OXFORD

Junior Secondary

Exploring Geography

Third Edition

Sample

Summary of changes and Skill list

Contents

Major overall changes

1	Using urban space wisely	2
2	Scramble for energy	6
3	Food problems	10
4	The trouble of water	14
5	Living with natural hazards	18
6	Global shift in manufacturing industry	22
7	Tourism	26
8	Oceans in trouble	30
9	Population problems	34
10	Taming the sand	38
11	Changing climate, changing environments	42

Major overall changes

Apart from **small-section design** for easy learning, there are a number of major changes as below.

LESS **is** **MORE**

LESS wordy → **MORE practices**, e.g.

writing training throughout the books

How can the Central–Wan Chai Bypass ease the transport problem in Central District? Support your answer with example or evidence.

- **Topic sentence**: The Central–Wan Chai Bypass can ease the problem of _____traffic_____ _____congestion_____ in Central District.

Checkpoints

Integrated exercises

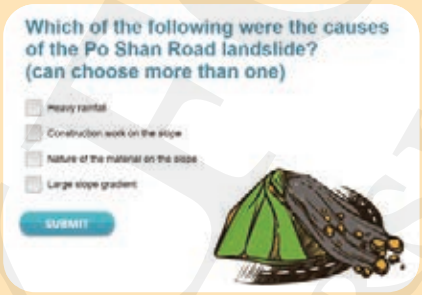
LESS chalk-and-talk → **MORE eResources for self-learning and interaction**, e.g.

Flipped classroom activities

Flip

Guided animations for map-reading skills

multimedia resources with questions



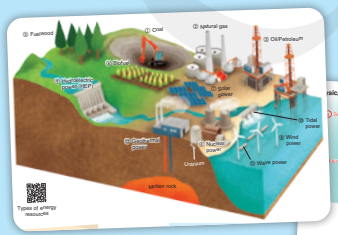
eActivities (e.g. polling, word cloud, photo and text sharing)

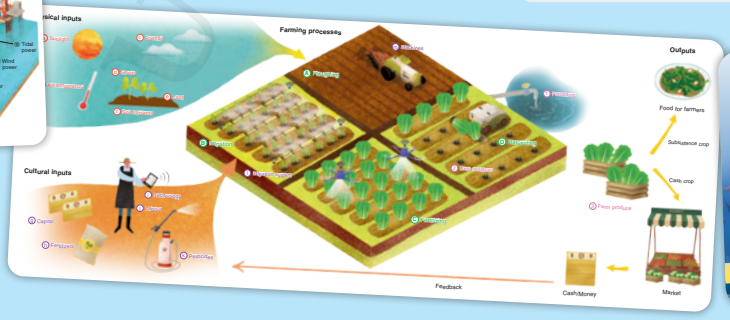
LESS lecturing → **MORE fun**, e.g.

Scan me with games, quizzes and fun facts

Scan me

more **attractive drawing and layout**





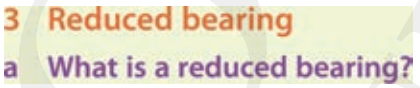
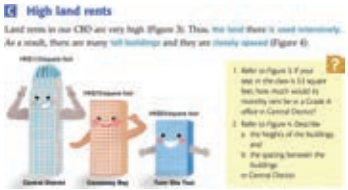
more **interesting and daily life examples**

Famous mascot in Japan, Kumamon, may get married and have kids

To ease the severe population problem in Japan, the minister in charge of population policies said that the famous mascot of Kumamoto Prefecture, Kumamon, will 'get married and have kids'.

However, the local government of the prefecture denied this, saying Kumamon 'is only a child'.

1 Using urban space wisely

Unit	Major change	
Whole book	e.g. pp. 10–11, 20, 51, 73–4, 79	**Simplify the text and add in more images and drawings** to make it easier for students to absorb and follow
1	pp. 3–7  	**Rearrange the text and add in a new unit about how to describe the locations of cities** by using **continents and oceans**, as well as the **lines of latitude and longitude**. As the very first Geography lesson, this lets students have some basic concepts about location first
2	pp. 13–15 	• **Provide** clearer and more detailed **step-by-step explanations of finding four-figure and six-figure grid references** respectively • **Simplify the 1:20,000 maps** so that students can read them more easily
3	pp. 22–3  	• **Split the types and distribution of urban land uses in Hong Kong into two sections**. This helps students learn one after another • **Add in a table to clearly describe the distribution of major urban land uses in Hong Kong**. This also helps students study the map on p. 22 more easily
	p. 25  	• **Add in 'reduced bearing'** to make the methods of showing direction complete • Move 'directions' to this unit to **avoid students learning two map-reading skills in one unit** as in the old edition, which was a bit hard for the students
4	pp. 29–30  	**Describe the characteristics of the CBD in Hong Kong more clearly** with new sub-headings and images

Unit	Major change	
4	p. 31 **A Long history of development**	**Add in 'Long history of development'** to make the discussion more complete
5	pp. 38–9 **5.2 Where are the industrial areas in Hong Kong?** **5.3 Why are some residential areas close to industrial areas?**	**Add in two sections about the locations of major industrial areas in Hong Kong and the reasons for having residential areas near industrial areas**. This makes the discussion more complete and easier for students to follow
6	p. 48 **A Housing problems** **a Inadequate housing supply** **b High housing prices**	**Add in two more housing problems in Hong Kong** to make the discussion more complete
	p. 53 	**Add in 'Light pollution'** and the **sources of each type of pollution** to enrich the content
7	pp. 62–76 **7.1 What has been done to solve the housing problems?** **7.2 What has been done to tackle urban decay?** **7.3 What has been done to solve the transport problems?** **7.4 What has been done to solve the pollution problems?**	**Split the text into four sections with new section headings** to help students better relate the solutions in this unit with corresponding urban problems in Unit 6 one by one
	p. 70 **B Kowloon East in Hong Kong** Similarly, the HKSAR government is redeveloping Kowloon East into the second CBD of Hong Kong. It covers the old industrial areas of Kwun Tong, Ngau Tau Kok, Kowloon Bay and the old site of the airport in Kai Tak (Figure 14).	**Add in content about redevelopment in Kowloon East in Hong Kong** to better compare the case of redevelopment of Canary Wharf in London
	pp. 75–6 **D Solving solid waste pollution** Waste reduction is an effective way to solve solid waste pollution. There are some measures to reduce waste (Figure 25). 	**Expand and rewrite the content** to help students learn one by one on **how each type of pollution problems can be solved by corresponding solutions**

Unit	Major skill	
–	pp. 10, 20, 51	**Interpret photographs**  Figure 2 *An urban area in Hong Kong*
–	pp. 16 (Q1b), 62, 65 (Q2)	**Support answers with map/photo evidence** Reason: The land is mainly used for housing blocks and shops Map evidence: There are _____ Estate and a _____ centre
–	pp. 22, 33, 64	**Describe distribution on maps**
1	p. 4	**Describe a location** b Where is Hong Kong located? Hong Kong is located in the _____ part of China.
	p. 7	**Locate a place with latitudes and longitudes** 1 Helsinki 60°N 25°E 2 40°N 116°E
2	pp. 12, 94–5	**Identify conventional signs** **(with complete lists for 1:5,000 and 1:20,000 maps)** Skills box A How can we show objects on a map using conventional signs? Appendix 1 Conventional signs (for 1:20,000 map) Appendix 2 Conventional signs (for 1:5,000 map)
	pp. 13–15	**Find out four-figure and six-figure grid references** B How can we locate a place using grid references?
3	pp. 24–5	**Find direction by compass point, whole-circle bearing and reduced bearing** Skills box How can we show direction on maps?
6	pp. 49–50	**Identify map scales** Representative fraction (R.F.): • Show the scale in the form of a fraction • For example, **1:20,000** can be written as $\frac{1}{20,000}$ Statement scale: • Describe the scale in words • For example, **1 cm to 200 m** Linear scale: • Show the scale on a line • For example, 0 200 400 600 800 1,000 m
		Measure actual direct distance/length on a map B How can we measure the actual direct distance between two places on a map?

<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td rowspan="3">6</td><td>pp. 54–5</td><td>Calculate population density
$\text{Population density} = \frac{\text{Number of people}}{\text{Total area}}$</td></tr>
<tr><td>p. 56</td><td>Interpret maps
 

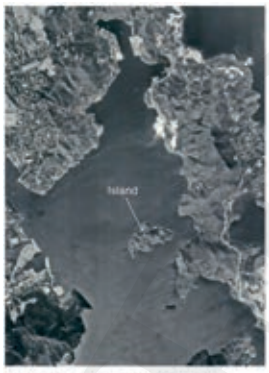
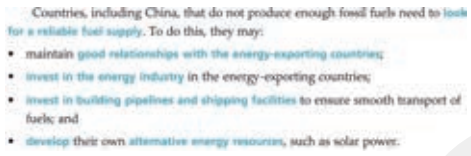
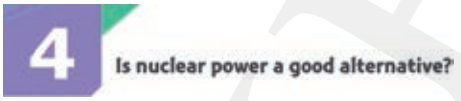
Figure 11 An example of poor urban planning in Kowloon City</td></tr>
<tr><td>p. 57</td><td>Read a two y-axes line graph and describe the trend</td></tr>
<tr><td rowspan="5">7</td><td>p. 64</td><td>Read aerial photographs
 

Figure 5a Tseung Kwan O in 1981
 

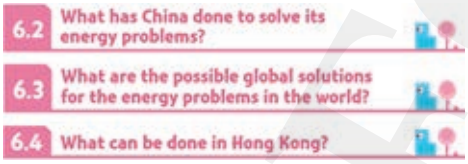
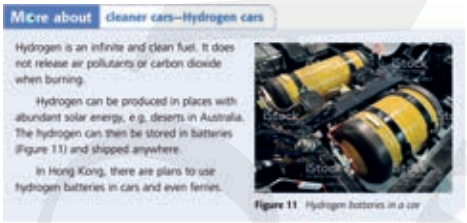
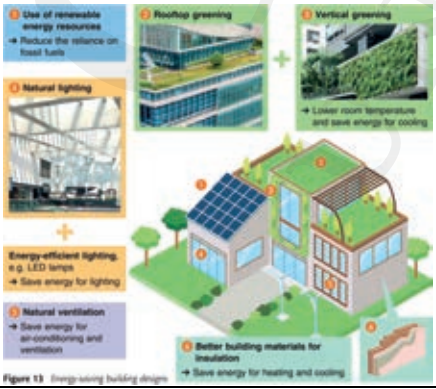
Figure 5b Tseung Kwan O at present</td></tr>
<tr><td>pp. 65–6</td><td>Calculate the size of an irregular object on maps
Skills box
How can we calculate the size of an irregular object on maps?</td></tr>
<tr><td>pp. 71–2</td><td>Measure the actual length of a curved road on maps
Skills box
How can we measure the actual length of a curved road on maps?</td></tr>
<tr><td>p. 71

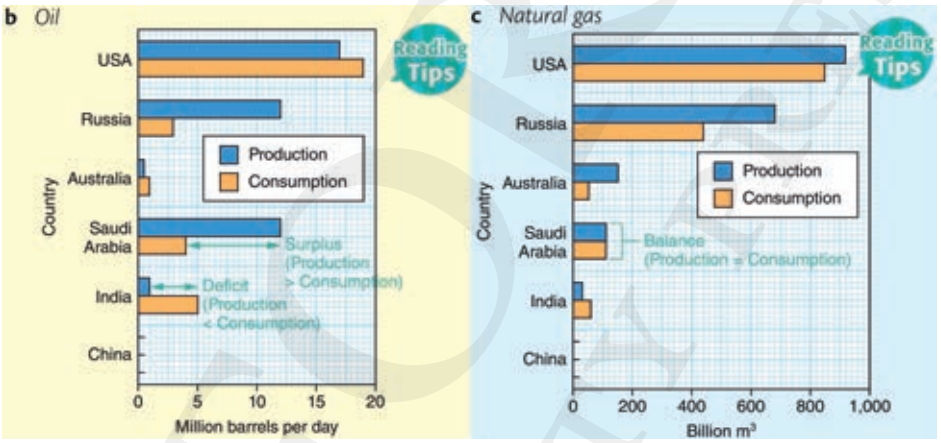
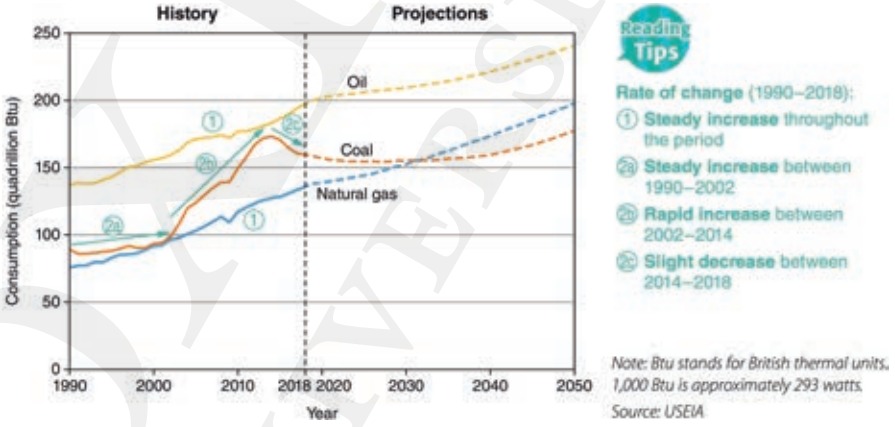
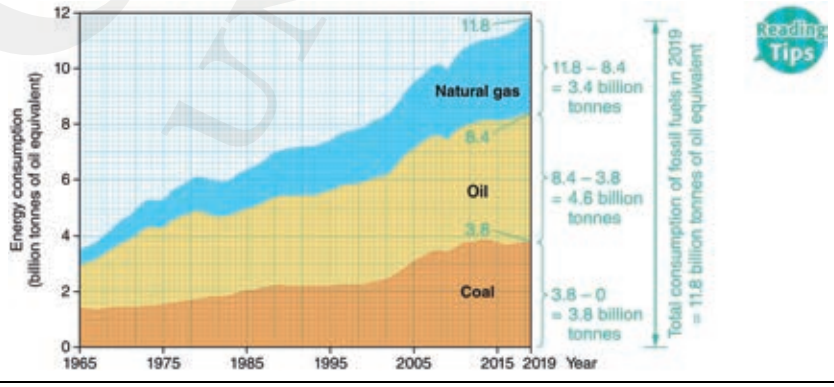
p. 74</td><td>Write an argument in three standard steps
3 How can the Central–Wan Chai Bypass ease the transport problem in Central District? Support your answer with example or evidence.
• Topic sentence: The Central–Wan Chai Bypass can ease the problem of _____ _____ in Central District.
• Explanation: This is because after building the bypass, cars (need / do not need) to enter the main roads in Central District, Wan Chai and Causeway Bay, e.g. Connaught Road Central and _____. This (increases / reduces) the traffic flow on these main roads.
• Example/Evidence: This can be shown by the fact that the travel time between A and B has been largely (increased / reduced) by _____ minutes.
Serve as a revision
How can reclamation help ease traffic congestion in the main urban areas? Explain your answer. (Hint: Follow the writing structure of Question 3 in Let's explore 11 on p. 71.)</td></tr>
</table>

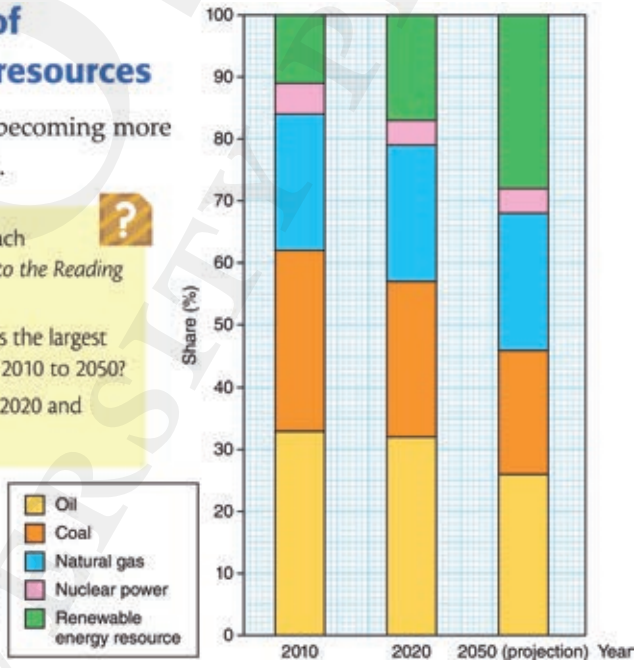
2 Scramble for energy

Unit	Major change	
1	pp. 4–5 	• **Add in photos and short descriptions about each energy resource** to let students have a basic understanding of the energy resources • **Remove the concepts about renewable and non-renewable energy resources in this introductory unit** as students have not yet learned about the concept of fossil fuels
2	p. 13  Countries, including China, that do not produce enough fossil fuels need to look for a reliable fuel supply. To do this, they may: • maintain good relationships with the energy-exporting countries; • invest in the energy industry in the energy-exporting countries; • invest in building pipelines and shipping facilities to ensure smooth transport of fuels; and • develop their own alternative energy resources, such as solar power.	**Add in content about the importance of energy security with the measures taken by various countries, including China**, as an example according to the *Geography Curriculum Framework of National Security Education*
	p. 14	**Add in data about the fossil fuel consumption between MDCs and LDCs**
	p. 16	**Introduce shale oil and gas** and a newer oil drilling technique
4	pp. 33–41  4 Is nuclear power a good alternative?	• **Add in a new unit to separate nuclear power from renewable energy resources** because the former is neither non-renewable nor fossil fuel • **Provide more detailed explanation** about current usage, generation, advantages, problems and future (**nuclear fusion**) of nuclear power with clear sub-headings
	pp. 33, 36–7  Let's explore 5 Where does the nuclear power used in Hong Kong come from? Hong Kong is using nuclear power from the Daya Bay Nuclear Power Station (Figure 1) for electricity. Scan the QR code to learn about this plant. Then, complete Table 1 below. Shenzhen Daya Bay Nuclear Power Station Hong Kong Central District Boundary of the HKSAR Figure 1 Location of the Daya Bay Nuclear Power Station	**Introduce the Daya Bay Nuclear Power Station and** add in more detailed content about the **nuclear disaster at Chernobyl** according to the *Geography Curriculum Framework of National Security Education*
5	pp. 42–4 	**Add in a section about the common advantages and the trends in the use of renewable energy resources** to avoid repetitiveness of introducing the advantages of each renewable energy resource and enrich the content

Supply	Their **supply is infinite**
Availability	Many of them are **more widely available** than fossil fuels
Cleanliness	**Clean**, emit **no air pollutants and greenhouse gases** during electricity generation
Safety	They are mostly **safe**. The risk of using them is low
Cost	**Low running costs** (except biofuels)

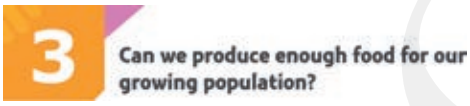
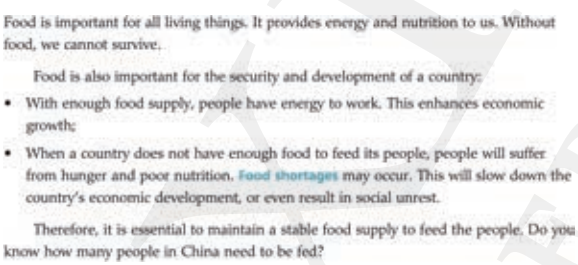
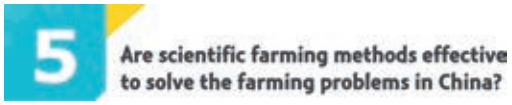
Unit	Major change	
	pp. 45–58	**Rewritten and restructure the content of each renewable energy resource by adding in more sub-headings** to enrich the content and make it clearer
	pp. 45, 47, 54, 55 	**Introduce the actual examples of renewable energy resources** (solar, wind, HEP and biofuels) **found in Hong Kong** to give students a more complete picture of the latest development of these resources in the city
6	pp. 61–2 	**Introduce the concept of sustainable energy use and the two approaches** (energy supply-side and energy demand-side) **to solve energy problems**. This makes the discussion more complete and easier for students to follow. The two approaches are reiterated when discussing the measures adopted in the Mainland and Hong Kong
	pp. 63–72 	**Change the sequence about the solutions to energy problems to the following order** to facilitate learning: **1** **China** (as students have learned about its energy problems in previous units) **2** **World** (to expand the scope of the study from national to global scale) **3** **Hong Kong** (as a case study at city level)
	pp. 68–9 	**Provide the latest strategies** put forward by ***Hong Kong's Climate Action Plan 2050***: • the new fuel mix target of using **more zero-carbon energy** • adoption of **hydrogen**
	pp. 70–1 	**Provide more examples of the measures to cut down energy consumption in Hong Kong, with more photos and appealing cartoons** to arouse students' interest in learning

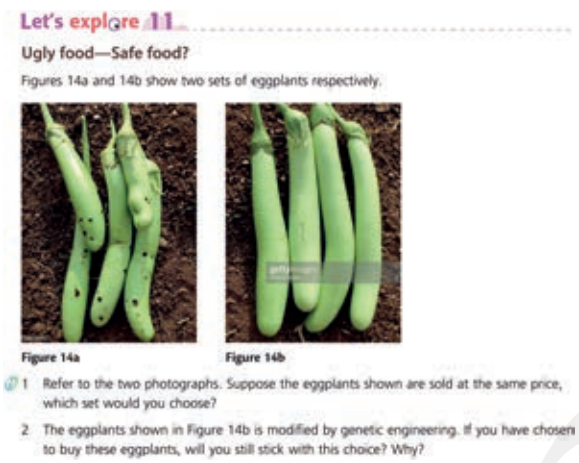
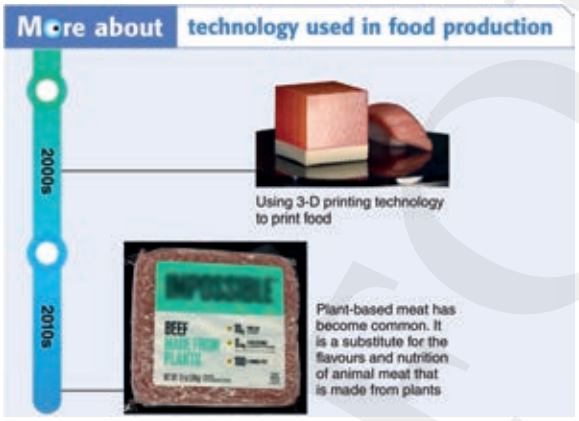
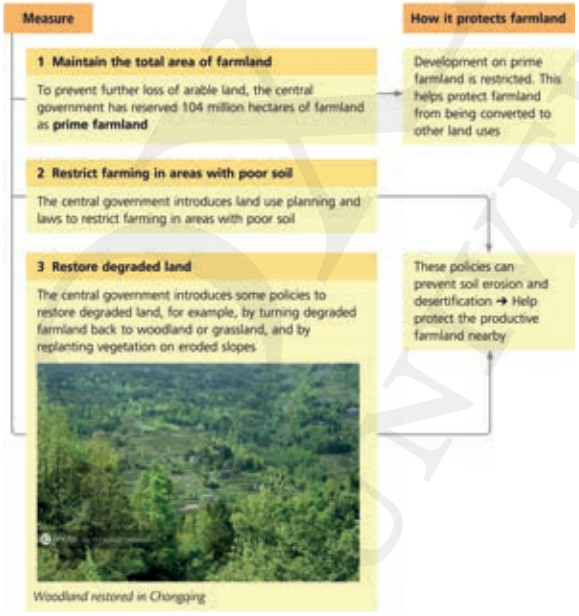
<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td rowspan="2">1</td><td>p. 3</td><td>Describe a causal relationship with data support
2 Are energy resources important to us? Support your answer with reference to Figure 1.
<table><tr><th>Your view</th><th>Connective term</th><th>Reason</th></tr><tr><td>Energy resources are (important / not important) to us</td><td>because</td><td></td></tr></table></td></tr>
<tr><td>p. 7</td><td>Draw a pie chart
Skills box
How do we draw a pie chart?</td></tr>
<tr><td rowspan="2">2</td><td>p. 12</td><td>Read grouped bar graphs
 
</td></tr>
<tr><td>p. 13</td><td>Describe rate of change in a multiple line graph
 
</td></tr>
<tr><td>3</td><td>p. 21</td><td>Read a compound line graph
 
</td></tr>
</table>

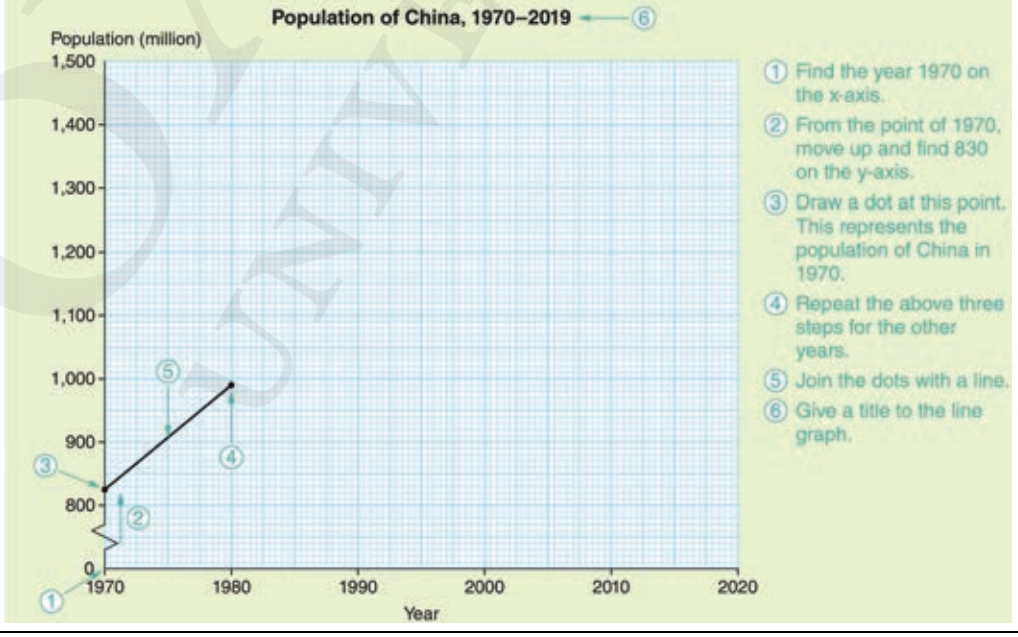
<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td></td><td>p. 22</td><td>Describe a trend from a line graph
<table>
<tr><th></th><th>What does it show?</th><th>What is the trend?</th></tr>
<tr><td>Figure 1</td><td>Global consumption of _____</td><td>(Increase / No change / Decrease)</td></tr>
<tr><td>Figure 2</td><td></td><td></td></tr>
<tr><td>Figure 3</td><td></td><td></td></tr>
</table></td></tr>
<tr><td rowspan="4">5</td><td>p. 42</td><td>Describe a causal relationship
<table>
<tr><td>Is it finite?</td><td>It is (finite / infinite) as there is always _____</td></tr>
<tr><td>Is it clean?</td><td>It (is / is not) clean because it does not emit any _____ or _____</td></tr>
</table></td></tr>
<tr><td>p. 43</td><td>Read a divided/stacked bar graph
B Trends in the use of renewable energy resources
Renewable energy resources are becoming more important in the world (Figure 1).
1 What are the percentage shares of each energy resource in 2010? (Hint: Refer to the Reading tips in Figure 1 on p. 21.)
2 a Which type of energy resource has the largest increase in percentage share from 2010 to 2050?
b What are its percentage shares in 2020 and 2050?


Source: USEIA
Figure 1 Percentage share of the global consumption of energy resources in 2010, 2020 and 2050</td></tr>
<tr><td>p.44</td><td>Draw a divided/stacked bar graph
Skills box
How do we draw a divided/stacked bar graph?</td></tr>
<tr><td>p. 50</td><td>Describe importance with data support
2 How would you describe the importance of China in global HEP generation? Support your answer with data.</td></tr>
</table>

3 Food problems

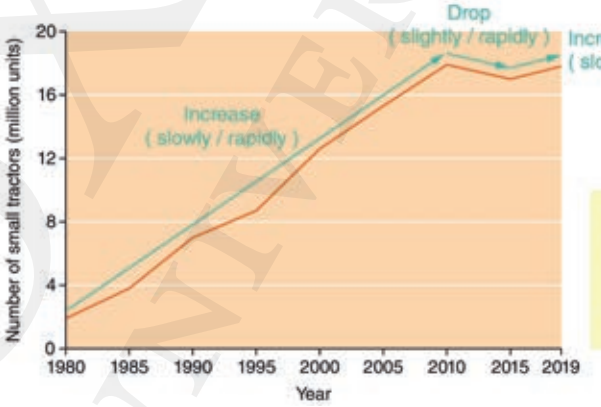
Unit	Major change	
1	pp. 3–13  	**Restructure the whole unit and rewrite part of the content** to give a solid background to students for learning the units that follow
	pp. 8–12  	**Change the sequence of the two sections**. This is to facilitate learning by letting students acquire the knowledge on how farming activities are classified first, and then enhance their understanding by showing different types of farming activities in the world as real examples
3	pp. 22–6  	**Rearrange and rewrite the content** to give students a general idea about the food demand and supply in China before learning its major farming problems that affects its food supply in the next unit
	p. 22  Food is important for all living things. It provides energy and nutrition to us. Without food, we cannot survive. Food is also important for the security and development of a country: • With enough food supply, people have energy to work. This enhances economic growth; • When a country does not have enough food to feed its people, people will suffer from hunger and poor nutrition. Food shortages may occur. This will slow down the country's economic development, or even result in social unrest. Therefore, it is essential to maintain a stable food supply to feed the people. Do you know how many people in China need to be fed?	**Add in the content about the importance of food** to highlight the importance of **Resource Security** (e.g. food resources) according to the *Geography Curriculum Framework of National Security Education*
4	pp. 30–9  	**Rewrite and rearrange the farming problems under three sections** (4.1–4.3) rather than grouping the farming problems into physical and human ones. This facilitates learning by breaking down the big section into smaller ones and highlighting the major farming problems
5	pp. 41–56  	**Merge, rewrite and rearrange** the content so that the **advantages and negative impacts of each scientific farming method are put** in the same section to facilitate learning

<table>
<tr><th>Unit</th><th colspan="2">Major change</th></tr>
<tr><td rowspan="2">5</td><td>p. 50
 
</td><td>Add in class activity about GM food to arouse students' interests, as GM food is commonly available in our daily life</td></tr>
<tr><td>p. 53
 
</td><td>Provide the timeline about the advancement in technology used in food production since the 1960s to arouse students' interests</td></tr>
<tr><td>6</td><td>pp. 65–6
 
</td><td>Simplify and rearrange certain content into charts and diagrams (Figures 8 and 9) to help students grasp the main points easily</td></tr>
<tr><td>7</td><td>pp. 73–7
 
</td><td>Simplify and rewrite part of the content to make it easier for students to follow</td></tr>
</table>

<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td>1</td><td>p. 9</td><td>Explain answers with evidence
Which farm carries out intensive farming? Explain your answer with evidence from Table 3.
Farm _____ carries out intensive farming. Table 3 shows that, compare to another farm, this farm has a _____ level of input per unit area of land [including (more / fewer) workers (Farm X has 2.5 workers/hectare while Farm Y has 0.01 worker/hectare) and (more / fewer) machines (Farm X uses _____ machine/hectare while Farm Y uses _____ machine/hectare)]. In addition, this farm has a (higher / lower) output per unit area of land (Farm X has 8.8 tonnes/hectare while Farm Y has 1.9 tonnes/hectare).</td></tr>
<tr><td rowspan="2">2</td><td>p. 14</td><td>Identify geographical features from a photo
Refer to the photograph shown in Figure 1, identify the type of farming practised in the province. Tick '✓' the appropriate answer(s).
☐ Arable ☐ Pastoral ☐ Intensive ☐ Extensive</td></tr>
<tr><td>p. 16</td><td>Explain answers with data support
Which place is suitable for growing paddy? Explain your answer with reference to the data given in Figures 3 and 4. Complete the paragraphs below.
Place (X / Y) is suitable for growing paddy.
This place has a (high / low) summer temperature (_____°C) and a (moderate / low) winter temperature (_____°C). It also has a (high / low) annual rainfall (_____ mm).</td></tr>
<tr><td>3</td><td>p. 23</td><td>Draw a line graph
Skills box
How do we draw a line graph showing the population of China?
A line graph is used to show changes over a period of time. It is useful to show trends. Refer to Table 1 on p. 22, follow the steps below to draw a line graph showing the population of China from 1970 to 2019.
 
</td></tr>
</table>

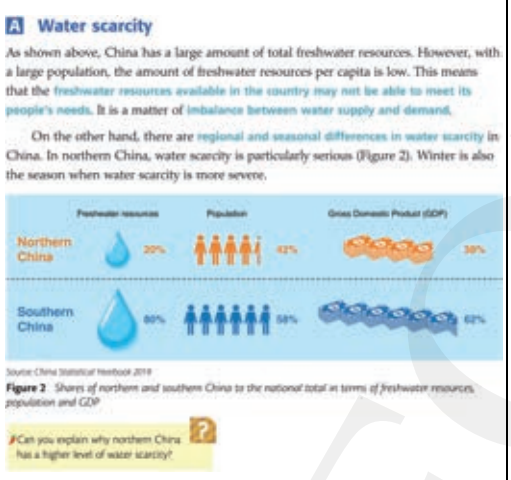
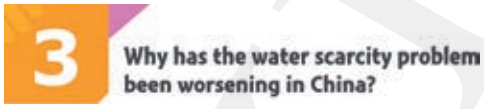
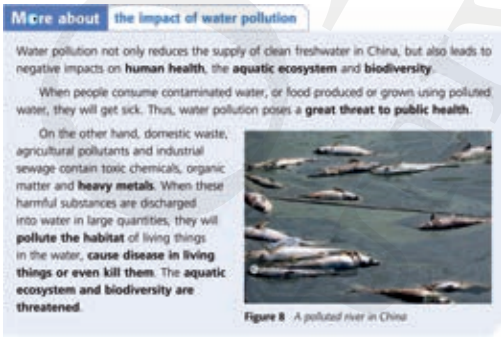
Unit	Major skill	
	p. 24	**Interpret data from table**

	1990	2000	2010	2019	Reading Tips
Per capita income (RMB)	1,510	6,256	10,382	42,359	
Grains (kg)	131	82	82	111	by 15%
Meat (including pork, beef, mutton and poultry meat) (kg)	25	26	35	36	by 44%
Milk (kg)	5	10	14	17	Increased by 240%

4	p. 32	**Draw a bar graph** **Skills box** How do we draw a bar graph to show the changes in the area of arable land in China?
	p. 33	**Read/Interpret aerial photograph** Reading Tips  Green areas with lined texture: Farmland
5	p.47	**Describe a trend from a line graph** Reading Tips  Circle the correct answers to describe the trend of using small tractors in China in the period shown.
6	p. 62	**Interpret data from table**

Year / Chemical	2012	2013	2014	2015	2016	2017	2018	2019	Reading Tips
[1]Chemical fertilizers (million tonnes)	58	59	60	60	60	59	57	54	Reduce since 2016
[2]Pesticides (million tonnes)	2.9	3.0	3.7	1.8	1.7	1.7	1.5	—	Sharp decrease since 2014

4 The trouble of water

Unit	Major change	
1	pp. 3–5  	Rearrange the content about **distribution of freshwater on the earth and where it comes from to become Unit 1** in this edition. This serves as an introduction to whether there is enough water for the whole world
2	pp. 11–12  	**Add in a new section** about the major water problems in China and **introduce the concept of water scarcity**, which has already been identified as a major global water problem by the United Nations, and is closely related to the *Geography Curriculum Framework of National Security Education* as it is a major threat to the national **Resource Security**
3	pp. 21–8  	**Unit 3 is newly added to address the water problem caused by the worsening of water scarcity**. As water pollution is one of the reasons for causing the worsening of water scarcity, the related content in the second edition is rewritten and put in this unit under Section 3.2 'Why is the supply of clean freshwater decreasing?'
	p. 26  	**Rewrite and rearrange the content about the impact of water pollution as More about**. This improves the flow and illustrates more clearly how water **pollution** affects **Ecological Security** according to the *Geography Curriculum Framework of National Security Education*
	p. 27  	**Add in content about depletion of groundwater** to enrich the content

Unit	Major change	
4	pp. 32–9 4 What problems does drought bring to China?	**Restructure and rewrite the whole unit** (mentioning definition, impact, distribution and causes of drought only) to reduce the extent
	p. 37 More about drought and aridity	**Add in 'More about drought and aridity'** to clarify the misconception between the two terms
5	pp. 41–7 5 What are the ways of tackling water scarcity and drought in China?	**Rewrite and restructure the solutions to water problems** introduced in units 3 and 4 as Unit 5. This helps students grasp the content better by mentioning the measures right after the problems
	p. 41 Water is an essential resource for humans and other living things. As water scarcity and droughts affect the daily life of people and have negative impacts on the natural environment, the central government has taken different measures to ease these problems, so as to secure a stable water supply and protect the natural environment.	**Rewrite text to highlight the importance of tackling water scarcity and drought** for the water resource security (i.e. **Resource Security**) according to the *Geography Curriculum Framework of National Security Education*
	p. 44 More about measures to ease water pollution in China To ensure the enforcement of policies of conserving the water and preventing pollution, the central government has introduced the **river chief system** throughout China since 2016. Officials at different levels of government have been appointed as chiefs of rivers all across the country. The chiefs are responsible for protecting their assigned river sections Before After Figure 3 *The river chief system in China*	**Add in 'More about measures to ease water pollution in China'** to enrich the content and highlight the efforts that the central government has paid to deal with water pollution in order to maintain **Ecological Security** according to the *Geography Curriculum Framework of National Security Education*
	pp. 48–50 What can we learn from the experience of Singapore?	**Simplify the content about Singapore** so that it focuses on the water problems of water scarcity and drought. **Then it is put after the solutions of water scarcity and drought in China** to make the flow more logical, coherent and easier for students to follow
6	pp. 52–60 6 What problems does flooding bring to China?	**Restructure and rewrite the whole unit** (mentioning definition, impact, distribution and causes of flooding only) to reduce the extent of the unit
7	pp. 61–7 7 What are the ways of controlling flooding in China?	**Rewrite and restructure the solutions to flooding as Unit 7**. This aligns with the treatment of the solutions to drought and water scarcity
	pp. 68–73 What are the differences between the MDCs and the LDCs in tackling the problem of flooding? A Experience of Bangladesh B Experience of the UK C Differences in flood control measures and the reasons behind	• **Simplify the content and keep focus on the flooding problems in Bangladesh and the UK** to make the flow more logical and align with the treatment of Singapore • **Enrich the content** by explaining why the flood control measures taken by Bangladesh are different from the UK

Unit	Major skill
1	p. 3 **Read pie charts and calculate the percentage share**
2	p. 17 **Read a climatic graph**
3	p. 22 **Read a two y-axes line graph**

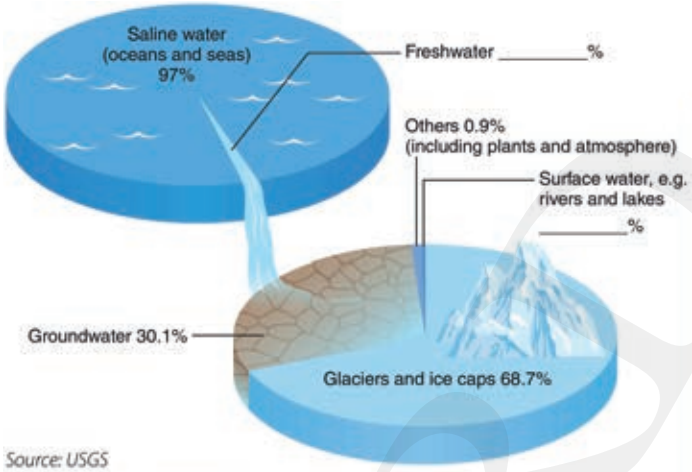
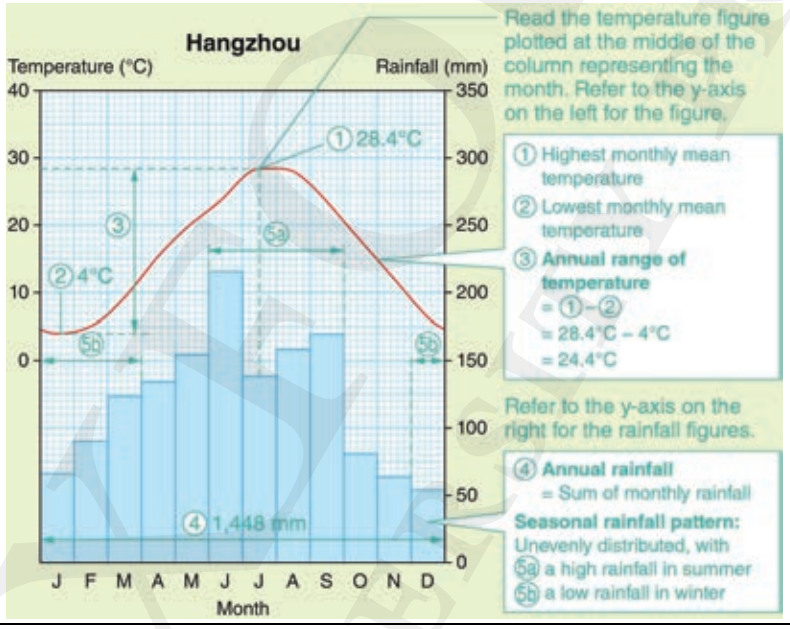


Figure 1 *The distribution of water on the earth*

1 Complete the blanks in Figure 1.
2 Calculate the percentage share of surface water in all water on the earth. *(Hint: It can be calculated by the formula below.)*

% share of freshwater in all water on the earth × *% share of surface water in freshwater*



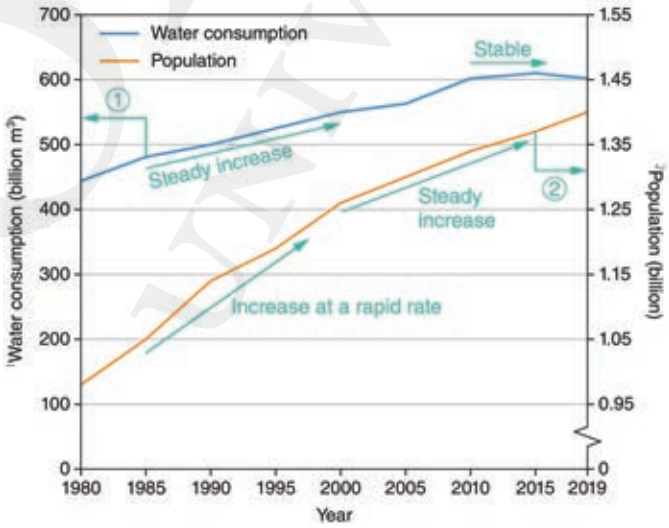
Read the temperature figure plotted at the middle of the column representing the month. Refer to the y-axis on the left for the figure.

① Highest monthly mean temperature
② Lowest monthly mean temperature
③ **Annual range of temperature**
= ① − ②
= 28.4°C − 4°C
= 24.4°C

Refer to the y-axis on the right for the rainfall figures.

④ **Annual rainfall**
= Sum of monthly rainfall

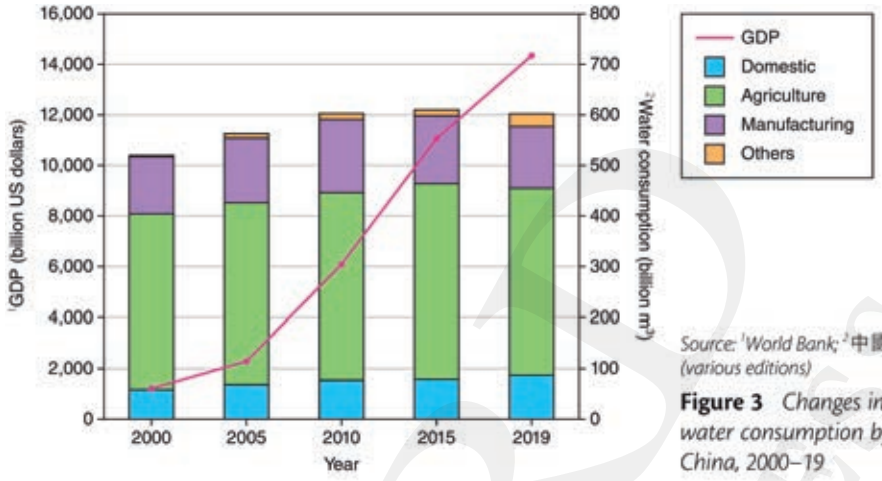
Seasonal rainfall pattern:
Unevenly distributed, with
5a a high rainfall in summer
5b a low rainfall in winter



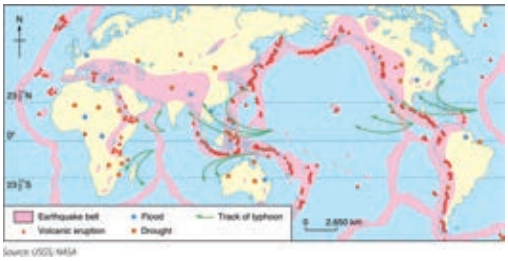
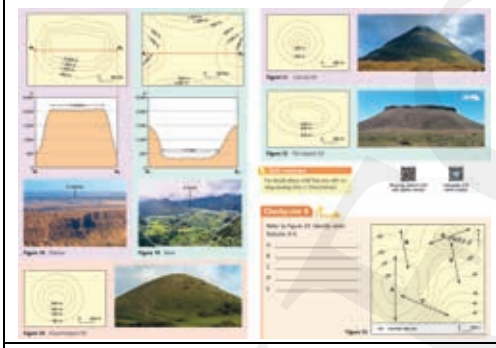
Reading Tips

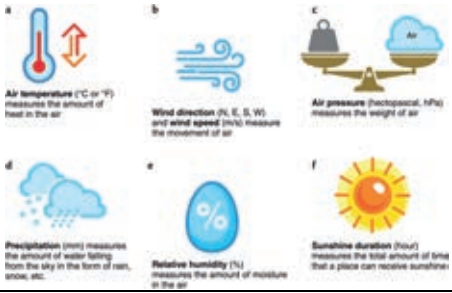
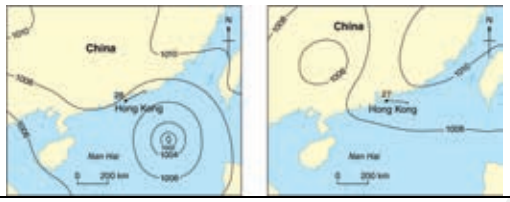
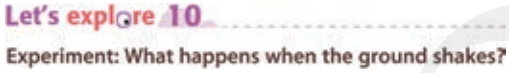
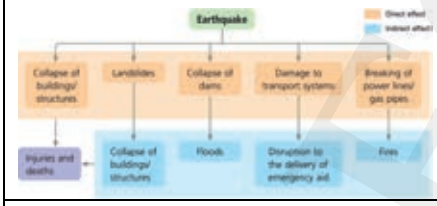
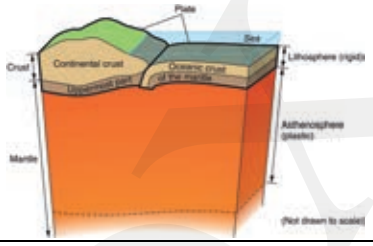
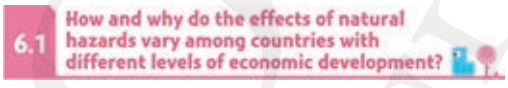
When reading a graph with two y-axes, make sure you refer to the correct y-axis for a particular curve.

① Refer to the values of the y-axis on the left for the amount of water consumption.
② Refer to the values of the y-axis on the right for population data.

Unit	Major skill	
3	pp. 22–3	**Read a divided/stacked bar graph**  *Source: [1]World Bank; [2]中國水資源公報 (various editions)* **Figure 3** *Changes in GDP and water consumption by sector in China, 2000–19* 1 Refer to Figure 3. Describe the general trends in GDP and total water consumption. 2 What is the relationship between economic development and water consumption?
	p. 24	**Answer with evidence** 1 How would you describe the water quality of the main tributaries of the Liao He and Chao Hu? Give evidence to support your answer.
6	p. 52	**Interpret photographs**  **Figure 1a**  **Figure 1b** 1 Are the two photographs showing the same place? Give photo evidence to support your answer. 2 What has happened to the area shown in Figure 1b? Give photo evidence to support your answer.
	p. 59	**Read satellite images**  **Figure 11a** *Dongting Hu in 1984*  **Figure 11b** *Dongting Hu in 2020*

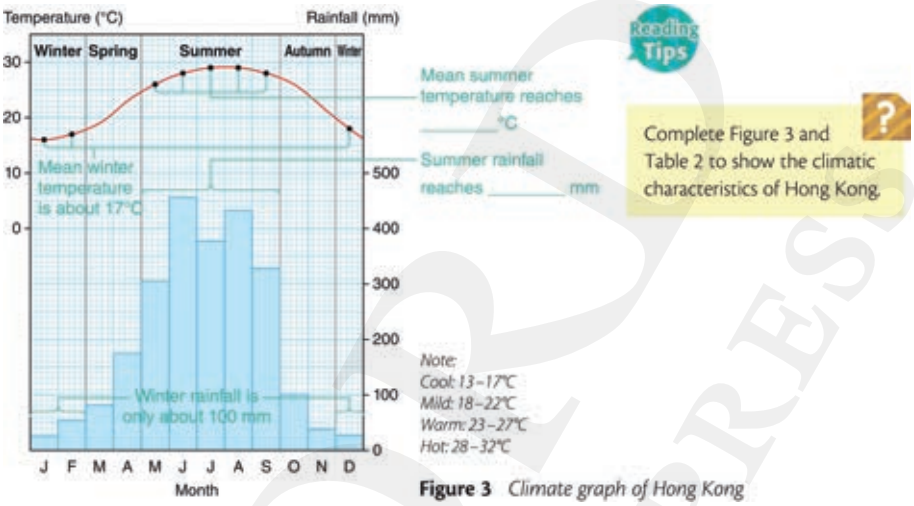
5 Living with natural hazards

Unit	Major change	
1	p. 6 	**Add in a map to show the global distribution of selected natural hazards** to explain more clearly why the distribution of different natural hazards varies from one another
	pp. 16–17 A Study the spacing of contour lines B Calculate slope gradient	**Restructure the content about the steepness of a slope with new sub-headings** to explain the concept more clearly
	pp. 21–2 	**Add in other common relief features found on contour maps** to enrich the content. This gives students a more comprehensive understanding of common relief features
	p. 23 2.5 How can we describe the relief of Hong Kong?	**Move the content about the relief of Hong Kong to the end of this unit**. This facilitates learning by allowing students to learn the ways to show relief on a map and common relief features first, before describing the relief of Hong Kong
3	p. 27 3.1 What are landslides?	**Restructure the content of this unit by explaining what landslides are and where they occur** (i.e. on natural terrain and man-made slopes) before describing the effects of landslides. This facilitates learning
	p. 35 A Preventive measures a Building barriers Landslides that occur on natural terrain may cause serious damage to settlements nearby. To prevent slope materials from rushing down to these settlements, barriers can be built on the slope or at the bottom of the slope (Figures 13 and 14). This reduces the loss of life and property.  Refer to Figures 13 and 14. 1 Which of the barriers is easier to install? 2 Which of the barriers can stop more slope materials from rushing down? 3 Is building barriers a good measure to prevent landslides in built-up areas? Why?	**Add in measures for tackling landslides on natural terrain (building barriers)**. This makes the content more complete

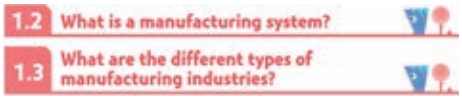
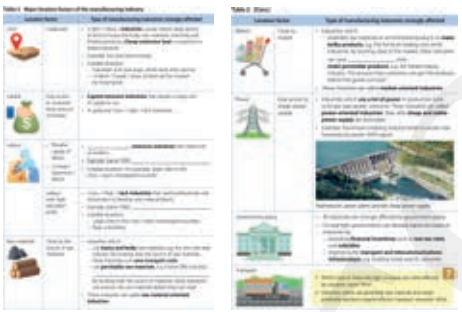
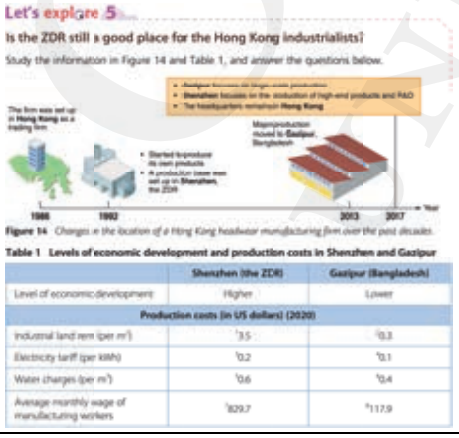
Unit	Major change	
4	p. 48 	**Rearrange the content by introducing the concepts of weather and climate at the beginning of this unit**. This provides background information for students to learn concepts taught later in the unit
	pp. 54–5 	**Use simplified weather charts** to make it easier for students to learn how to read a weather chart and to identify changes in weather elements under the influence of a typhoon
5	p. 62 	**Add in an experiment to simulate ground shaking.** This provides a general understanding of the possible effect caused by earthquakes and arouses students' learning interest
	p. 63 	• **Rewrite the content by grouping the effects of earthquakes as direct effects and indirect effects** • **Add in a flow chart** to make the presentation clearer
	pp. 66–7 	**Rewrite the content about the structure of the earth** to explain the concepts of plates, the lithosphere and the asthenosphere more clearly and accurately
6	pp. 75–6 	**Rewrite the content** to explain how and why the effects of natural hazards vary among countries **by focusing on aspects related to the level of economic development**
	p. 77 	**Add in a comparison between earthquakes of a similar magnitude in an MDC and an LDC** to illustrate the difference in the level of destruction
	p. 80 	**Add in 'Trust in preventive measures' as one of the reasons** explaining why people still choose to live in areas affected by natural hazards. This makes the explanation more complete

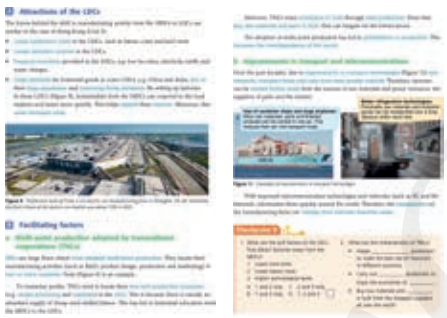
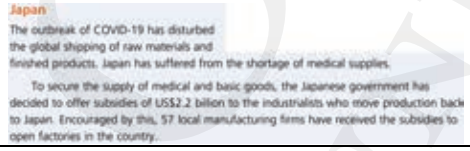
Unit	Major skill	
1	p. 7	**GIS** How can we use GIS to show the global distribution of natural hazards?
2	pp. 11–13	**Draw a cross section from a contour map** Skills box How do we draw a cross section from a contour map?
	p. 14	**Calculate the vertical exaggeration (V.E.) of a cross section** Skills box How do we calculate the vertical exaggeration (V.E.) of a cross section?
		Find the vertical scale and horizontal scale for calculating vertical exaggeration  Reading Tips Vertical scale: 1 cm to 100 m (i.e. 1:10,000) Figure 7 For example, the V.E. of the cross section in Figure 7 is: $= \frac{1:10,000}{1:20,000}$ ← This is the map scale of Figure 5 on p. 11. $= \frac{1}{10,000} \div \frac{1}{20,000}$ $= \frac{1}{10,000} \times \frac{20,000}{1}$ $= 2$ ← The value of 2 means the V.E. of the cross section is 2 times.
	p. 18	**Calculate slope gradient from a contour map** Skills box How do we calculate slope gradient from a contour map?
3	p. 28	**Identify effects of landslide from photographs**  Figure 2 *Examples of landslides in Hong Kong*
	p. 41	**Explain factors with evidence**

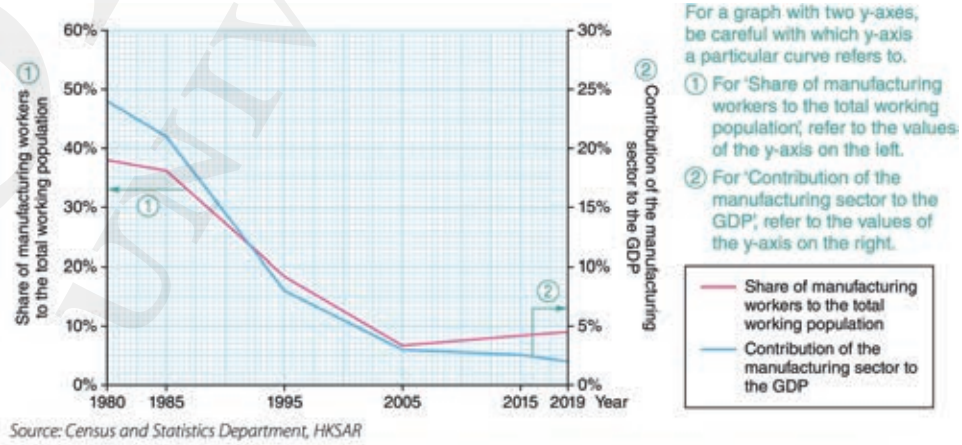
Natural factor	Explanation and evidence	Effect on shear stress and shear strength
(Hilly / Flat) relief	Xinmo Village was found at the bottom of a (gentle / steep) slope. The slope angle where the landslide started was about _____°. The average slope gradient reached 40°	Shear stress (↑ / ↓)

Unit	Major skill	
4	p. 49	**Draw a climatic graph** Skills box How do we draw a climatic graph?
	p. 50	**Read a climatic graph**  **Figure 3** *Climate graph of Hong Kong*
	p. 54	**Read a weather chart** Skills box How do we read a weather chart?
5	p. 64	**Identify how a lake was formed after a landslide from a photograph**  *A lake formed when sand and mud blocked the river*
6	p. 77	**Identify a less developed country with data evidence** **New Zealand** • Gross Domestic Product (GDP) per capita (2010): US$33,700 • Literacy rate: 99% **Haiti** • Gross Domestic Product (GDP) per capita (2010): US$1,172 • Literacy rate: 61% *Source: The World Bank* 2 Which country is less developed? Give evidence.

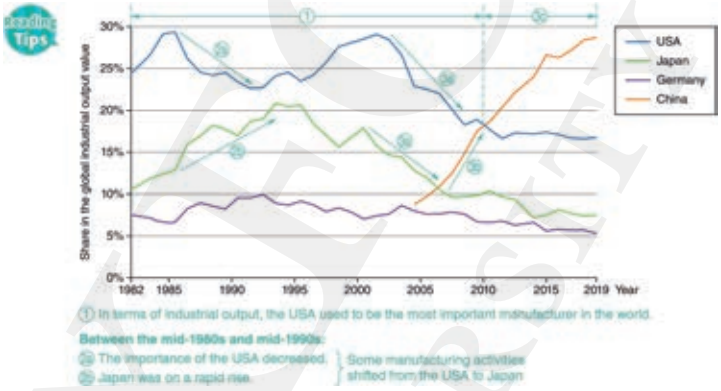
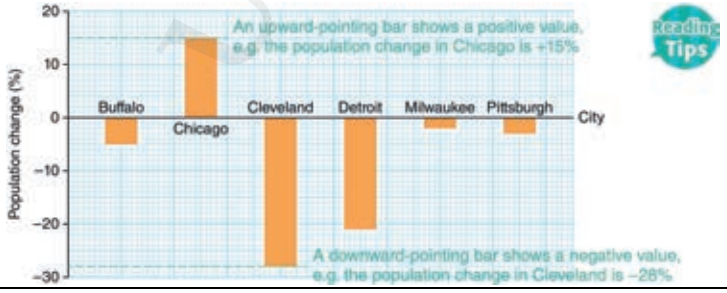
6 Global shift in manufacturing industry

Unit	Major change	
1	p. 4  The economic activity of making paper (p. 3) is an example of manufacturing, which turns raw materials or semi-finished products to finished products. Through manufacturing, value is added to the products.	**Simplify the content about the value-adding nature of manufacturing** and put it under the section 1.1 'What is manufacturing?'. This arrangement is easier for students to understand
	pp. 5–7  1.2 What is a manufacturing system? 1.3 What are the different types of manufacturing industries?	**Move the classification of manufacturing industries right after the manufacturing system**, so that students can relate the classification of industries with the characteristics of inputs and outputs more easily
	pp. 9–10 	• **Elaborate how each location factor affects different types of manufacturing industries in detail** • Help students revise their knowledge about types of manufacturing industries just learned by **including some simple exercises** in the table
2	pp. 15–24  A Difficulties faced by the manufacturing industry in Hong Kong As seen above, the manufacturing industry in Hong Kong has been declining since the 1980s. What were the reasons behind? In the 1970s, as manufacturing grew rapidly, both the labour costs and land rents rose sharply (Figure 10). This put a heavy burden on the industrialists. 1973 1980 Workers' wage: HK$21 Workers' wage: HK$56.3 Figure 10 Average daily wage of manufacturing workers in Hong Kong in 1973 and 1980	**Elaborate the development of the manufacturing industry in Hong Kong and the affecting factors in detail** under three major sections
	p. 23  Let's explore 5 Is the ZDR still a good place for the Hong Kong industrialists? Study the information in Figure 14 and Table 1, and answer the questions below. Figure 14 Changes in the location of a Hong Kong headwear manufacturing firm over the past decades Table 1 Levels of economic development and production costs in Shenzhen and Gazipur Shenzhen (the ZDR) / Gazipur (Bangladesh) Level of economic development: Higher / Lower Production costs (in US dollars) (2020) Industrial land rent (per m²): 3.5 / 0.3 Electricity tariff (per kWh): 0.2 / 0.1 Water charges (per m³): 0.6 / 0.4 Average monthly wage of manufacturing workers: 829.7 / 117.9	Add in an exercise about the **real-life case** of a Hong Kong manufacturing firm to **arouse students' interest** in the topic

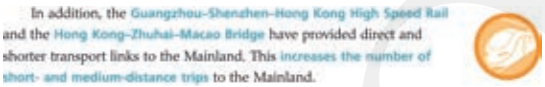
Unit	Major change	
3	pp. 29–31	**Elaborate the distribution and location factors of the major industrial regions in the world more clearly** with new sub-headings
	p. 32  Let's explore 7 Where is the product produced? Figures 6a and 6b show a video game console. Figure 6a *A video game console of a famous Japanese manufacturing firm*	**Replace the example** of the activity **with a popular product among students** to arouse their interest
	pp. 34–7 	**Elaborate the factors causing a global shift in manufacturing activity in detail** with new sub-headings and examples
4	pp. 43–9	• Rearrange the sequence of the content by **placing the cycle of economic first**, so that students can **comprehend the content more easily** • **Elaborate the impacts** of the global shift in manufacturing activity **in detail** with new sub-headings
5	pp. 53–7  5.2 How can the host areas/countries achieve sustainable industrial development? 5.3 How can the home areas/countries achieve sustainable industrial development?	**Swap the content by discussing the measures taken by the host areas first** in order to align with the changes made in Unit 4
	p. 57  Japan The outbreak of COVID-19 has disturbed the global shipping of raw materials and finished products. Japan has suffered from the shortage of medical supplies. To secure the supply of medical and basic goods, the Japanese government has decided to offer subsidies of US$2.2 billion to the industrialists who move production back to Japan. Encouraged by this, 57 local manufacturing firms have received the subsidies to open factories in the country.	**Add in the latest case of Japan to show how the outbreak of COVID-19 affects the global industrial location**

<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td>1</td><td>p. 3</td><td>Describe a process
1 Refer to Figure 1.
a What is the finished product?
b What is the raw material used for making the product?
c Where is the product made?
d Briefly describe where paper comes from.
_____ (finished product) is made in _____ from _____ (raw material). It is then sold in the _____.
2 Name ONE product you have on hand. Then, briefly describe where it comes from. [Hint: You may refer to the sentence pattern of the answer to 1(d).]</td></tr>
<tr><td rowspan="3">2</td><td>p. 14</td><td>Describe importance and change over time with data support
2 With reference to your answers above, describe the importance of the manufacturing industry to Hong Kong's economy in 1976.
The manufacturing industry was (unimportant / important) to Hong Kong's economy.
Firstly, the manufacturing industry employed the (smallest / largest) number of people. It accounted for _____% of the workers employed in the city.
Secondly, the contribution of the manufacturing industry to the city's GDP was the (smallest / largest) too. It accounted for _____.</td></tr>
<tr><td>p. 18</td><td>Serve as a revision
2 With reference to your answers above, describe the change in the importance of the manufacturing industry to Hong Kong's economy between 1980 and 2019. (Hint: Refer to Question 2 on p. 14 for how to write the answers.)
The manufacturing industry has been becoming (less / more) important to Hong Kong's economy between 1980 and 2019.
Firstly, (fewer / more) people worked in the manufacturing industry. The share of manufacturing workers to the total working population has (decreased / increased) from _____% in 1980 to _____% in 2019.
Secondly, _____.</td></tr>
<tr><td>p. 18</td><td>Read a two y-axes line graph
Reading Tips
For a graph with two y-axes, be careful with which y-axis a particular curve refers to.
① For 'Share of manufacturing workers to the total working population', refer to the values of the y-axis on the left.
② For 'Contribution of the manufacturing sector to the GDP', refer to the values of the y-axis on the right.
 

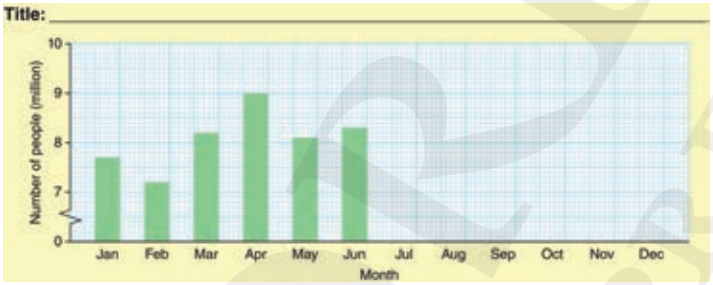
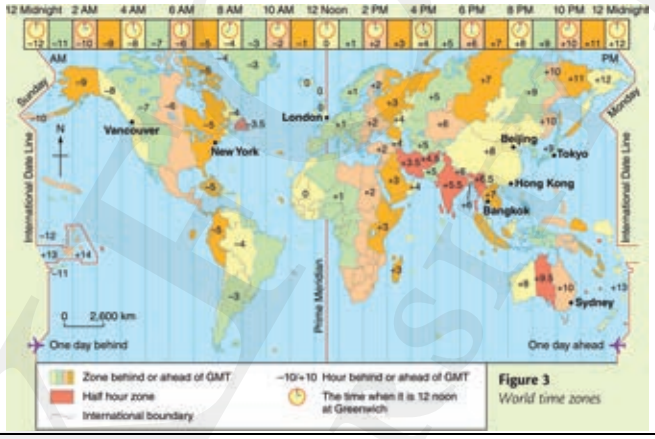
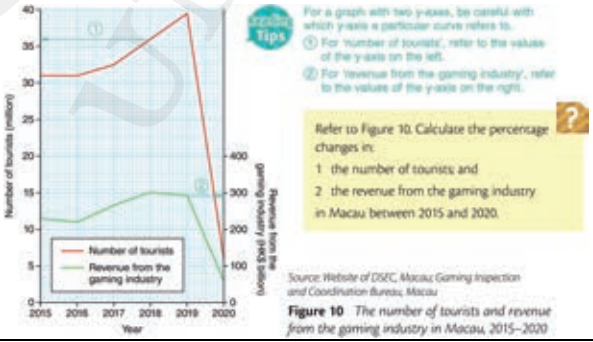
Source: Census and Statistics Department, HKSAR
Figure 9 The share of manufacturing workers to the total working population, and the changes in the contribution of the manufacturing sector to the GDP of Hong Kong between 1980 to 2019</td></tr>
</table>

<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td rowspan="3">2</td><td>p. 19</td><td>Calculate percentage increase
1 Calculate the percentage increase of the average daily wage of manufacturing workers in Hong Kong between 1973 and 1980.
(Hint: The percentage increase can be calculated by the formula below.)
$\frac{\text{Value of 1980} - \text{Value of 1973}}{\text{Value of 1973}} \times 100\%$</td></tr>
<tr><td>p. 22</td><td>GIS How can we compare the changes in land use in different periods of time using GIS?</td></tr>
<tr><td>p. 23</td><td>Explain answers with data support
1 Why do you think the Hong Kong headwear manufacturing firm has moved its production from Shenzhen to Gazipur in the 2010s? Explain your answer with data support.</td></tr>
<tr><td rowspan="2">3</td><td>p. 31</td><td>Draw conclusion with evidence support
Table 1 Favourable factors of industrial development in the Great Lakes Region
<table>
<tr><th>Conclusion (favourable location factor)</th><th>Evidence (features on the map)</th><th>Explanation (why this is important to the manufacturing industry)</th></tr>
<tr><td>Presence of raw materials</td><td>_____ deposits near Lake Superior and Lake Huron</td><td>_____ is an important raw material for many heavy industries, e.g. the iron and steel and the car-making industries</td></tr>
</table></td></tr>
<tr><td>p. 33</td><td>Read a multiple line graph
 
</td></tr>
<tr><td rowspan="3">4</td><td>p. 43</td><td>Describe changes with data support
Study Figure 1. With data and photo evidence support, describe the changes in Shenzhen between 1980 and 2019 according to the five aspects shown.
 
</td></tr>
<tr><td>p. 46</td><td>Draw a line graph</td></tr>
<tr><td>p. 47</td><td>Read a bar graph with both positive and negative values
 
</td></tr>
</table>

7 Tourism

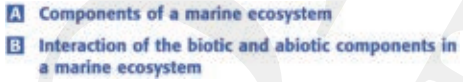
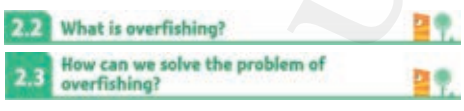
Unit	Major change	
Whole book	e.g. pp. 7–8, 18–19, 31, 40–1 	**Rewrite and simplify the text with more images and interesting drawings** to arouse students' learning interest and help them understand the content more easily
1	pp. 4–5 	**Group the content about the characteristics of Hong Kong people going on holiday outside Hong Kong** (number of people and time) **in the same section** to improve the flow
	p. 10 	Update the factors that make travel possible by **adding in the Guangzhou–Shenzhen–Hong Kong High Speed Rail and the Hong Kong–Zhuhai–Macao Bridge**
2	pp. 12 and 16 	**Revise and simplify the activities** to better compare the **benefits and problems brought by tourism to the same place** (i.e. Thailand)
	p. 13 	**Expand and present the cycle of economic growth in the form of a flow chart** to explain more clearly the economic benefits brought by tourism and enhance students' learning and understanding
	p. 15 	Provide interesting information about **how tourism can provide resources for creating 3-D models for heritage preservation**

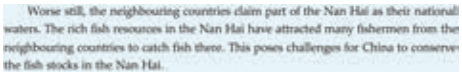
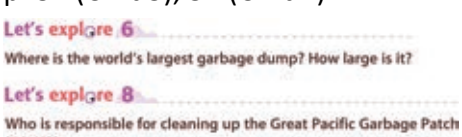
Unit	Major change	
2	p. 17 For example, due to the global outbreak of COVID-19 in 2020, both the number of tourists and revenue from the gaming industry in Macau decreased greatly (Figure 10). Many hotel rooms were vacant and travel agencies did not have businesses. As mentioned on p. 13, Macau relies heavily on tourism, the economy was thus badly affected.	**Provide a more recent example** (global outbreak of COVID-19) in illustrating the **problem of over-reliance on tourism**
3	pp. 27–31  Figure 1	Swap the sequence by **introducing the natural attractions in Hong Kong first (with an interesting warm-up activity)**, then the cultural attractions as students may find natural attractions more interesting
	p. 30 More about the world-class geoparks in China China has rich geological resources. Refer to Figure 4. It has the largest number of UNESCO Global Geopark (41 in total) in the world. 	**Introduce other geoparks in China** to enrich the content and encourage students to explore these parks by themselves
	p. 33 In recent years, there are some new cultural sites with local colours such as Choi Hung Estate (Figure 11) and Tai Nan Street with many special cafés in Sham Shui Po. Tourists can learn about the local culture and lifestyle there.  Figure 11 *The colourful design of Choi Hung Estate has become a famous attraction for photography*	**Introduce some more recent and popular cultural attractions in Hong Kong** to arouse students' learning interest as they may be familiar with them
	pp. 38–9 Fieldwork Why do tourists visit the Central and Western Heritage Trail?	• **Change the fieldwork site from Sai Kung town to Central District** to make the study to be carried out more easily • Explain more clearly on **how to carry out a questionnaire survey**
4	pp. 43–7, 53–5 4 Can we develop tourism in a sustainable way?	**Group all the content related to sustainable tourism in the same unit** to make the discussion more focused
	p. 53 Let's explore 10 Bingo! Let's be a responsible tourist! 1 Use the bingo card shown in Figure 13. 2 Complete Table 4 to show 12 actions that help achieve sustainable tourism. 3 Choose EIGHT actions and write down their codes (e.g. A1) in the boxes of Figure 13 randomly.  B I N G O FREE SPACE	**Use an interactive class activity (Bingo game)** to arouse students' interest in the topic of **sustainable tourism**

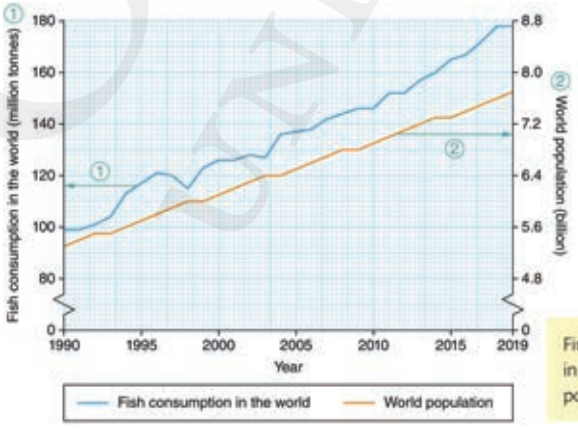
Unit	Major skill	
1	p. 4	**Draw a line graph** 1 Complete the line graph in Figure 2 by using the data in Table 1.
		Calculate percentage change and describe a trend 2 Refer to the line graph you drew. a Calculate the percentage change in the number of Hong Kong people travelling outside Hong Kong between 1990 and 2019. Show your calculations. b Describe the change above. It increased (greatly / slightly) by _____% between 1990 and 2019.
	p. 5	**Draw a bar graph** 
	p. 6	**Find the time of a place from a time zone map**  Figure 3 *World time zones*
2	p. 16	**Extract useful information from photographs**  1 Compare the following before and after the closure of Maya Bay. Before / After Number of tourists Number of speedboats
	p. 17	**Read a two y-axes line graph**  Figure 10 *The number of tourists and revenue from the gaming industry in Macau, 2015–2020*

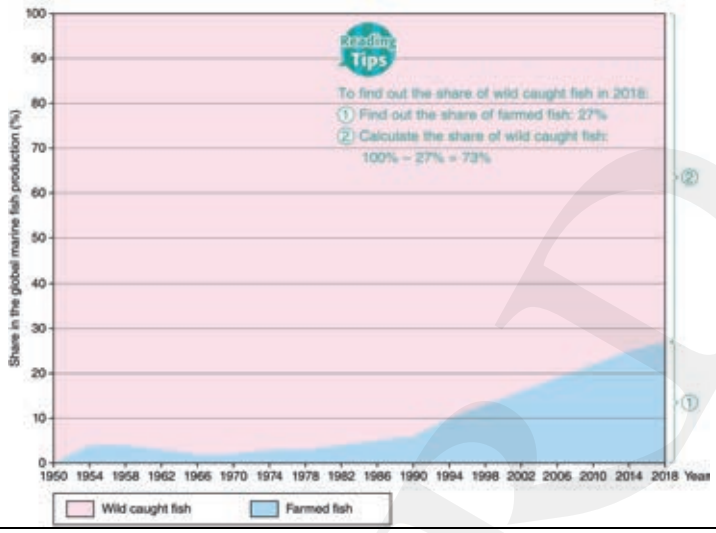
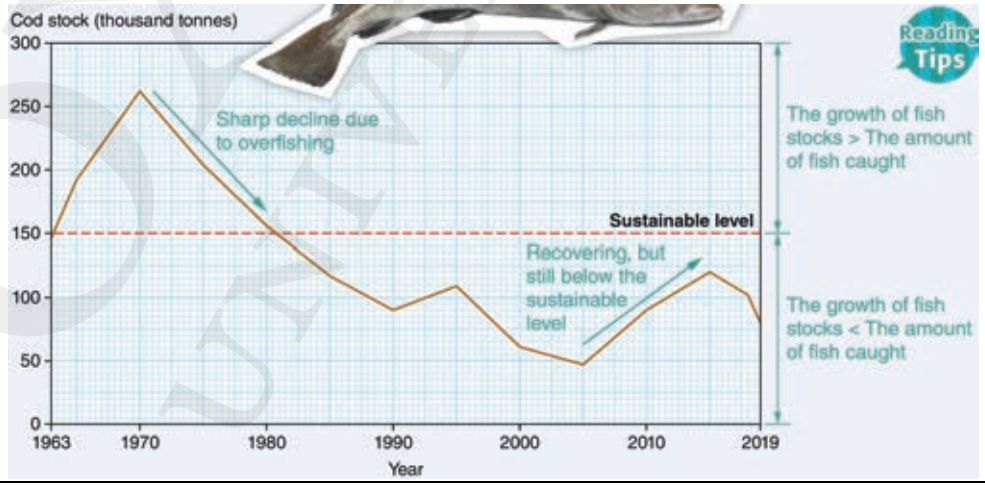
<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td rowspan="3">3</td><td>pp. 34–5</td><td>Measure the actual length of a road on maps
1 Measure the actual length of the Ping Shan Heritage Trail from A to F. Show your calculations.</td></tr>
<tr><td></td><td>Find out four-figure and six-figure grid references
2 Find out the four-figure and six-figure grid references of the following.
<table>
<tr><th></th><th></th><th>Four-figure grid reference</th><th>Six-figure grid reference</th></tr>
<tr><td>a</td><td>Pagoda ('A' on the map)</td><td></td><td></td></tr>
<tr><td>b</td><td>Visitor centre ('F' on the map)</td><td></td><td></td></tr>
</table></td></tr>
<tr><td>pp. 36–7</td><td>GIS
A How can we add files to Google My Maps?
B How can we measure distance by Google My Maps?
C How can we measure area by Google My Maps?</td></tr>
<tr><td>pp. 38–9</td><td>Carry out and analyse a questionnaire survey
Questionnaire about the Central and Western Heritage Trail
Tourist: No. _____ Date: _____
1 Where are you from? _____
2 How did you discover the Central and Western Heritage Trail? (can tick '✓' more than one box)
☐ Relatives or friends ☐ Internet ☐ Others: _____
☐ Visitor centre ☐ TV programmes
3 Why do you visit the trail? (can tick '✓' more than one box)
<table>
<tr><th>Reason</th><th></th><th>Remark</th></tr>
<tr><td>R1 Learn about the history and culture of the place</td><td></td><td></td></tr>
<tr><td>R2 Study the building design</td><td></td><td></td></tr>
<tr><td>R3 Enjoy food</td><td></td><td></td></tr>
<tr><td>R4 Do shopping</td><td></td><td></td></tr>
<tr><td>R5 Others: _____</td><td></td><td></td></tr>
</table>
4 How would you rate the following items along the trail?
<table>
<tr><th>Item</th><th>Bad ◄——► Good</th><th>No opinion</th><th>Remark</th></tr>
<tr><td>T1 Attractiveness of the heritage</td><td>1 2 3 4 5</td><td></td><td></td></tr>
<tr><td>T2 Information boards</td><td>1 2 3 4 5</td><td></td><td></td></tr>
<tr><td>T3 Transport</td><td>1 2 3 4 5</td><td></td><td></td></tr>
<tr><td>T4 Facilities (e.g. toilets)</td><td>1 2 3 4 5</td><td></td><td></td></tr>
</table>
5 What can be done to make your trip along this trail better?
_____
End of questionnaire. Thank you!
During the trip
a When should we carry out the survey?
We should carry out the survey at daytime and on weekends or holidays. This is because there are more tourists visiting the trail during this period.
After the trip
a How can we handle the data?
Prepare a table to summarise the data collected (below is an example).
<table>
<tr><td colspan="2">Total number of tourists: _____</td></tr>
<tr><td></td><td>Number of tourists</td></tr>
<tr><td>Question 1</td><td>North America: _____ Central and South America: _____
Europe: _____ Africa: _____ Asia: _____ Oceania: _____</td></tr>
<tr><td>Question 2</td><td>Relatives or friends: _____ Internet: _____
Visitor centre: _____ TV programmes: _____ Others: _____</td></tr>
<tr><td>Question 3</td><td>R1: _____ R2: _____ R3: _____ R4: _____ R5: _____</td></tr>
<tr><td>Question 4 (average score*)</td><td>T1: _____ T2: _____ T3: _____ T4: _____</td></tr>
</table></td></tr>
</table>

8 Oceans in trouble

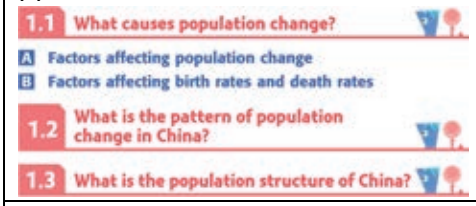
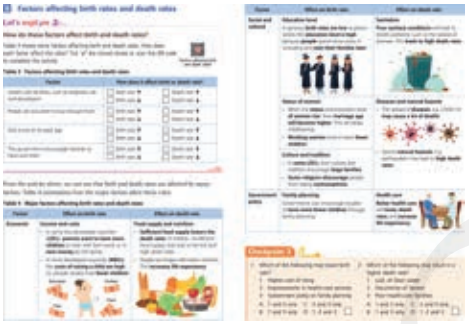
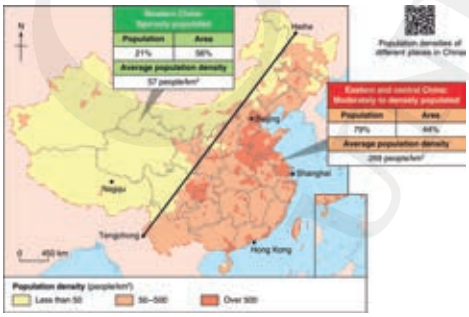
Unit	Major change	
1	p. 4  	**Add in the sub-heading 'Major seas in China'** in order to highlight the major seas, as well as the land territories and territorial waters of China according to the *Geography Curriculum Framework of National Security Education*
	pp. 5–11 	**Move the content about the human use of oceans to the first unit** under 1.2 'What benefits do oceans provide to people?' in order to provide students with an overview of the global distribution of marine resources
	p. 8  p. 10 In China, the Nan Hai contains different kinds of useful minerals and metals. Figure 10 on p. 8 shows some examples.	**Add in content about the major energy, mineral and metallic resources in the Nan Hai**. This highlights the rich marine resources there according to the *Geography Curriculum Framework of National Security Education*
2	pp. 15–18  	**Rearrange the content about a marine ecosystem under the sub-heading 2.1 'What is a marine ecosystem?'**. In this way, students can learn about the marine ecosystem before investigating into the problem of overfishing, as overfishing is a direct cause of the imbalance of the ecosystem
	pp. 20–33  	**Move the content about overfishing and the problems caused right after the marine ecosystem** in order to align with the change mentioned in the row above

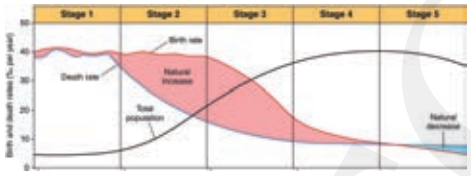
Unit	Major change	
2	p. 25  Worse still, the neighbouring countries claim part of the Nan Hai as their national waters. The rich fish resources in the Nan Hai have attracted many fishermen from the neighbouring countries to catch fish there. This poses challenges for China to conserve the fish stocks in the Nan Hai.	**Describe the challenges that China encounters when conserving the fishery resources in the Nan Hai** according to the *Geography Curriculum Framework of National Security Education*
	p. 30  • Educate the public to conserve marine resources. • Lay 3-D printed **man-made 'reef tiles'** in the sea to restore the marine habitats (Figure 23). Figure 23 3-D printed man-made 'reef tiles' in the Hoi Ha Wan Marine Park served as beds for corals	**Add in laying 3-D printed man-made 'reef tiles' in the sea as a measure to ease the problem of overfishing in Hong Kong**. This is a measure adopted in recent years
3	p. 37 (Unit 3), 51 (Unit 4)  Let's explore 6 Where is the world's largest garbage dump? How large is it? Let's explore 8 Who is responsible for cleaning up the Great Pacific Garbage Patch (GPGP)?	**Introduce GPGP (Great Pacific Garbage Patch) in Let's explore 6 (Unit 3), and Let's explore 8 (Unit 4)** to arouse student's interest about the seriousness of marine pollution and the fact that it is difficult to clean them up
	pp. 37–42  3.1 What are the sources of marine pollution? How does it affect the environment?	**Present a particular source of marine pollution and its environmental impact in the same section** in order to facilitate learning
	p. 40  More about the lack of oxygen in water	**Add in the information about the 'dead zones' in More about** to enrich the content
	p. 47  f Reduce the production of plastic waste Plastic waste is harmful to marine ecosystems. Many governments around the world have taken actions to reduce the production of plastic waste. Hong Kong is no exception (Figure 15). Plan to ban the sale and provision of single-use plastic tableware in eateries	**Add in the measures tackling plastic pollution in Hong Kong** in order to make the discussion more complete
	p. 48  More about the actions taken in different countries to prevent marine pollution Many countries have taken measures to prevent marine pollution. Figure 17 shows some examples.	**Introduce the measures taken by other countries in preventing marine pollution** in order to enrich the content
4	pp. 53–4  More about the international cooperation to tackle the ocean problems in the North Sea The North Sea is rich in marine resources, such as fish, minerals and oil (Figure 4). There are also some busy seaports. Due to the busy fishery, oil drilling and sea transport activities, the North Sea has been badly affected by overfishing and marine pollution for many decades.	**Rewrite the case study of the North Sea** to show how international cooperation is essential to solve the ocean problems

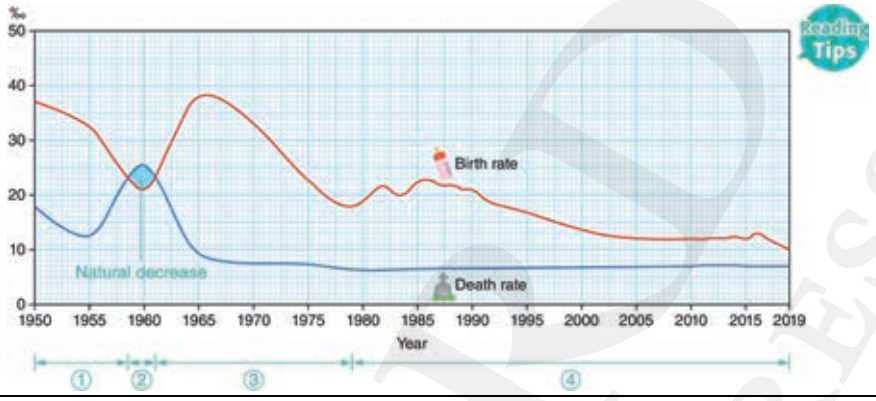
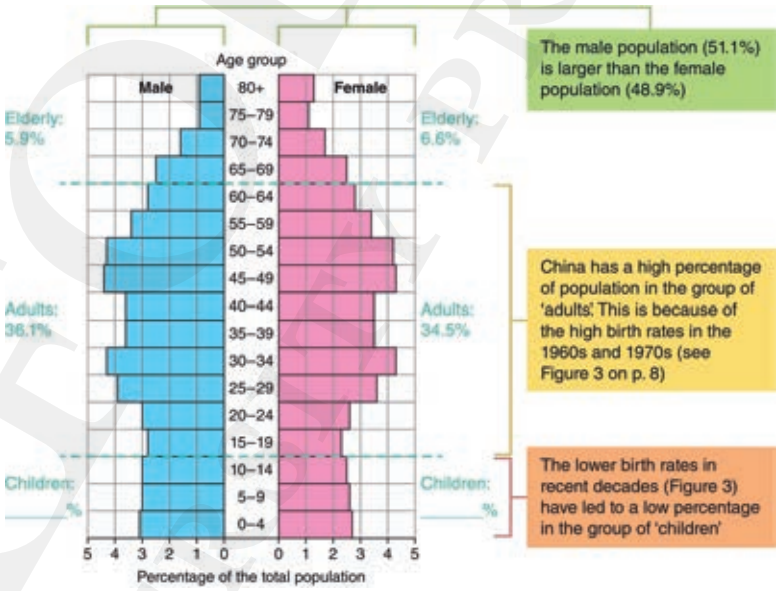
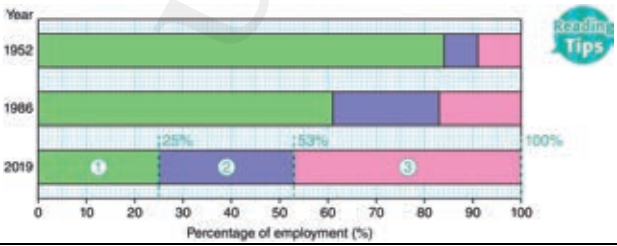
Unit	Major skill	
1	p. 3	**Read a satellite image** 
	p. 5	**Explain the importance of something** 2 Refer to the question above. Do you think oceans are important to us? **Topic sentence**: Oceans are (not important / important) to us. **Explanation 1 (with examples)**: • This is because oceans provide different kinds of resources. These resources are important in our daily life. • For example, we can get _____ and energy resources from seas and oceans. Also, we can enjoy _____ activities in the sea. **Explanation 2 (with example)**: • Besides, oceans provide convenience for economic activities. • For example, we can _____ goods across the oceans.
	p. 7	**Describe the spatial distribution of a feature** Describe the distribution of the fishing grounds in the Nan Hai near Hong Kong. The fishing grounds are found in the (shallow / deep) sea (near / far away from) the coast.
2	p. 20	**Describe the trend of something** 1 Describe the trend in the amount of the seafood fished between 1950 and 1986. **Step 1:** Describe the overall trend, as well as the values of the start and end years: The amount was _____ million tonnes in 1950. It (dropped / rose) to _____ million tonnes in 1986. **Step 2:** Calculate the percentage change (i.e. $\frac{\text{Value of the start year} - \text{Value of the end year}}{\text{Value of the start year}} \times 100\%$): It (decreased / increased) by _____%. **Step 3:** Describe the rate of change: The (decrease / increase) was (slow / rapid) during the period. 2 Describe the trend of seafood fished between 1986 and 2018. *(Hint: Refer to the sentence pattern in Question 1.)*
	p. 22	**Read a two y-axes line graph**  Reading Tips For a graph with two y-axes, be careful with which y-axis a particular curve refers to. ① For 'Fish consumption in the world', refer to the values of the y-axis on the left. ② For 'World population', refer to the values of the y-axis on the right. Find out the fish consumption in the world and the world population in 2019 respectively.

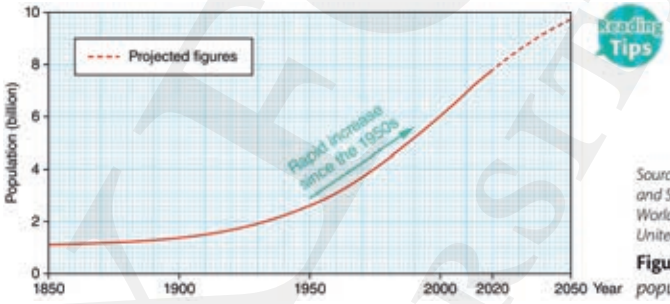
Unit	Major skill	
2	p. 28	**Read a stacked area chart** 
	p. 32	**Draw a diagram** c Based on the food chain in 3(a), draw a nutrient cycle in the marine ecosystem in the space below. 
3	p. 41	**Describe the spatial relationship between two features** 2 What is the relationship between the main shipping routes and the areas affected by prolonged oil slicks?
4	p. 54	**Describe a trend from a line graph** 

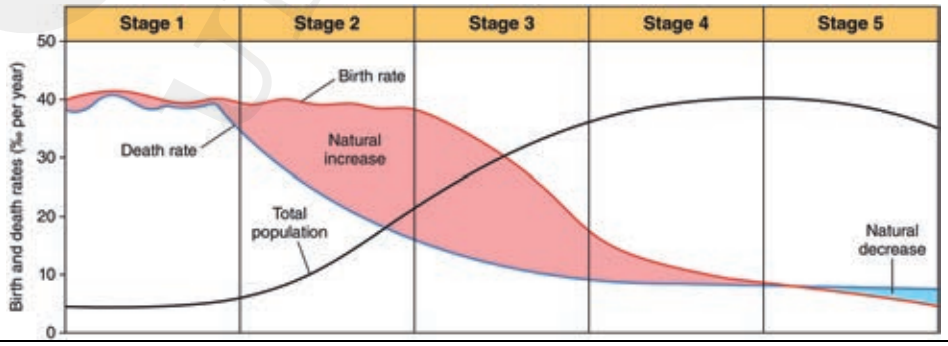
9 Population problems

Unit	Major change	
1	pp. 3–11  	**Restructure the content about the factors affecting population change under the first section with new sub-headings**, and **group the content about the population of China in the second and third sections**. This improves the flow and facilitates learning
	pp. 6–7 	**Add in a section about the factors affecting birth rates and death rates** to make the discussion more complete
2	pp. 19–20  	**Use a daily example to illustrate the concept of carrying capacity and explain the concept in a clearer way with sub-headings**. This makes it easier for students to follow
	pp. 23–4	**Add in actual data to explain the problem of overpopulation in China**. This makes the discussion more concrete
3	p. 32 	**Add in data about the average population density in Western and Eastern China** to better illustrate the population distribution of China

Unit	Major change	
4	p. 53 a Causes of ageing population 1 Lower birth rates Due to the rapid economic growth since the late 1970s and higher education level, more people prefer late marriage. Together with the higher costs of raising children, the birth rate of China has decreased a lot (Figure 3 on p. 8). 2 Longer life expectancy Rapid economic growth has also greatly improved the quality of health-care services. People can live longer and the life expectancy has increased from 44 years old in 1960 to 77 in 2020. This increases the proportion of the elderly.	**Add in a section about the causes of ageing population in China** to explain the situation more clearly
	p. 55	**Update and add in more latest measures for tackling the ageing population in China with sub-headings**. This enriches the content and makes it easier for students to follow
5	pp. 57–9 5.1 What are the characteristics of the world population? A Size, trend and distribution B Growth patterns	**Rearrange the content about the characteristics of the world population more clearly into two sections with sub-headings**. This improves the flow and makes it easier for students to follow
	pp. 60–70  	**Swap the sequence by first examining the demographic transition model and interpreting the model in detail**. This complete overview provides students with more solid background knowledge before going in deep to discuss the differences and situations in LDCs and MDCs
	p. 67 Let's explore 11 Why is the famous mascot in Japan getting married and having kids? Refer to the news clipping below. Famous mascot in Japan, Kumamon, may get married and have kids To ease the severe population problem in Japan, the minister in charge of population policies said that the famous mascot of Kumamoto Prefecture, Kumamon, will 'get married and have kids'. However, the local government of the prefecture denied this, saying Kumamon 'is only a child'. 	Arouse students' learning interest by **making use of a popular character among students to design the activity**
	pp. 68–9	**Update and add in more latest measures adopted by MDCs to solve their population problems with new sub-headings**
—	pp. 6–7, 11, 35, 44–5, 68 Proportion of adults: • Adults make up the working group. They are the **working population**. • Since they are economically active, a **large share of adults means the supply of labour force is adequate** Proportion of children and the elderly: • Children and the elderly depend on the working population for support. They are the **dependent population**/**dependents**. • When the **share of the dependent population** is very **high**, many resources will be spent on supporting them. This **increases the financial burden of society** Sex ratio: • It is the ratio between the male and female population. • An **imbalanced sex ratio** may adversely **affect population growth**. For example, when the male population is much larger than the female population, it will be difficult for men to find wives and start their families	**Add in tables or restructure the content in table form** for students to follow more easily

<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td rowspan="4">1</td><td>p. 4</td><td>Calculate natural increase rate
Birth rate [i.e. Number of births per 1,000 people (‰)] − Death rate [i.e. Number of deaths per 1,000 people (‰)] = Natural increase rate</td></tr>
<tr><td>p. 8</td><td>Identify population periods from a multiple line graph (with birth and death rates)
 
</td></tr>
<tr><td>pp. 10, 12–15</td><td>Read, interpret and draw a population pyramid
 
</td></tr>
<tr><td>p. 11</td><td>Calculate dependency ratio
Dependency ratio = (% of children (0–14 years old) + % of the elderly (65 years old or above)) / (% of working population (15–64 years old)) × 100</td></tr>
<tr><td rowspan="2">2</td><td>p. 24</td><td>Explain answers with data support
<table>
<tr><td>[1]Oil reserve per capita (2018)</td><td>18 barrels</td></tr>
<tr><td>[2]Arable land per capita (2018)</td><td>0.09 hectare</td></tr>
<tr><td>[3]Water resource per capita (2017)</td><td>1,971 m³</td></tr>
</table>
Compare the per capita natural resources in China in Table 4 with the world average in Table 1 on p. 20. Explain your answer with data support.</td></tr>
<tr><td>p. 26</td><td>Read a divided/stacked bar graph
 
</td></tr>
</table>

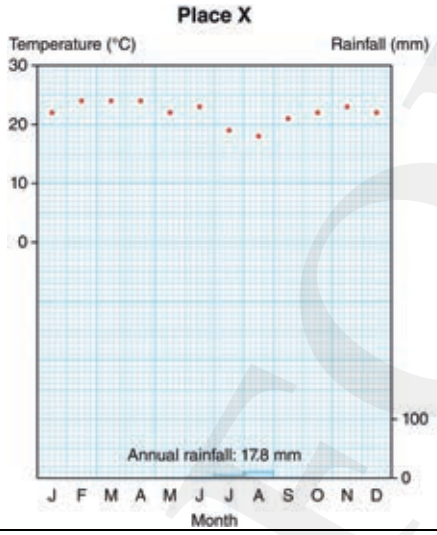
<table>
<tr><th>Unit</th><th colspan="2">Skill</th></tr>
<tr><td rowspan="4">3</td><td>p. 31</td><td>Describe the population distribution of a place
2 Describe how population is distributed in China in general.
• The population is (evenly / unevenly) distributed.
• Most people live in the _____ and central parts. A few people live in the _____ part.</td></tr>
<tr><td></td><td>Calculate population density
Population density = $\frac{\text{Total population}}{\text{Area (km}^2\text{)}}$ = (_____) people/km^2</td></tr>
<tr><td>p. 36</td><td>Describe the distribution pattern of a feature with guidance
Refer to Figure 7. Describe the distribution pattern of the major cities in China.
• The major cities are mainly found in _____ and _____ China, in particular along and near the _____.
• In western China, _____.</td></tr>
<tr><td>pp. 38–9</td><td>GIS How do we create a choropleth map with QGIS to show the population distribution in China?</td></tr>
<tr><td>4</td><td>p. 52</td><td>Describe a trend from a bar graph
2 Describe how the percentage share of the elderly in China changes over time.
It shows (an increasing / a decreasing) trend. It has _____ by _____% between 1960 and 2020, and is projected to (rise / drop) to over one fourth of the total population in 2050.</td></tr>
<tr><td rowspan="3">5</td><td>p. 57</td><td>Describe rate of change in a line graph
 

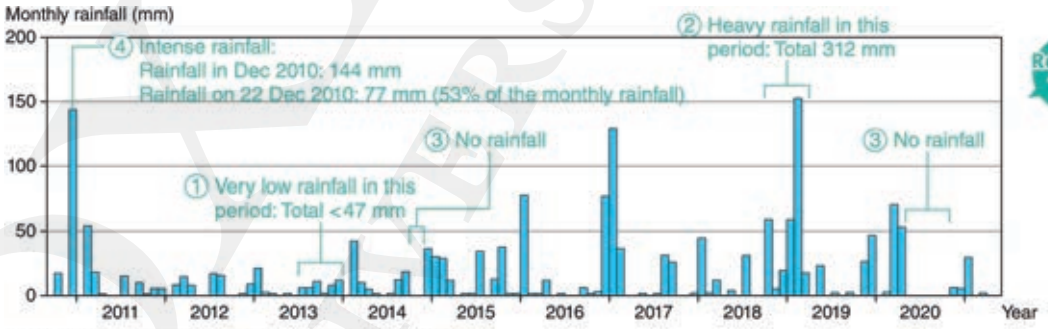
Source: Department of Economic and Social Affairs, United Nations; World Population Prospects 2019, United Nations
Figure 1 World population, 1850–2050</td></tr>
<tr><td>p. 58</td><td>Describe a trend from a line graph and distribution pattern/density from a map
<table>
<tr><td>Size</td><td>The population size is huge, reaching _____ in 2020</td></tr>
<tr><td>Trend</td><td>• It is (increasing / decreasing). The change since the _____s has been the most significant
• It is expected to reach about _____ in 2050</td></tr>
<tr><td>Distribution</td><td>• It is (evenly / unevenly) distributed
• In general, Europe, Central Africa, South Asia, East Asia and South-east Asia have a higher population density</td></tr>
</table></td></tr>
<tr><td>pp. 60–1</td><td>Interpret a demographic transition model
 
</td></tr>
</table>

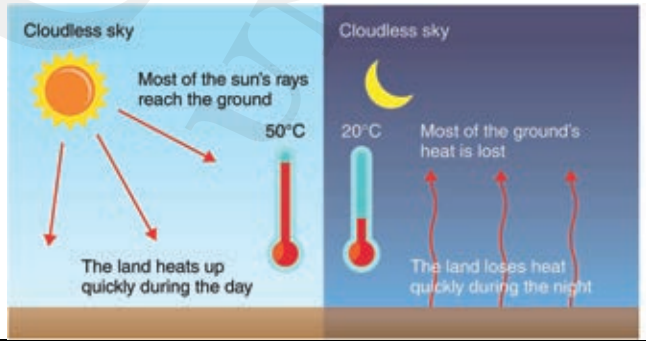
10 Taming the sand

Unit	Major change	
1	p. 5 More about the location of deserts	**Add in new More about** to serve as an extension to cater for learner's diversity
	pp. 6–9 1.3 What are the characteristics of deserts? A Climate a Scarce and unreliable rainfall b High evaporation rate c Large daily range of temperature B Surface materials C Plants and animals 	**Rewrite and rearrange the text with concrete data** to improve the flow. The **attractive layout** in this section aims to arouse students' interest
2	pp. 12–24 2 How is China affected by desertification?	**Merge, rewrite and restructure the content** of units 10.2 and 10.3 in the previous edition as Unit 2. This avoids redundancy and relevant content are grouped in a more logical and coherent way to facilitate learning
	pp. 12–13 2.1 What is desertification?	**Rewrite the content to explain the concept more clearly**
	pp. 16–21 2.4 What are the physical and human causes of desertification in northern China? A Physical causes a Low precipitation and strong winds b Presence of deserts and poor soil B Human causes a Population growth b Misuse of dryland resources c Human-induced climate change	**Modify, expand and restructure the content** about the physical and human causes of desertification in northern China. This enriches the content, but at the same time makes it easier for students to follow
	p. 18 Let's explore 5 Is population pressure on drylands in China high?	**Add in an activity** to bring out how population growth on drylands will cause land degradation to enhance students' understanding
	p. 23 C Affecting the natural environment Desertified land cannot support much vegetation growth. As land degradation persists, the land loses productivity and eventually turns into a desert-like environment.	**Add in new content** about how desertification adversely affects the natural environment, or the **Resource and Ecological Security** of China according to the *Geography Curriculum Framework of National Security Education*

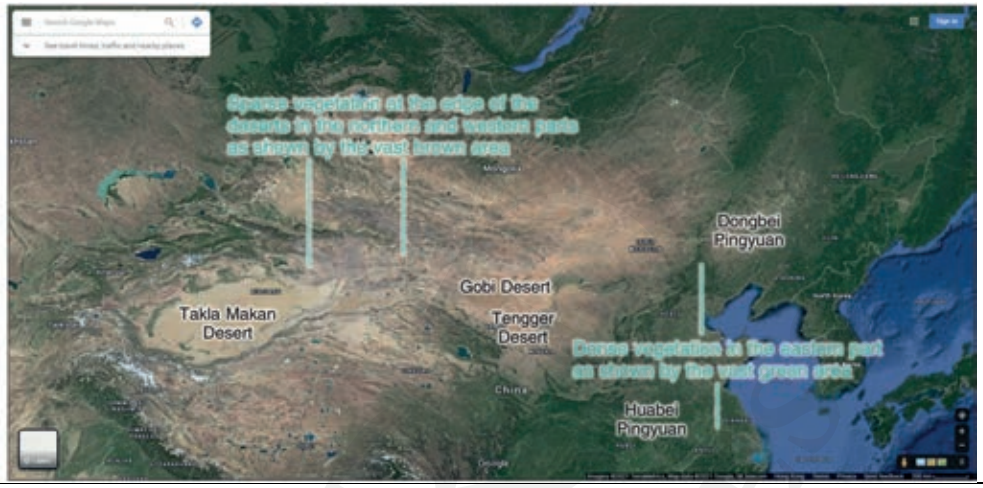
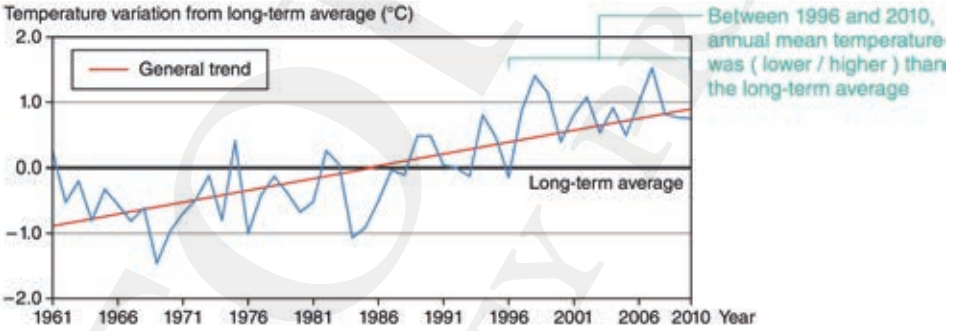
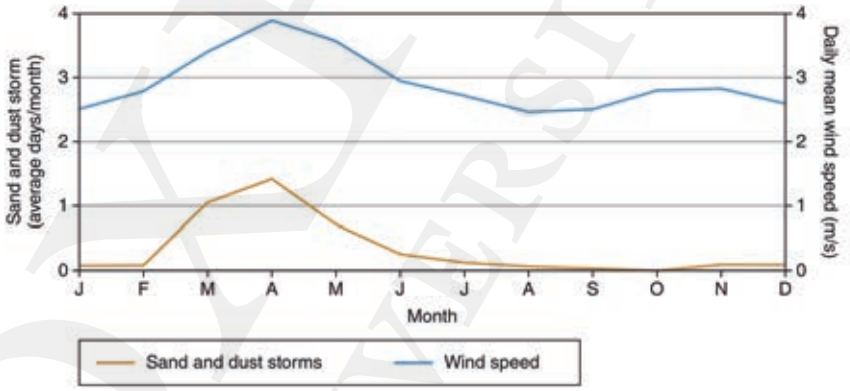
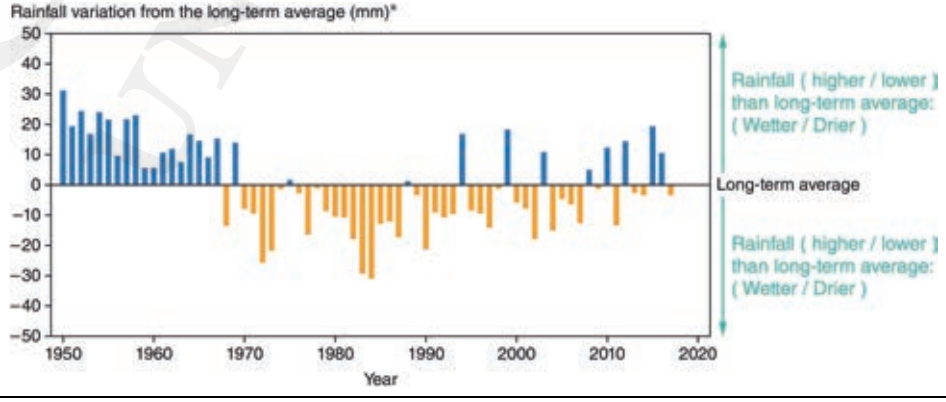
Unit	Major change	
3	pp. 31–2 3.3 What are the characteristics and the major causes of the sand and dust storms in China? A Characteristics B Causes a Plentiful sources of sand and dust b Strong winds	**Rewrite and rearrange the content as well as add in new sub-headings** to help students grasp the main points easily. Concrete data is also added to better illustrate the text
	p. 34 D Intensifying desertification Sand and dust storms are strong windstorms. They can increase soil erosion. The land loses soil nutrients and organic matter. This makes the land less productive and the land degrades. Persistent land degradation results in desertification, which provides more sand and dust for sand and dust storms. A vicious circle is created (Figure 8).	**Modify the content about how sand and dust storms intensify desertification** and put under 3.4 'What negative impacts do sand and dust storms bring to northern China?' as a sub-section. This groups the relevant content in a more logical way to facilitate learning
4	pp. 38–44 4.2 What has been done to keep desertification in check? A Increasing vegetation cover in northern China  Figure 2 *Functions of a windbreak* What sorts of trees are suitable for planting in drylands? B Restoring vegetation cover and preventing further loss	• **Restructure the content and group the measures into two major aspects** in accordance with the causes of desertification mentioned in Unit 2. This facilitates learning by pairing up the causes and solutions together. • On the other hand, certain measures have been expanded to highlight what the central government has done to secure the **Resource and Ecological Security** according to the *Geography Curriculum Framework of National Security Education*
	pp. 40–2 B Restoring vegetation cover and preventing further loss a Control grazing activities b Control farming activities	**Rewritten and expand the content under two sub-sections**. This helps students grasp the main points easily
5	pp. 47–58 5.1 What can we learn from the experience of the Sahel? 5.2 What can we learn from the experience of Australia?	**Swap the two cases** can facilitate learning. As the background of the Sahel has been introduced in Part 3, if students have learned this already, they may find the case of desertification in the Sahel easier to handle
	p. 49 A Causes of desertification in the Sahel a Physical causes	**Add in text** rather than just providing two figures to explain the physical causes. This helps enhance students' writing skills
	pp. 51–2 a Planting trees b Applying appropriate farming methods to conserve water and soil c Controlling the size of herds d Reducing reliance on fuelwood	**Rewrite and rearrange the content under four new points.** As this section is arranged in similar structure as in Unit 4, this facilitates learning

<table>
<tr><th>Unit</th><th colspan="2">Major skill</th></tr>
<tr><td rowspan="3">1</td><td>p. 3</td><td>Describe the environment from a photograph
 
<table>
<tr><td>Atmosphere</td><td>(Cloudy / Cloudless)</td></tr>
<tr><td>Vegetation</td><td>(Dense / Sparse)</td></tr>
<tr><td>Land</td><td>(Barren and dry / Fertile and wet)</td></tr>
</table></td></tr>
<tr><td>p. 6</td><td>Describe the rainfall and temperature characteristics of a place by reading its climatic graph
 

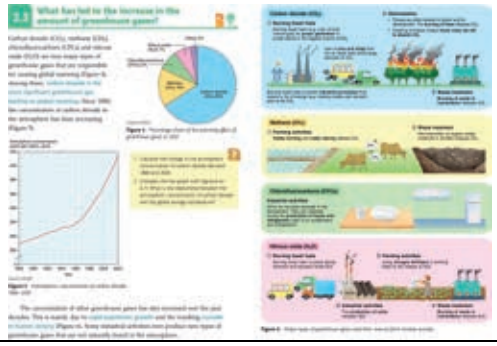
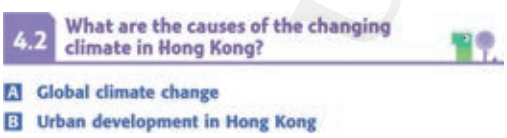
<table>
<tr><th></th><th>Place X</th></tr>
<tr><td>Annual rainfall</td><td>(Higher / Lower)</td></tr>
<tr><td>Distribution of rainfall</td><td>Rainfall occurs (every month / few months) in a year</td></tr>
<tr><td>Mean daily range of temperature</td><td>(Larger / Smaller)</td></tr>
</table></td></tr>
<tr><td>p. 7</td><td>Describe the rainfall pattern of a place over a long period of time
 

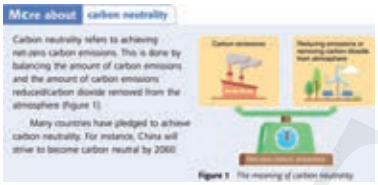
Note: The average annual rainfall in this desert: 70–150 mm.
Calculate the daily range of temperature
 

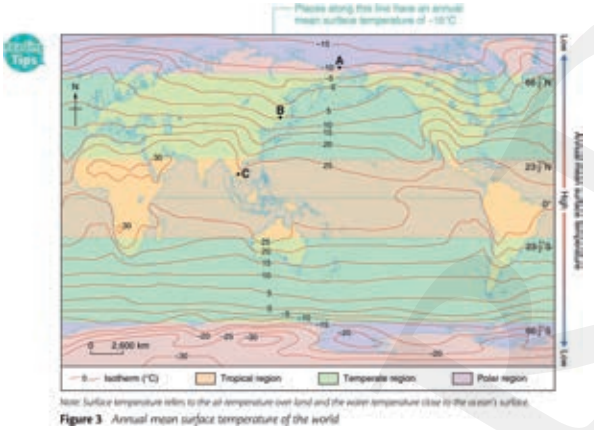
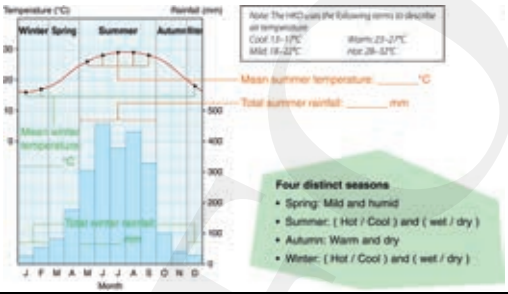
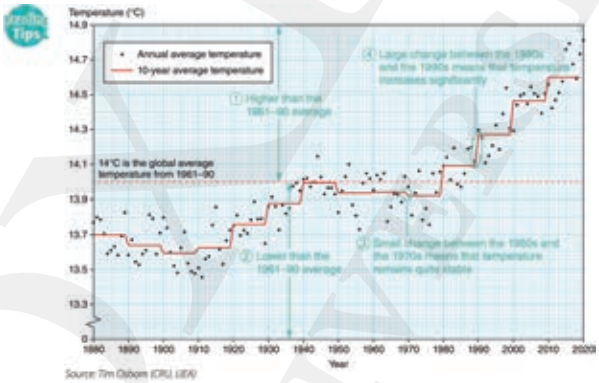
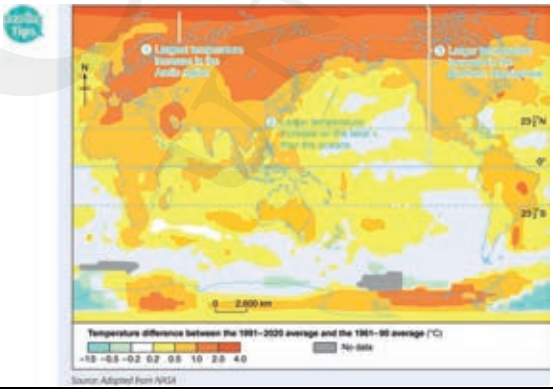
What is the daily range of temperature in the desert shown in Figure 7? (Hint: Daily range of temperature is the difference between daily maximum and minimum temperatures.)</td></tr>
</table>

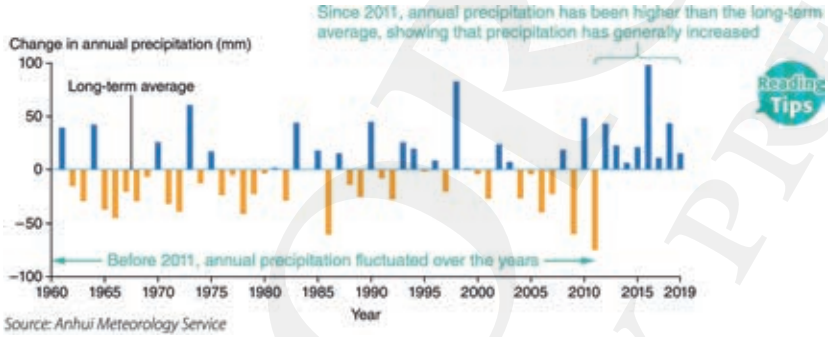
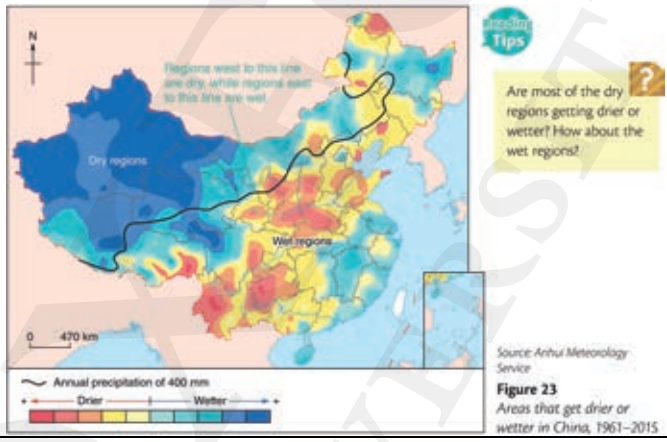
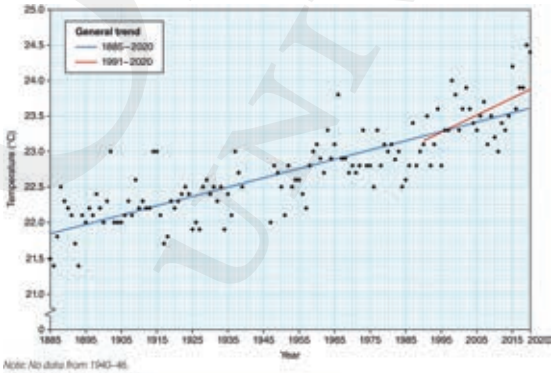
Unit		Major skill
2	p. 17	**Interpret a satellite image** 
	p. 21	**Describe temperature variation from long-term average from a line graph** 
3	p. 32	**Describe the relationship of two variables from a line graph**  2 What is the relationship between wind speed and the occurrence of sand and dust storms?
5	p. 49	**Describe rainfall variation from long-term average from a bar graph** 

11 Changing climate, changing environments

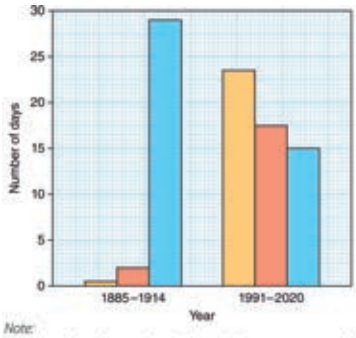
Unit	Major change	
2	pp. 16–17 	**Rewrite the section about the human sources of greenhouse gases** by grouping the sources by the types of gases. This makes it easier for students to know the major sources of a particular type of gas
3	pp. 28–9 	**Add in a spread explaining how climate change may drive some species to extinction**. Interesting examples and the colourful layout intend to raise students' awareness of the severity of the impacts of climate change on plants and animals
	pp. 32–4 	• **Restructure the content about the possible benefits of climate change** by categorising them into gains from the polar regions and to the temperate regions. This facilitates learning • **Add in the content explaining the importance of protecting the fragile polar ecosystems** according to the *Geography Curriculum Framework of National Security Education*
	pp. 35–6 	**Expand the content to explain in detail the effects of climate change in China**. This improves students' understanding of how climate change has impacted China according to the *Geography Curriculum Framework of National Security Education*
4	pp. 47–9 	**Rearrange the causes of the changing climate in Hong Kong** into global climate change and urban development. This highlights the importance of global climate change, as Hong Kong has experienced a change in climate in recent decades like the rest of the world

Unit	Major change	
4	p. 50  More about changes of visibility in Hong Kong	**Rewrite the content about changes of visibility in Hong Kong in the past decades** as extra information, since visibility is not usually included as an element to describe changes in climate
	p. 51 	**Rewrite and regroup the possible impacts of climate change in Hong Kong** into three categories. This provides a clearer and more comprehensive description of these impacts
5	p. 53  More about carbon neutrality	**Add in the content about carbon neutrality** as extra information to let students know about the meaning of the popular term and how it can be achieved
	pp. 54–8 A Action taken by China a Slowing down the emission of greenhouse gases b Removing greenhouse gases from the atmosphere B Action taken by other countries	**Rewrite and restructure the content** according to the *Geography Curriculum Framework of National Security Education* by introducing the measures taken by China and other countries to combat climate change. This helps students understand the importance of these measures in safeguarding polar and ecological security
	pp. 59–61  5.2 Why is international cooperation in combating climate change difficult? Let's explore 9 What do people in different countries think about reducing greenhouse gas emissions?	**Rewrite the section about international cooperation in combating climate change**. Using a simplified activity, highlight the views of some people in selected countries about reducing greenhouse gas emissions. This helps students understand the concerns about reducing emissions and views about who should be responsible
	pp. 62–3  5.3 What should we do as individuals to combat climate change?	**Expand and move the content about how individuals can help combat climate change to the end of this unit.** The new activity and fieldwork raise students' awareness of their carbon emissions and teach them how to live a greener lifestyle

Unit	Major skill	
1	p. 3	**Explain answers with evidence** 1 Which place is in the low-latitude region? Which is in the high-latitude region? Give evidence to support your answer.
	p. 5	**Read isotherms on a map**  Figure 3 Annual mean surface temperature of the world
	p. 8	**Read a climatic graph** 
	p. 9	**Identify changes in temperature from a line graph** 
	p. 10	**Identify patterns in temperature change from a map** 

Unit	Major skill	
2	p. 16	**Calculate changes from a line graph** 1 Calculate the change in the atmospheric concentration of carbon dioxide between 1880 and 2020.
3	p. 22	**GIS** **How can we use Google Earth Pro to show changes in the ice cover?**
	p. 31	**GIS** **How can we use GIS to show the areas affected by the major harmful effects of climate change?**
	p. 35	**Describe changes from a bar graph**  **Identify changes from a map**  **Figure 23** *Areas that get drier or wetter in China, 1961–2015*
4	p. 44	**Describe and compare trends from a scatter graph with trend lines**  **Figure 1** *Annual mean temperature of Hong Kong, 1885–2020* 1 Describe the general trend in annual mean temperature from 1885–2020. 2 Compare the general trends between 1885–2020 and 1991–2020. Has the change in annual mean temperature been getting faster or slower? How can you tell?

Unit	Major skill	
4	p. 45	**Read a grouped bar graph**



Long-term temperature rise in Hong Kong (Cantonese only)

Note:
1 *A hot night refers to a day with a minimum temperature of 28°C or above.*
2 *A very hot day refers to a day with a maximum temperature of 33°C or above.*
3 *A cold day refers to a day with a minimum temperature of 12°C or below.*

Source: Hong Kong Observatory

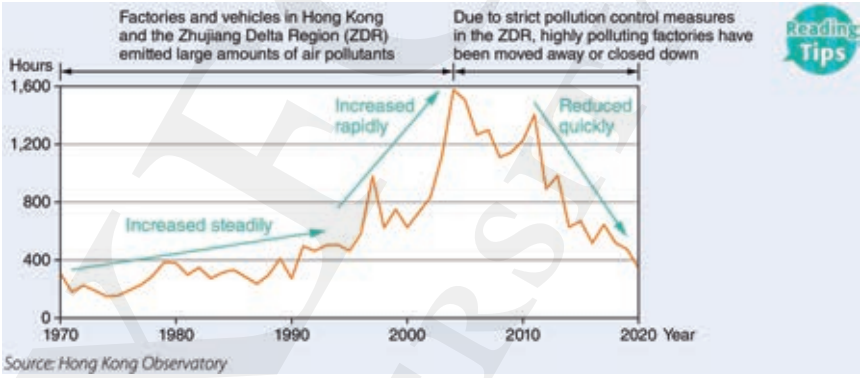
Figure 2 *Annual number of hot nights, very hot days and cold days in 1885–1914 and 1991–2020*

Calculate the differences in the annual number of hot nights, very hot days and cold days in the two periods shown. Complete Table 1.

Table 1

	Number of hot nights	Number of very hot days	Number of cold days
1885–1914	0.5		
1991–2020	23.5		
Percentage change	+4,600%		

	p. 50	**Identify trends from a line graph**



Source: Hong Kong Observatory

Identify features from a satellite image