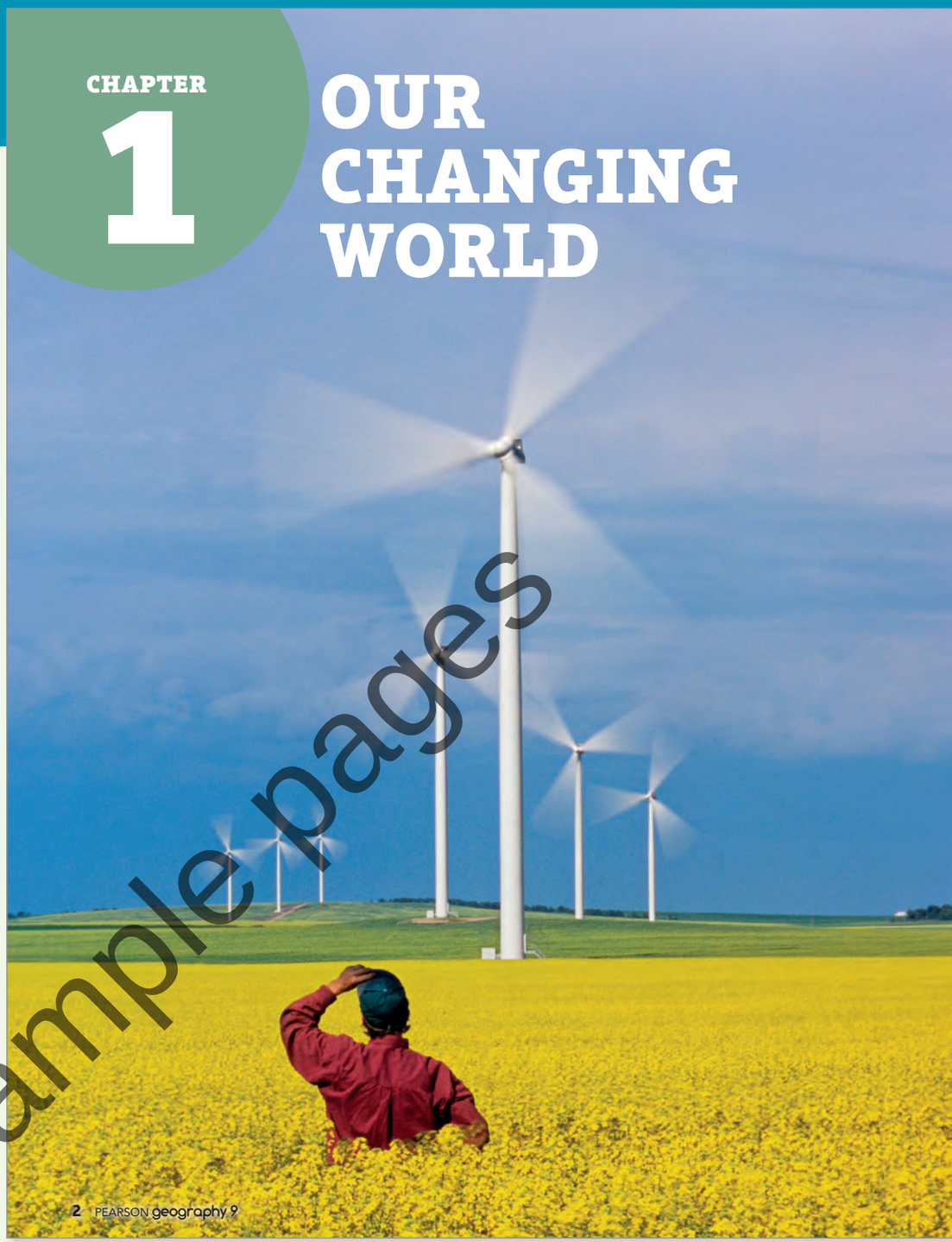
CHAPTER OVERVIEW

CHAPTER 1

OUR CHANGING WORLD



Sample pages

What's coming up

This chapter focuses on global food security and the role of technology in an interconnected world. With the key themes of technology and agriculture, this chapter recognises people as global citizens and focuses on sustainability. It explores the challenges of satisfying our needs in the present without compromising future generations.

As the world is an ever-changing place and no organism can live in isolation, we as humans affect the environment through our actions. The environment is the basis of our survival, therefore we are required to develop our activities in a way that safeguards the environment we all share, the global village. Due to advances in technology such as the internet, we are now interdependent as never before. The actions of one country can have a global effect, which brings with it both positives and negatives.

Using the image

Global food production and energy supply are two examples of our interconnected and changing world. The role of technology has allowed the global population to become interconnected, which has its benefits and costs.

1. As a class, use the image to brainstorm the changes that have occurred in technology and agriculture over the past 150 years. Highlight the beneficial changes and the challenges.
2. Students imagine they are living in 2200 and consider what the world might be like. Students complete a Y chart of what they would feel, see and hear if they were standing in a field in the future.

Pre-quiz

1. Students decide whether the following are true or false.
   - All people in the world have access to enough food.
     False
   - There are more obese people in the world than those who are under-nourished.
     True
   - The global population is over 7 billion people.
     True
   - There are 2.5 billion internet users in the world today.
     True
   - Over 124 billion emails were sent today.
     True
2. Name a country that doesn't have access to enough food. Why is this the case?
   Student answers will vary. A possible response could be India, due to population.
3. What do people think of when they hear the word globalisation?
   Student answers will vary.
4. Name three types of social media.
   Student answers will vary.
5. Can you name the biome in which this school is located?
   Student answers will vary.
6. Make a list of all the social media you have used in the last week.
   Student answers will vary.

As adults you will inherit a world even more crowded than it is today. The biophysical environment will be more threatened and the global economy will be even more competitive and interconnected. Change is something that we must all embrace. We cannot ignore it. As geographers you have the knowledge and skills required to understand the nature, causes and consequences of these changes. You can also shape the process of change if you choose to be informed and active global citizens. You can make a difference. You can help make the world more socially just and our collective relationship with the environment more sustainable.

In this chapter we explore some of the main themes addressed in Year 9 Geography. These are 'ecosystems and biomes', 'food security', 'sustainability', 'transforming technologies' and 'global interconnections'.

KEY IDEAS

- To develop a knowledge and understanding of the key concepts central to the study of Geography in Year 9
- To develop an understanding of biomes and ecosystems, and the concept of sustainability
- To appreciate the challenge of meeting the food needs of a growing world population
- To develop an appreciation of the role technology plays in enhancing interconnectedness

GLOSSARY

aquatic ecosystem	a water-based community of plants and animals
biosphere	the global sum of all ecosystems; can also be called the zone of life on earth
cross-section	a side view or profile of a landscape; a visual impression of the shape of the land
culture	the shared attitudes, values, goals and practices characteristic of a group; their customs, art, literature, religion, philosophy and so on; the pattern of learnt and shared behaviour among the members of a group
e-commerce	the buying and selling of goods or services conducted over electronic systems such as the internet, or other computer networks
ecologically sustainable development	an approach to environmental management that involves using, conserving and enhancing the resources available to people. It ensures that the ecological processes on which all life depends are maintained and the quality of life improved for both present and future generations
ecosystem	a community of interacting plants and animals and their physical surroundings
food security	the availability of food and a person's access to it
global village	a view of the world as having contracted into a village by the speed and reach of information and communication-based technologies
globalisation	the increasing economic, political and cultural interconnectedness of countries through the mass consumption of mainly Western culture, technology and trade
infrastructure	the basic facilities that are necessary for a community to operate; these include transportation and communication networks, power and sewerage systems, schools and hospitals
location	the position of a feature or place on the earth's surface; geographers refer to absolute location (latitude and longitude) and relative location (where the site is in relation to other things, for example, a hilltop or another place)
relief	the shape of the land
species	a group of organisms capable of interbreeding and producing fertile offspring
terrestrial ecosystem	a community of organisms and their environment that is found on the landmasses of continents and islands
transect	a straight line or narrow section through an object or natural feature or across the earth's surface, along which observations are made

1.0 Canola fields in Manitoba, Canada

Sample pages

7 Calculate how many hours you have used social media in the last week.
Student answers will vary.

8 List the different countries you have 'visited' via social media in the last week.
Student answers will vary.

Getting started

Students discuss traits of a global citizen, which are written on the board. Suggestions could include someone who respects diversity or tries to make the world more sustainable. Students may use the internet for assistance. Once there are a number of traits on the board, students write a paragraph on why it is important to be a global citizen in today's world. Students share responses as a class. Students rate themselves out of 10 as a global citizen.

EAL/D support

Geographical concepts

Change is a significant concept for EAL/D students, who are learning to live in a new environment with a different language. To introduce this chapter, encourage students to bring their own lives and past experiences into the classroom. This will show them that their ideas and observations are valid sources of information and a key component of the learning process.

Students make a list of all of the changes they have witnessed in their lives since moving to Australia. They could group their lists according to the following categories: school, home, food, buildings, landscape, customs, people.

PEARSON geography 9 RESOURCES

Pearson Reader and eBook

Documents
Test: Our changing world
Teaching program: Chapter 1

Interactive activity
Definitions
Biomes and ecosystems
Food security
Sustainability
A 'shrinking' world
Interconnections
Agriculture

Templates
Graphic organisers
Blank outline maps

Pearson Reader

Interactive activity
Humans and environment
Ecosystems
Effects of human activity on ecosystems

Geographical knowledge and understanding

Helpful hints

Introduction to food security

MI: visual–spatial, verbal–linguistic

This activity is ideally done before students start the unit.

With the global population expected to increase by one billion by 2025 (UNFPA, 2013), global food supply will become a major issue. Students brainstorm factors other than population that will affect or influence global food supply. Answers could include climate, food preferences, cost and so on. Students list five countries they believe suffer from lack of food and from the brainstorm suggest the main reason why. Using Figure 1.4 students match the countries they listed and answer the following.

1 Were your predictions correct? Which ones? What countries on this map surprised you?

AC general capabilities: critical and creative thinking

AC geographical concepts: place, space

Geographical inquiry and skills

Extension task

Food security investigation

MI: verbal–linguistic

Using Figure 1.4, students choose one country from Asia which is affected by the problem of food security. Using the internet and other resources, students research factors affecting food security for that country and create a three minute presentation. Students:

1 Identify the economic, socio-cultural, political and environmental factors affecting food security within their country.
2 Describe the effects of these factors on the people living in the country.
3 Discuss possible solutions to food security and recommend a possible solution to the country.

AC general capabilities: ICT, critical and creative thinking

AC geographical concepts: place, environment

AC cross curriculum priorities: Asia and Australia's engagement with Asia

1.2 Key theme: Food security

Like other species, humans eat to live. While it is fundamental to life, securing enough food is also considered a fundamental human right. There are concerns that the struggle for food could well become the next battleground and that global food security lies at the heart of both political and social stability right across the world.

Defining food security

The United Nations Food and Agriculture Organization's 2009 Food Summit defined food security as a situation in which:

> … all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Food security means that the following conditions are met.

- Enough good-quality food is available. Food supplies can be affected by adverse weather (hailstorms, heatwaves), natural hazards (droughts, floods, tropical cyclones and tsunamis), conflict (civil unrest, wars), population growth, unsuitable agricultural practices, environmental degradation, trade barriers and inequalities within societies.
- Food is affordable and within the reach of all. When food supplies are interrupted and become expensive, wealthy people can still afford to buy them, but poorer people do not have the means to do so.
- The food available is the right sort of food. A variety of food types is essential for a balanced diet that ensures normal growth and development and good health. Such food needs to be stored safely and prepared hygienically.

1.3 Somali refugees arrive at the Dagaley refugee camp in Dadaab, Kenya, 2011. Hundreds of thousands of people fled the hardship and civil war in Somalia to Dadaab. A severe drought added to the misery and hardship. Some refugees walked for up to 30 days to reach the camp, and some children died on the way, due to lack of food and water.

Australia's food plan

When developing a national food plan in 2011, the Australian Government identified a number of levels within which the discussion of food security operates:

- the global level, at which the issue is the capacity of the world as a whole to produce and effectively and fairly distribute sufficient supplies of food
- the national level, at which the issue is the capacity of each country to secure sufficient food to meet the needs of its population in general
- the community level, at which the issue is the difficulty that communities, for geographical or other reasons, may have in accessing food in a country that has sufficient access to food overall
- at the individual level, at which personal income is one factor that affects food security.

Global food security

In 2011, the countries of Somalia, Djibouti, Ethiopia and Kenya were hit by the worst drought in 60 years. This caused a severe food crisis as famine took hold in the worst-affected areas and thousands of people, including the woman and children shown in Figure 1.3, fled in search of food and water.

While there have been significant advances in global food production, many people still suffer chronic hunger because of the inequalities that exist. There is actually enough food in the world for all, but it is not reaching everyone.

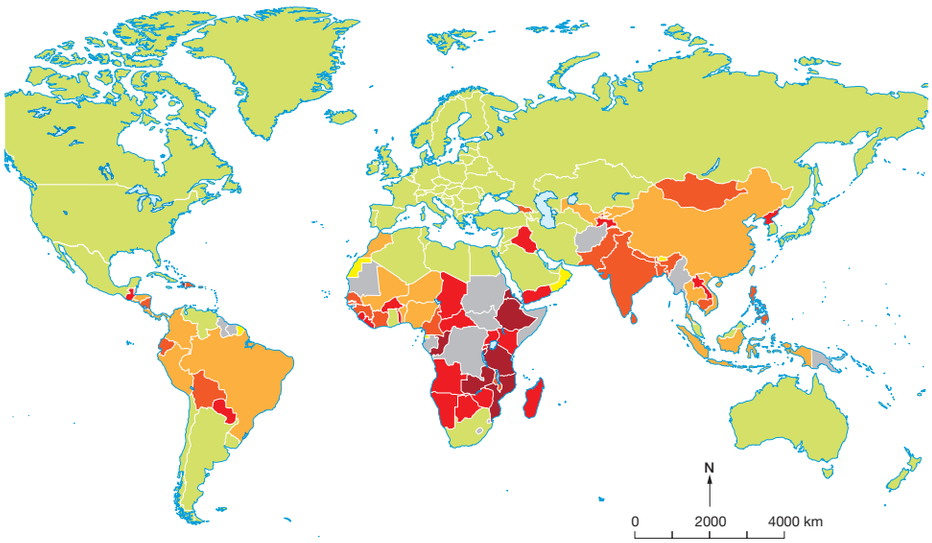
Sample pages

EAL/D support

Scaffolding task

Provide EAL/D students with the vocabulary to complete activity 5 by introducing them to 'if and then' statements. These are reasoning statements where 'if' is the hypothesis and 'then' is the outcome (positive or negative). For example:

- If whoever controls the food supply fails to make the food affordable, then people living on a low income will not get enough food to eat.
- If whoever controls the food supply does not provide a variety of food types, then people will not be able to have a balanced and healthy diet.



Missing or insufficient comparative data
<5% Very low undernourishment
5–14% Moderately low undernourishment
15–24% Moderately high undernourishment
25–34% High undernourishment
35% and over Very high undernourishment
No data

1.4 From Africa and Asia to Latin America and the Near East, there are 870 million people in the world who do not get enough food to lead a normal, active life.

Over half of the world's population live in low-income, food-deficit countries that are incapable of producing enough food for their people and cannot afford to import food. The inequitable distribution of hunger is shown in Figure 1.4.

Challenges in securing global food security

The world is rapidly changing and there is an obvious need to increase food production and provide access to food for everyone. The world's food supply is being put under pressure from:

- population growth, especially in Asia and Africa
- increased demands on land and water resources
- conflict between competing landuses, such as food crops and biofuels
- possible impact of climate change, with shifting climate belts and extreme weather events
- changing consumption patterns as nations become more economically developed.

ACTIVITIES

1.2

Knowledge and understanding

1 Define food security.
2 Explain what is necessary for food to be 'secure'.
3 Assess current global food security.
4 Identify the challenges in securing global food security.

Applying and understanding

5 Evaluate the Australian Government's national food plan.

Geographical skills

6 Study Figure 1.4.
- a Name the continent that is experiencing very high undernourishment in some parts.
- b List the continents not experiencing very low undernourishment.
- c Name the continent experiencing the greatest differentiation, from very high undernourishment to very low undernourishment.
- d Describe the spatial distribution of undernourishment on this continent.
- e Can you suggest reasons why there is great differentiation?

Sample pages

Activity answers

Knowledge and understanding

1 Food security is a situation in which all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

2 Food is considered secure when enough good quality food is available to everyone; food is affordable and within the reach of all; and the food available is the right sort of food.

3 There is enough food produced in the world to feed everyone; however, it is not accessible to everyone. Some parts of the world have food security, but in many areas, a food deficit exists. Globally, food security meets some criteria but not all.

4 A number of challenges exist in securing global food security. These include:
- population growth, especially in Asia and Africa
- increased demands on land and water resources
- conflict between competing landuses, such as food crops and biofuels
- possible impact of climate change, with shifting climate belts and extreme weather events
- changing consumption patterns as nations become more economically developed.

Applying and analysing

5 The Australian Government's national food plan is divided into four levels: global, national, community and individual. Considering less than five per cent of Australians experience undernourishment, Australia's food plan appears thorough.

Geographic skills

6 a Africa
b South America, North America, Europe, Asia, Australia
c Africa
d Undernourishment is relatively low in both Northern Africa and South Africa. Countries experiencing high levels of undernourishment are located in equatorial central Africa and its east coast.
e Reasons for this spatial distribution include variation in climate, stability of governments in post-colonial African countries and the AIDS epidemic, which has removed large parts of the adult population in parts of Africa and with them, the knowledge and skills on how to productively farm the land in order to produce enough crops to feed all people.

Geographical knowledge and understanding

Group work

A sustainable future

MI: verbal–linguistic, bodily–kinaesthetic, musical–rhythmic

Students write a poem using the trigger 'A sustainable future …'. Students share their poem with the class or in a small group.

AC general capabilities: ethical understanding

AC geographical concepts: sustainability

Evaluate understanding

Sustainability concept map

MI: visual–spatial

Students create a concept map on the principles of sustainable development and how it can be achieved. Students should demonstrate an understanding of how it is important for them, as active global citizens, to understand and practice these principles.

As a class, create a summary statement about the importance of sustainable development.

AC general capabilities: sustainability

AC geographical concepts: sustainability

Geographical inquiry and skills

Extension tasks

Ecological footprint

MI: visual–spatial

Using the EPA Victoria ecological footprint calculator, students recognise how their activities contribute to the global ecological footprint. Once the survey is complete, students identify two ways in which they could change their behaviour to be more sustainable. This activity could be done for homework to allow students access to their guardians for more detailed information.

AC general capabilities: ethical understanding

AC geographical concepts: sustainability

Homework

Opinion please

MI: interpersonal

Students create an opinion piece for a newspaper in response to the statement 'Australia does not do enough to be called sustainable'.

AC general capabilities: literacy, critical and creative thinking

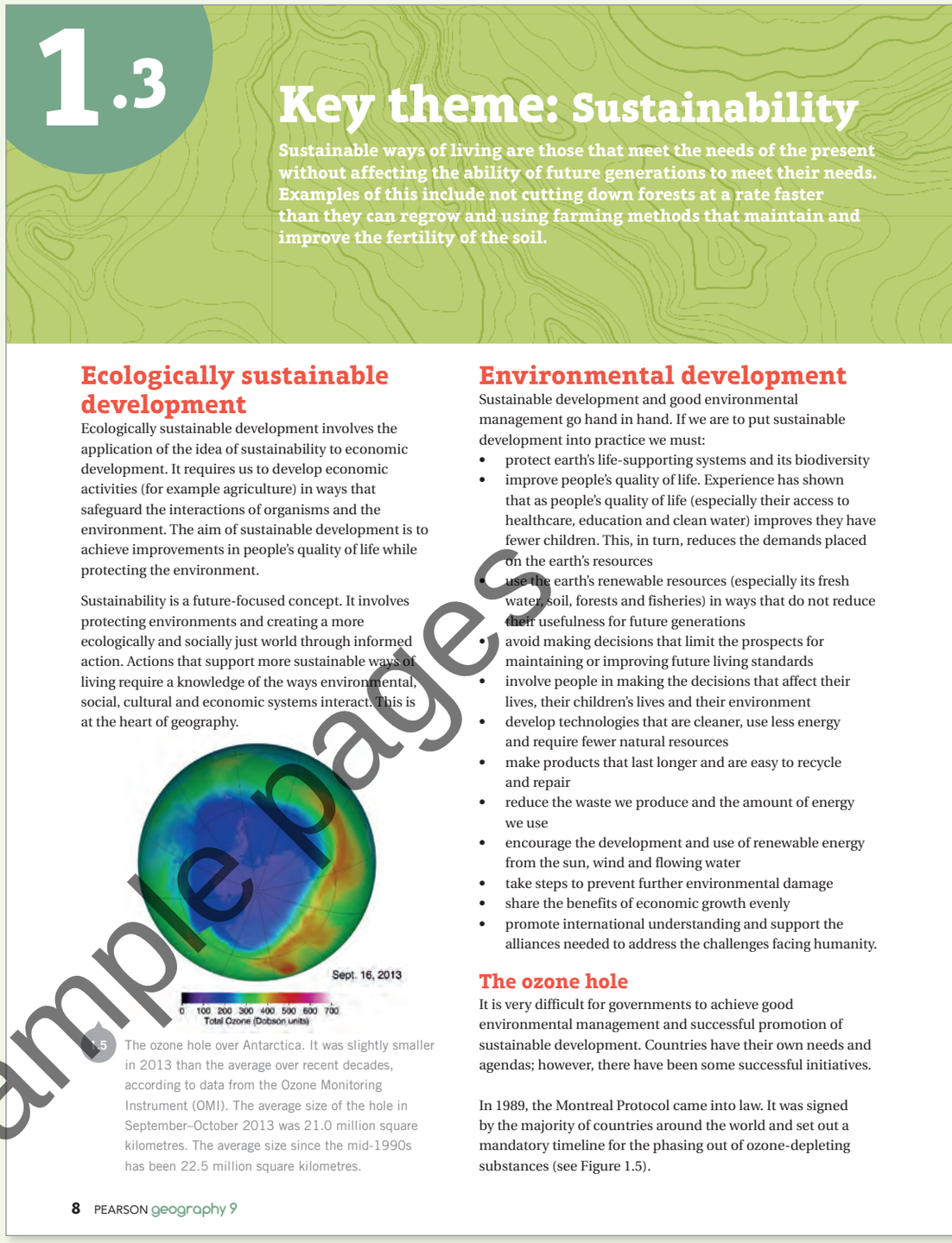
AC geographical concepts: sustainability

AC cross curriculum priorities: sustainability

EAL/D support

Reading strategy

Students read the six definitions of sustainable development in Figure 1.6 and rewrite each one in their own words. Some of the language is quite complex, so working in groups or even as a whole class may be beneficial. As an extension to this activity, once students have grasped the concept and vocabulary of 'sustainable development', they can write their own definition.



1.3

Key theme: Sustainability

Sustainable ways of living are those that meet the needs of the present without affecting the ability of future generations to meet their needs. Examples of this include not cutting down forests at a rate faster than they can regrow and using farming methods that maintain and improve the fertility of the soil.

Ecologically sustainable development

Ecologically sustainable development involves the application of the idea of sustainability to economic development. It requires us to develop economic activities (for example agriculture) in ways that safeguard the interactions of organisms and the environment. The aim of sustainable development is to achieve improvements in people's quality of life while protecting the environment.

Sustainability is a future-focused concept. It involves protecting environments and creating a more ecologically and socially just world through informed action. Actions that support more sustainable ways of living require a knowledge of the ways environmental, social, cultural and economic systems interact. This is at the heart of geography.

1.5 The ozone hole over Antarctica. It was slightly smaller in 2013 than the average over recent decades, according to data from the Ozone Monitoring Instrument (OMI). The average size of the hole in September–October 2013 was 21.0 million square kilometres. The average size since the mid-1990s has been 22.5 million square kilometres.

Environmental development

Sustainable development and good environmental management go hand in hand. If we are to put sustainable development into practice we must:

- protect earth's life-supporting systems and its biodiversity
- improve people's quality of life. Experience has shown that as people's quality of life (especially their access to healthcare, education and clean water) improves they have fewer children. This, in turn, reduces the demands placed on the earth's resources
- use the earth's renewable resources (especially its fresh water, soil, forests and fisheries) in ways that do not reduce their usefulness for future generations
- avoid making decisions that limit the prospects for maintaining or improving future living standards
- involve people in making the decisions that affect their lives, their children's lives and their environment
- develop technologies that are cleaner, use less energy and require fewer natural resources
- make products that last longer and are easy to recycle and repair
- reduce the waste we produce and the amount of energy we use
- encourage the development and use of renewable energy from the sun, wind and flowing water
- take steps to prevent further environmental damage
- share the benefits of economic growth evenly
- promote international understanding and support the alliances needed to address the challenges facing humanity.

The ozone hole

It is very difficult for governments to achieve good environmental management and successful promotion of sustainable development. Countries have their own needs and agendas; however, there have been some successful initiatives.

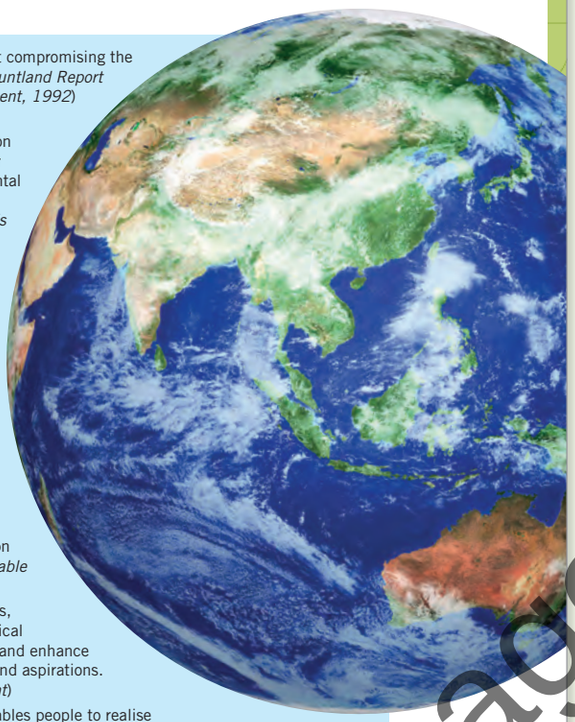
In 1989, the Montreal Protocol came into law. It was signed by the majority of countries around the world and set out a mandatory timeline for the phasing out of ozone-depleting substances (see Figure 1.5).

8 PEARSON geography 9

Sample pages

Definitions of sustainable development

- Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (*Bruntland Report for the World Commission on Environment and Development, 1992*)
- In essence sustainable development is about five key principles: quality of life; fairness and equity; participation and partnership; care for our environment and respect for ecological constraints—recognising there are 'environmental limits'; and thought for the future and the precautionary principle. (*Making London Work by Forum for the Future's Sustainable Wealth London project*)
- The environment must be protected … to preserve essential ecosystem functions and to provide for the wellbeing of future generations; environmental and economic policy must be integrated; the goal of policy should be an improvement in the overall quality of life, not just income growth; poverty must be ended and resources distributed more equally; and all sections of society must be involved in decision making. (*The Real World Coalition 1996, a definition based on the work of the World Commission on Environment and Development*)
- A sustainable future is one in which a healthy environment, economic prosperity and social justice are pursued simultaneously to ensure the well-being and quality of life of present and future generations. Education is crucial to attaining that future. (*Learning for a Sustainable Future—Teacher Centre*)
- A process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. (*The World Commission on Environment and Development*)
- Sustainable development is a dynamic process which enables people to realise their potential and improve their quality of life in ways which simultaneously protect and enhance the earth's life support systems. (*Forum for the Future*)



1.6 Definitions of sustainable development

ACTIVITIES

Knowledge and understanding

1 Define the term 'sustainability'.
2 Explain what sustainable development is.
3 Outline the things we must do in order to achieve a more sustainable way of living.

Applying and analysing

4 Identify the ways in which you and your family contribute to a more sustainable future. Share your thoughts with others in the class. Are there any changes that you and your family could adopt to live more sustainably?
5 Study the definitions of sustainable development in Figure 1.6. Identify the words, ideas or themes that these definitions have in common.
6 Write your own definition of sustainable development.

Investigating

7 Undertake internet research to find definitions of 'social justice', 'intra-generation equity' and 'inter-generational equity'.
8 Undertake internet research about the Montreal Protocol. Find out why the Protocol has been regarded as the most successful environmental protection agreement.

Sample pages

Activity answers

Knowledge and understanding

1 'Sustainability' is a concept that supports the idea that development and economic activity of the present should not damage or detract from the environment for the use of future generations.
2 Sustainable development is the concept that development which meets the needs of the present should not also compromise the ability of future generations to meet their own needs.
3 In order to achieve a more sustainable way of living, humanity must:
   - protect earth's life-supporting systems and its biodiversity
   - improve people's quality of life
   - use the earth's renewable resources in ways which do not reduce their usefulness for future generations
   - avoid making decisions that limit the prospects for improving future living standards
   - involve people in making the decisions that affect their lives
   - develop technologies that are cleaner, use less energy and require fewer natural resources
   - make products that last longer
   - reduce the waste we produce and the amount of energy we use
   - encourage the development and use of renewable energy
   - reduce further environmental damage
   - share benefits of economic growth evenly
   - promote international understanding.

Applying and analysing

4 Student answers will vary.
5 Common words, ideas and themes include: without compromise, future generations, quality of life, economic prosperity, social justice, fairness and equity
6 Student answers will vary.

Investigating

7 Student answers will vary.
8 Student answers will vary.

Geographical knowledge and understanding

Group work

Debate of great minds

MI: verbal–linguistic

Technology is an easier and faster way to get things done, but the question we are beginning to ask is: 'Have we gone too far?' As a class, students debate the topic 'Does technology hinder or enhance our world?'

The class divides into two groups: one for and one against, and students collect evidence for their argument. The topic may be further divided to allow all students to contribute. Some suggested subtopics include: technological advancements in the past, technology in schools, energy, communication and transport.

After hearing the arguments from both sides, students write three paragraphs on the conclusions they have reached about the topic of technology in the world.

AC general capabilities: critical and creative thinking

AC geographical concepts: place, space

'Reteach–relearn'

Two-sentence summary

MI: logical–mathematical

Students read the section 'Advances in transport' and write a two-sentence summary for each subheading. Students should include key points of the advances, as well as any positives or negatives.

AC general capabilities: literacy

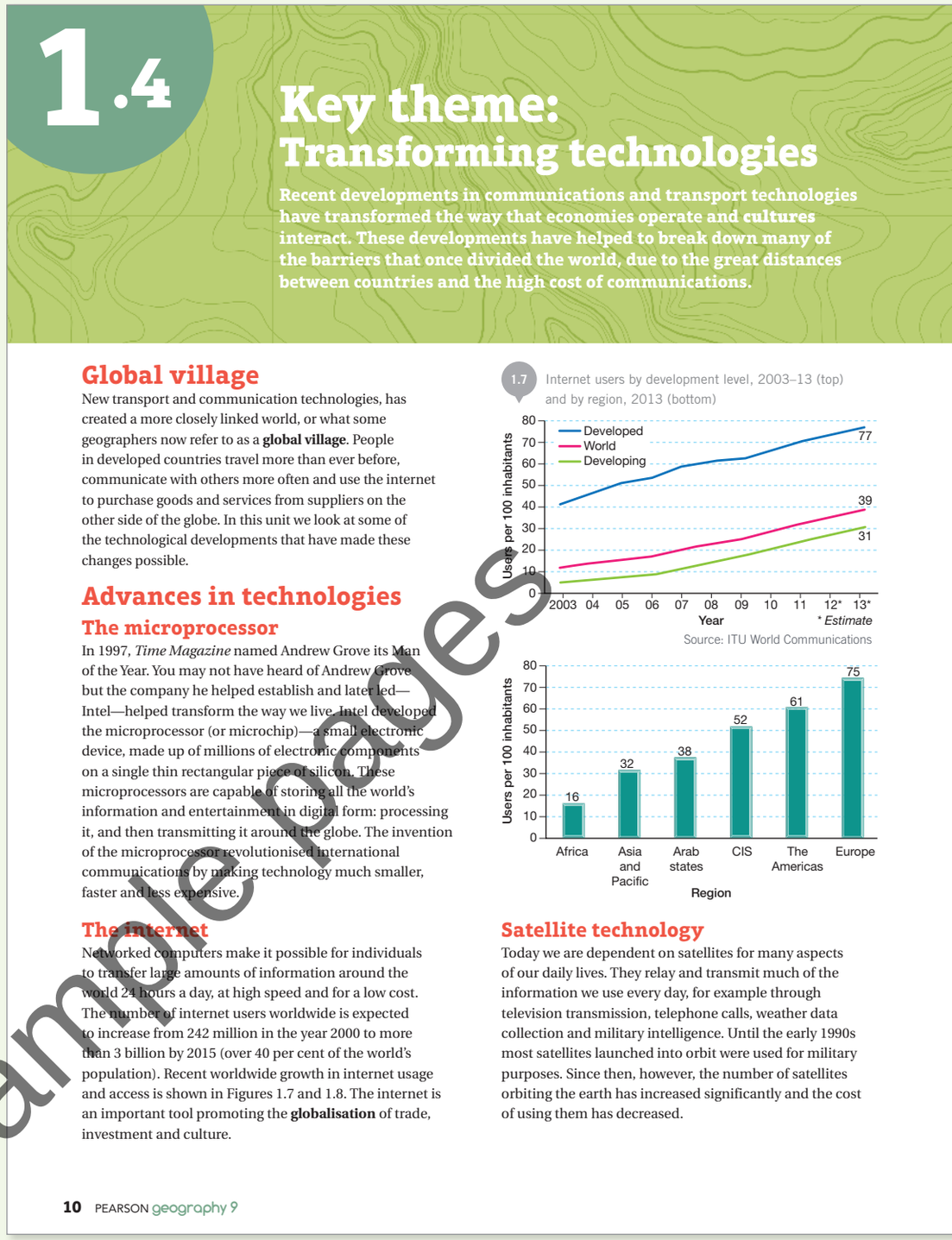
AC geographical concepts: interconnection, scale, change

EAL/D support

Oral rehearsal

Before completing activities 8 and 9, students work in pairs to make sense of the graphs in Figures 1.7 and 1.8. Students can choose from the following scaffolds to assist them:

- The graph shows us that ...
- On the X axis ...
- On the Y axis ...
- There has been a steady/sudden increase/decrease ...
- The graph displays a stable growth pattern ...
- The graph trends upwards/downwards ...



1.4 Key theme: Transforming technologies

Recent developments in communications and transport technologies have transformed the way that economies operate and cultures interact. These developments have helped to break down many of the barriers that once divided the world, due to the great distances between countries and the high cost of communications.

Global village

New transport and communication technologies, has created a more closely linked world, or what some geographers now refer to as a **global village**. People in developed countries travel more than ever before, communicate with others more often and use the internet to purchase goods and services from suppliers on the other side of the globe. In this unit we look at some of the technological developments that have made these changes possible.

Advances in technologies

The microprocessor

In 1997, *Time Magazine* named Andrew Grove its Man of the Year. You may not have heard of Andrew Grove but the company he helped establish and later led—Intel—helped transform the way we live. Intel developed the microprocessor (or microchip)—a small electronic device, made up of millions of electronic components on a single thin rectangular piece of silicon. These microprocessors are capable of storing all the world's information and entertainment in digital form: processing it, and then transmitting it around the globe. The invention of the microprocessor revolutionised international communications by making technology much smaller, faster and less expensive.

The internet

Networked computers make it possible for individuals to transfer large amounts of information around the world 24 hours a day, at high speed and for a low cost. The number of internet users worldwide is expected to increase from 242 million in the year 2000 to more than 3 billion by 2015 (over 40 per cent of the world's population). Recent worldwide growth in internet usage and access is shown in Figures 1.7 and 1.8. The internet is an important tool promoting the **globalisation** of trade, investment and culture.

1.7 Internet users by development level, 2003–13 (top) and by region, 2013 (bottom)

Source: ITU World Communications

Satellite technology

Today we are dependent on satellites for many aspects of our daily lives. They relay and transmit much of the information we use every day, for example through television transmission, telephone calls, weather data collection and military intelligence. Until the early 1990s most satellites launched into orbit were used for military purposes. Since then, however, the number of satellites orbiting the earth has increased significantly and the cost of using them has decreased.

Sample pages

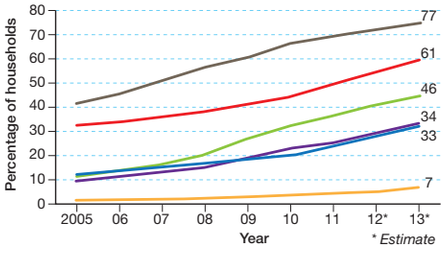
Activity answers

Knowledge and understanding

1 The term 'global village' is used to describe the increased connectivity of people across the globe and the speed with which they are now able to communicate using modern technology. People can converse with friends on the other side of the planet as if they lived next door in the same small village.

2 Computer, communications and transport technologies have all made rapid advancements in the last twenty years. Microprocessors make

1.8 Households with internet, by region, 2005–13



CIS = Commonwealth of Independent States (Russia and former Eastern European states)

Source: ITU World Communications

Advances in transport

Air transport

Developments in aviation technology, especially the introduction of the Boeing 747, have led to lower travel costs and increased volumes of international tourism and business activity. In addition to cost savings, coordination between different types of transportation (air, road, rail and shipping) has helped to reduce the time lost in the movement of people and cargo. The result has been a rapid increase in world trade and international tourism. These, in turn, have had an impact on our cultural identity. When we are exposed to new customs and traditions, we often integrate aspects of these into our own way of life.

SPOTLIGHT

The Monsterbus

The aviation industry has taken a technological leap forward with the introduction of the giant Airbus A380. The double-decked aircraft is capable of carrying 550 passengers—25 per cent more than the Boeing 747.

Source: Qantas

1.9 Airbus A380

Land transport

Increased levels of investment in rail and road **infrastructure** have made land transport faster and more competitive over longer distances. The introduction of high-speed rail systems and new cargo handling equipment has, for example, cut delivery times and increased efficiency. Likewise, the development of refrigerated road and rail transport has enabled fresh produce to be transferred over long distances.

Sea transport

Technological developments in shipping and cargo handling have been central to the expansion of international trade. As ships have increased in size, the cost of transporting goods has declined. Specialised bulk carriers, oil tankers and container ships lower costs and reduce the amount of time that ships spend in port being loaded and unloaded. Containerisation has revolutionised the way cargo is handled. Containers are capable of being carried by road, rail or ship, eliminating the need for multiple handling of goods.

ACTIVITIES

1.3

Knowledge and understanding

1 What is a 'global village'?
2 Explain how recent changes in technology helped to create a global village.
3 What is a microprocessor? Explain how have microprocessors changed international communications.
4 How have the availability and cost of satellite communications changed over time?
5 Describe the impact of recent developments in air, sea and land transport on the cost of transporting both freight and passengers.

Applying and analysing

6 What do you think international transport and communications will be like in 2050? Prepare a talk, poster or comic strip outlining your vision.

Geographical skills

7 Study Figure 1.7. Name the region with the greatest percentage of internet growth per 100 inhabitants between 2003 and 2013. Can you suggest reasons for this growth pattern?
8 Study Figure 1.8. Rank the regions from the highest to lowest percentage growth of households with internet access between 2005 and 2013.

Investigating

9 Interview three older people to find out what you can about changes in transport and communications technology over time. In small groups, create a timeline to illustrate your results.

Spotlight support

Taking it further

The Airbus A380 was introduced in 2007 providing airlines with 150 additional seats per flight on key high-density routes. This allowed operators to replace multiple flights of smaller aircraft with one, while also increasing profit and drawing more traffic to popular destinations. Many airports upgraded their facilities to accommodate the Airbus A380. The aeroplane is said to be cleaner and more efficient than ever before, burning 17% less fuel per seat than today's largest jets and producing around 60% less carbon dioxide than the average family car, per passenger kilometre.

Source: Airbus.com and Qantas

Students study the impacts of the aviation industry and create a T-chart with positives and negatives of this form of transport. Students then research the new technology in 'green' aviation.

Sample pages

computers smaller, faster and cheaper. The internet makes it possible for individuals to transfer large amounts of information around the world twenty-four hours a day, at high speed and for a low cost. Satellites relay and transmit television, telephone calls and other data around the globe.

3 A microprocessor is a small electronic device, made up of multiple electronic components on a single thin rectangular piece of silicon. It is a vital component of modern computers, and enables them to become smaller and cheaper.

4 The internet is an important tool promoting the globalisation of trade, investment and culture. This technology has, for example, enabled many small businesses to market their products to a global audience twenty-four hours a day, improving trade. Investors are able to access assets and markets around the globe. People are able to access music, video and communicate with others around the globe, in this way culture is no longer restricted to countries or towns.

5 Developments in transport technology have played a significant role in transforming society. Improvements in the speed, size and reduction in the cost of travel have enabled many more people and goods to move around the globe via air and sea. Continued investment and improvement in road and rail have improved speed and safety, making accessing areas previously isolated faster and safer.

Applying and analysing

6 Student answers will vary.

Geographical skills

7 The region with the greatest percentage of internet growth per 100 inhabitants between 2003 and 2013 is the developed world. This is primarily due to inhabitants of the developed world being wealthier, having access to the hardware required to use the internet and investment in infrastructure required to support the internet.

8 CIS, Europe, the Americas, Arab states, Asia and Pacific, Africa

Investigating

9 Student answers will vary.

Geographical knowledge and understanding

Helpful hints

Your globalised day

MI: verbal–linguistic, interpersonal

Globalisation is the concept that everything is connected and people are now interdependent. Teenagers today are growing up in a world where they experience this concept every day. Students begin the lesson by considering the following questions.

- How many people in the class have a mobile phone?
- How many people have bought something on the internet from another country?
- How many people watch a TV show made overseas?
- How many people have heard of the Kony campaign from 2012?

Students are shown a series of logos and asked to list the company they belong to. Suggested logos include Apple, McDonalds, Nike, Pepsi. Students discuss how globalisation connects people and places.

AC general capabilities: intercultural understanding

AC geographical concepts: interconnection

Extension tasks

Your globalised day

MI: visual–spatial

Students use a map to show how globalised their day is. Students think about the food they consume, clothes they wear, technology and services they use. This could be extended over a week. Students write a paragraph about their findings and display maps in class.

AC general capabilities: intercultural understanding

AC geographical concepts: interconnection

Quick 5

Decision spectrum

MI: intrapersonal, bodily–kinaesthetic

Students consider the statement 'globalisation destroys culture' and use the four corners of the classroom to represent 'strongly agree', 'agree', 'disagree' and 'strongly disagree'. Students move to the corner of the room that represents their viewpoint. Students discuss their views as a class.

1.5 Key theme: Global interconnections

Today, because of technologies such as the internet, everything is connected to everything. We are now interdependent. We are linked as nations, and as individuals, as never before. These developments have helped to bring about, and reinforce, the process of globalisation.

Globalisation

Globalisation is the term given to the process by which the economies and cultures of countries (and peoples) are becoming more integrated or independent. It involves the global spread of products, ideas and other aspects of culture. Globalisation can either erode or make universal the characteristics of local cultures. For example, local cultural traditions might be lost while distant traditions are embraced. Traditional Australian slang terms such as 'cobber', 'grouse', 'galah', 'jumper' and 'ridgy-didge' are falling into disuse, while we increasingly use US slang terms such as 'guys', 'sweater', 'bling', '24/7' and 'hoodie'—terms that we have become familiar with as a result of our television viewing.

While globalisation is not new, advances in transport and telecommunications technologies, including the rise of the internet, are major factors in its acceleration. Each new advance increases the interdependence of economic and cultural activities. It strengthens the connections between people and places.

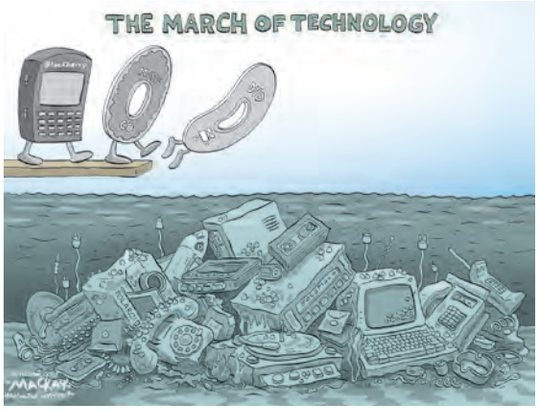
Connections between producers and consumers

Advances in transport and communications technologies have transformed global patterns of production and consumption. In recent decades, labour-intensive manufacturing has moved to those parts of the world where the labour costs are lowest, especially the countries of East and South Asia and South and Central America. These manufactured goods are then shipped to a worldwide market in which consumption habits are shaped by media-based, global advertising campaigns. It is now possible to make a product almost anywhere in the world, using resources from anywhere, by a company located anywhere, to be sold anywhere. This has put businesses in one country in direct competition with businesses in others, and results in workers in different parts of the world competing against each other for jobs, wages and working conditions.

As a result of labour-intensive manufacturing abandoning the high-cost countries of the developed world, new forms of wealth generation have emerged. In the developed world the main focus is now on high value-added manufactured goods and service industries. High value-added manufactured goods include pharmaceuticals, aircraft and wine—goods that cannot be easily made without the necessary expertise and infrastructure. Service industries include financial management, education and healthcare.

e-commerce

Electronic commerce or **e-commerce** is the buying of goods and services using the internet or other electronic systems. Fewer people are using cash to purchase goods and services. In 2012, the value of e-commerce exceeded a trillion US dollars in a single year for the first time. Australia's share of this was US$36.2 billion.



1.10 Technology is continuously evolving.

Sample pages

Geographical inquiry and skills

Geographic inquiry activity

How industries are affected

MI: verbal–linguistic, intrapersonal

Students use the internet to find information that supports or challenges the statement 'Australia benefits from globalisation'. Students choose an industry in Australia and comment on how it has been affected by globalisation. Possible industries include: car, clothing, fast food, primary (mining), music, airline, technology, agricultural (choose a specific segment, e.g. dairy).

Students consider the effects on producers, consumers and the economy. They comment on how quality of life and Australian culture has been affected by globalisation in their chosen industry.

Possible sequence of the inquiry could be:

- Define globalisation
- Discuss how the chosen industry has been affected by globalisation
- Evaluate whether Australia has benefitted from globalisation.