READING, WRITING & CRITICAL THINKING 4

GLOBALIZATION

UNIT 1

UNIT OBJECTIVES				
Watch and listen	Watch and understand a video about China's plans to revive the Silk Road trade routes.			
Reading skills	Make predictions from a text type; recognize topic sentences.			
Critical thinking	Evaluate supporting examples; use tables and diagrams.			
Grammar	Use noun phrases; use time phrases.			
Academic writing skills	Use correct essay structure; write an effective thesis statement.			
Writing task	Write an explanatory essay.			
C Teacher development	Help your students become better at evaluating supporting examples and using tables and diagrams.			

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows a container ship and a tugboat in the Port of Tacoma, Washington, the USA. It is one of the biggest container ports in North America. Its main trading partner is China. Free trade and increased exchange of goods between different nations is one of the benefits of globalization. Other advantages of globalization include improved access to technology, media, education and consumer goods. Some of the disadvantages of globalization include the exploitation of developing countries, homogenization of culture and the destruction of the natural environment.

Lead-in

Give students one minute to consider the clothes they are wearing and the possessions they are carrying. In what country was each of them made? Students note this down. Tell them that they are going to spell the names of these countries. Give them a few minutes to check the spelling of each country in a dictionary. Everybody starts with three points. One person says the first letter of a country on their list and the next person says another letter that together with the first makes the beginning of the word. The next student adds another letter and so on. If at any time somebody doubts that the student who says a letter has a real (correctly spelt) country in mind, they can challenge that person. If the challenged student can't give an appropriate answer, they lose a point and a new word is started. If they can give a word, the challenger loses a point. If somebody can't continue a word, they also lose a point. The winner is the last student with points remaining at the end of the game.

When the game is complete, ask students to reveal their entire lists. What country appeared most frequently? Why do they think this is the case? page 15 Answers will vary.

WATCH AND LISTEN

Learning objectives

- Listen and identify the main idea in a video about trade routes
- Listen and understand details about a future project
- Listen and identify the meaning of unfamiliar words and phrases from their context in the video
- Practise talking about international trade and infrastructure

Exercises 1-2 page 16

Answers will vary.

Exercise 3 page 17 Main idea: Sentence 2

Exercise 4 page 17

1 F; Korgas is at the heart of the trading route. **2** F; Five years ago, there was no infrastructure in the area. **3** T **4** T **5** F; The project has economic and political goals.

Exercise 5 page 17

- 1 If something is built **from scratch**, it is built from the very beginning without using anything that already exists.
- 2 The phrase **so the theory goes** means that something is still only a theory, and it may not happen this way.
- **3** If you **project** a particular quality, that quality is what most people notice about you.

Exercise 6 page 17

Answers will vary.

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READING 1

Learning objectives

- Understand key vocabulary for global companies dominant, reputation, multinational
- Use the text type to predict style and content in a blog post about IKEA's global success
- Read and understand detail
- Read and identify formal equivalents of informal language from the context of the blog
- Make inferences about the writer's implications and attitude
- Describe personal experiences of blogs and online reviews

Lead-in

Ask students to look at the logo in the first reading. Ask if anybody knows the company and what kind of products it sells. Ask if anybody has shopped there and if so, to describe the experience and the store more generally. How is this store different from other stores?

Exercise 1 page 18

a domestic **b** dominant **c** discount **d** reputation **e** supplier **f** inflation **g** multinational **h** selling point

Exercises 2-3 page 19

1 use of informal language: use of phrasal verbs,
'check out'; informal vocabulary, 'a lot of', 'super-low';
contractions, 'I'll look at'
3 use of first person, such as 'I will check out', 'it seems to me,' I'll look at'

Exercise 4 page 20

1 Because he/she is writing a blog series about successful multinational companies, one of which is IKEA. 2 A UK store might feature a bedroom display with a British flag bedspread, while a Tokyo store might have a bedroom display with a traditional mat on the floor. 3 Because it sells its furniture in flat boxes which use less space and paper and are easier to transport. 4 Multinational companies which specialize in household goods and automobile production.

Exercise 5 page 20

1 T 2 T 3 F; They have long understood the need to research other markets. 4 T 5 DNS
6 F; It will only be in some markets.

Exercise 6 page 20

1b 2c 3a

Optional activity

Write the words and phrases in the table randomly on the board. Ask students to find pairs of words with similar meanings and decide which is more likely to be used in a blog (informal) and which in an academic article (formal).

Answers:

informal	formal		
a lot	a great deal		
ask for	request		
get	receive		
stuff	possessions		
pretty	rather		
get better	recover		

Exercise 7 page 20

Answers will vary. Possible answers:

 As an example of what they learnt about what customers in different markets want, based on their research.
 Because if customers feel strongly about protecting the environment, it might make them more likely to shop at stores that follow eco-friendly policies.
 He/She does not explicitly say.

Exercise 8 page 21

Answers will vary.

READING 2

Learning objectives

- Understand key vocabulary for global eating habits consumption, convenience, experiment
- Use topic sentences to predict the content of an essay about eating habits in Italy
- Read and identify the main changes over time in Italian eating habits
- Read and identify the target readers and author's purpose in writing the essay
- Synthesize information from two texts about globalization in a discussion

Lead-in

Ask students if they like Italian food. Why do they think it is so popular worldwide? Elicit some Italian dishes and any restaurants where they are served in the town where the class is studying. Ask if they think this food is similar to the food in Italy, or if it has been adapted to local taste. Elicit some examples of local adaptations.

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Exercise 1 page 21

1 convenience2 ensure3 consumption4 increase5 relatively6 specialty7 influence8 experiment

Exercises 2–3 page 22

Answers will vary. Possible answers:

1 more ready-made food, frozen food and take-away food
2 greater variety of food available in shops and restaurants
3 positive and negative impact of fast-food restaurant chains

Optional activity

Get students to predict the content of a paragraph (not in the text), based on each of the topic sentences below, for four paragraphs of an essay about globalization. They should be able to infer that the paragraphs will discuss some of the pros and cons of globalization. Ask them to justify their answers. (For example, the first two topic sentences suggest those paragraphs will be about advantages and the third and fourth topic sentences suggest those paragraphs will be about disadvantages. Together, they would probably be from an essay about both.)

- 1 Supporters of globalization argue that it is good for the country's economy.
- 2 Globalization helps us learn about other countries and their cultures.
- 3 Globalization generally helps rich countries more than poor countries.
- 4 Globalization gives a lot of power to large, multinational companies.

Exercise 4 page 22

2 both 3 present 4 past 5 present 6 both

Exercise 5 page 22

Answers will vary. Possible answers: **1** all over the world **2** eat Asian food **3** foreign food **4** less common

Exercise 6 page 24 **1** a **2** b

Exercise 7 page 24 Answers will vary.

LANGUAGE DEVELOPMENT

Learning objectives

- Rewrite sentences using academic alternatives to phrasal verbs – The amount of migrant labour is expected to go up (increase). Academics have been looking into (investigating) the implications of globalization for many years.
- Use globalization vocabulary to complete a text about businesses – monopoly, multinational outlets

Exercise 1 page 24

1b 2a 3f 4c 5h 6d 7g 8e

Optional activity

Ask students to write their own sentences that might appear in a blog about changing eating habits, using the phrasal verbs in Exercise 1. Students should then exchange papers with a partner and rewrite the sentences in a more academic form, substituting academic synonyms for the phrasal verbs.

Exercise 2 page 25

1 increase2 continue3 studying4 confused5 excluded6 refused7 exhausted8 removed

Exercise 3 page 25

1 domestic2 consumption3 outlets4 multinational5 monopoly6 discounts7 inflation

CRITICAL THINKING

Learning objectives

- Use examples from a text to support arguments
- Choose and analyze a globalization topic, using an ideas map
- Create a plan for a body paragraph of your essay in a table

UNLOCK TEACHER DEVELOPMENT

BE INFORMED

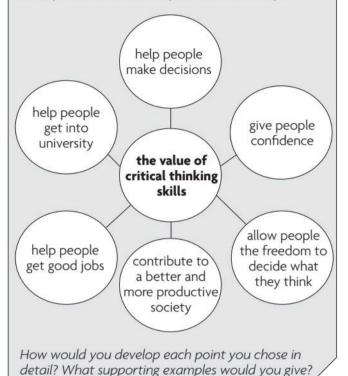
→ Evaluating supporting examples and using tables and diagrams are important skills for students because: (1) Whilst students are often aware that they need to use supporting examples in their writing, these examples are not always directly relevant; (2) Students need to develop skills in evaluating those examples which are relevant, and those which are not;

(3) Tables and diagrams can help in organizing appropriate information to support ideas and plan content in students' writing.

BE CONFIDENT

→ Develop these skills for yourself by doing the following activity:

Imagine that you have been asked to write a short article on the following topic: 'Why all young people must develop their critical thinking skills'. Which three points below would you focus on? Why?



Lead-in

Give students a minute to read the writing task. Ask them to brainstorm in groups for a few minutes if the changes have been mostly positive or negative. Tell them to keep their brainstorming notes for later, when they begin to write their essay.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on pages 26–27.

→ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

➔ Are your answers true for all students in your class?

→ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

With weaker groups, restrict your class to three to four topics from the list in Exercise 2. Students first create an ideas map by themselves, and then compare with a partner who has created the same ideas map. Students can then add any useful and relevant ideas to their own map.

Exercise 1 page 26

Answers will vary. Possible answers:

- 1 Until recently, pasta would have been made by people in their local area. Families would also have made the sauces to eat with the pasta at home.
- **2** Only pizza and pasta were available in the local town square.
- **3** Frozen or take-out meals, mass-produced dried pasta, and ready-made pasta sauces have become very popular. Fast food chains are seen as more convenient.
- **4** People worry about the destruction of local and national specialties. The 'Slow Food' movement was started in Italy to encourage people to eat locally sourced food.
- **5** The popularity of foreign food, international chain restaurants and convenient food are results of globalization, and this has changed the way Italians eat.

Exercises 2-3 pages 26-27

Answers will vary.

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

Think about the following questions:

→ Did you choose the same three points as your colleague(s) who also did the activity in the *Be* confident section? Why? / Why not?

→ How much are your students already using tables and diagrams to plan their writing? If they are not doing this on a regular basis, they should begin to incorporate it into their academic practice as soon as possible.

BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peercollaborate. Why not share the ideas you generated in the *Be ready* section, and their outcome?

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GRAMMAR FOR WRITING

Learning objectives

- Use correct word order in academic noun phrases a chain which is growing globally, a fact of modern life, a contribution that benefits us the most
- Use time phrases to refer to general and specific past times around ten years ago, historically, in the 1990s
- Use time phrases to refer to present time currently, presently, these days
- Complete sentences with time phrases about food in your country – Nowadays, you can buy many different kinds of noodles. Until the 1990s, it was impossible to find sushi in a supermarket.

Exercise 1 page 27

1d 2b 3a 4c

Exercise 2 page 28

2 a range of exports 3 a change in environmental standards 4 the exchange of technological ideas
5 the impact of multinational chains 6 a group of international entrepreneurs 7 the mixture of different cultures 8 an increase in worldwide consumption

Optional activity

Ask students to write three new sentences, each with two noun phrases containing one of the following features: adjectives, prepositions, relative clauses, N+N compounds.

Exercise 3 page 28

general past time: before the war, formerly, historically, in recent years, in the past

specific past time: around ten years ago, in the 1990s, in the eighteenth century

present: at the present time, currently, nowadays, presently, these days

Exercise 4 page 29

Answers will vary. Possible answers:

1 food from all over the world 2 foreign chains 3 Thai food in my country 4 cooking programmes on television
5 Asian spices in the markets here 6 things they got from their farms

ACADEMIC WRITING SKILLS

Learning objectives

- Understand the structure of academic essays
- Identify effective thesis statements
- Write an effective thesis statement for an essay about globalization and the developing world

Lead-in

Ask students why we have an introduction, body paragraphs, and a concluding paragraph in academic essays. Elicit guesses from students and write them on the board. What purpose does each serve? Check answers as the class reads through the Skills box on page 29.

Exercise 1 page 30

1a 2d 3e 4c 5b

Exercise 2 page 31

1F 2Q 3OK 4G 5OK 6G 7D

Exercise 3 page 32

Answers will vary. Suggested answer:

The phenomenon of globalization has harmed certain countries.

Be flexible

Look at the example thesis statements in the Skills box on page 30 again. In small groups, ask students to predict the content of the body paragraphs that would appear in these essays. If this is easy for **more advanced students**, ask them to write topic sentences for at least two of the body paragraphs.

WRITING TASK

Learning objectives

- Use a table to plan the content of an essay on how globalization has changed your country
- Write a thesis statement for your essay
- Draft an essay on how globalization has changed your country
- Review and revise the content and structure of your essay
- Review and revise the use of language in your essay

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Exercise 1 page 32 **a** 2 **b** 1 **c** 5 **d** 3 **e** 4

Exercises 2–11 pages 32–34 *Answers will vary.*

RESEARCH PROJECT

Investigate and give a presentation on how globalization has increased awareness of your country and culture in other parts of the world.

Divide the class into groups and ask them to think about the impact of globalization. In what ways has the world become more aware of their country and culture? They should research the following 'exports' from their country: culture (e.g. entertainment, music), food, technology, sport, people (workforce), or another topic of their own choice. These points should be divided between the groups so that each one can investigate a different theme.

Each group of students should then present their findings to the class.

CLASSROOM APP

Exercise 1

Answers will vary.

Exercise 2

1 selling point2 supplier3 increase4 consumption5 dominant6 reputation7 experiment8 influence

Exercise 3

Answers will vary.

Exercise 4

1 refused 2 confuse 3 studying 4 increased 5 excluded 6 continue 7 exhausting 8 remove

Exercise 5

1 multinational 2 consumption 3 domestic 4 inflation 5 outlet 6 monopoly 7 discount

Exercise 6

- 1 Introduction, Body, Conclusion
- 2 A hook; Background information; A thesis statement
- 3 develop your main ideas; provide evidence or information to support your ideas
- 4 state the thesis statement again; give your conclusions / recommendations / predictions
- 5 give an opinion; give an overview of the essay
- 6 Although there are certain benefits to globalization, there are arguably a greater number of disadvantages.

UNIT1 415

EDUCATION

UNIT OBJECTIVES	
Watch and listen	Watch and understand a video about an app that helps children catch up outside the classroom.
Reading skill	Make inferences.
Critical thinking	Analyze similarities and differences; use a Venn diagram to plan a comparison-contrast essay.
Grammar	Use transitions to show comparison and contrast; use adverb clauses of contrast.
Academic writing skills	Avoid run-on sentences and comma splices; write a comparison and contrast essay.
Writing task	Write a comparison and contrast essay.
C Teacher development	Help your students become better at analyzing similarities and differences .

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows pupils at a school in Kawangware, Nairobi, Kenya using tablets. These tablets were designed by a specialist technology company in Nairobi, and are tailor-made to fit the needs of African classrooms. They can be used even in very remote areas. Using technology in the classroom can give students access to additional online resources. It also teaches them how to collaborate with other students and teachers online, how to use online resources and how to search for information online.

Lead-in

Show students the following simile (or use a different one of your own if you prefer):

A good lesson is like a meal, because it satisfies you and gives you the fuel to live your life.

Check students understand that in this sentence 'meal' is a simile /'sɪm.r.li/ because we are comparing it to a good lesson, using the structure *is like*. Now replace the sentence with the following:

A good education is like _ because

Ask if students can think of a simile to complete the sentence. If they cannot, give prompts (*light*, *food*, *a key*, *a ship*, *a tree*, *money*) and ask them to complete the sentence. Students share their ideas with the class, justifying their similes.

page 37 Answers will vary.

WATCH AND LISTEN

Learning objectives

- Listen and understand the main ideas in a video about an app
- Listen and complete a summary of the ideas in the video
- Make inferences about the views held by different speakers in the video
- Practise talking about learning techniques

Exercises 1–2 page 38

Answers will vary.

Exercise 3 pages 38-39

1 F; Many students cannot afford private tuition. 2 T 3 F; This is a new programme that is helping a small number of students. 4 F; The teachers are very enthusiastic about the idea. 5 T = 6 T

Exercise 4 page 39

1 extra 2 expensive 3 afford 4 fall behind 5 access 6 available

Exercise 5 page 39 **1** c, e **2** a **3** b, d

Exercise 6 page 39 Answers will vary.

READING 1

Learning objectives

- Understand key vocabulary for university education *discipline*, *oriented*, *pursue*
- Read and identify the main ideas about two subjects in an essay about university courses
- Read and understand detail
- Use your knowledge to make inferences about ideas implied in the text
- Explain your views on university subjects

Lead-in

Write the acronym STEM on the board and ask students what subject each letter stands for (Science, Technology, Engineering, Mathematics). Ask how many of them study these fields and which ones. If you have a mixed gender class, take note of the gender breakdown – are there more male or female students studying these subjects? Is it equal? Ask students why they think there is this difference. If your class is all male or all female, ask who typically studies these subjects and why.

Exercise 1 page 40

a pursue **b** concrete **c** launch **d** oriented **e** underrepresented **f** evolve **g** discipline **h** gender gap

Exercise 2 page 41

2 discipline 3 gender gap 4 launch 5 oriented 6 under-represented 7 concrete 8 evolve

Exercise 3 page 41

Answers will vary.

Exercise 4 page 43

1 both 2 Engineering 3 Business 4 both 5 both

Exercise 5 page 43

1 F; about 40% 2 T 3 T 4 F; Science, Technology, Engineering, Mathematics 5 F; 16% of Engineering and Technology students are female.

Optional activity

In small groups, ask students to make a list of university subjects. They should write down any concrete skills each subject offers (i.e. ones that students could use in the working world). Then, ask students to rank the subjects as *more* or *less* careeroriented. Finally, they explain their list and rankings to another group.

Exercise 6 page 43

Answers will vary. Possible answers:

1 easier to find a job 2 **Engineering:** very specific and possibly not as transferable to different types of careers **Business:** not as academic as other subjects

Exercise 7 page 43

Answers will vary.

READING 2

Learning objectives

- Understand key vocabulary for styles of learning delivery distance learning, technological advances, modern phenomenon
- Use your knowledge to predict the main ideas in an essay about distance and face-to-face learning
- Read and identify the main ideas in each paragraph of an essay
- Read and identify the features of distance and face-to-face learning
- Make inferences about the language, ideas and attitude of the essay writer
- Synthesize information from an essay about university courses and an essay about distance and face-to-face learning in a discussion

Lead-in

Ask students to think of something they have wanted to learn recently, but not as part of their formal education; for example, how to repair something, background information about a news item, or how to use a piece of technology or software. How did they learn it? Did they use books, other people or the internet? Students discuss their experiences and try to identify what is best studied face-to-face and what is better learnt online.

Exercise 1 page 44

Answers will vary. Possible answers:

1 the trend toward more online learning 2 mechanical engineering 3 you can interact with the teacher and other students 4 you can study for it from your home 5 rechargeable batteries 6 communicate with people around the world 7 high standards of academic behaviour is important 8 the cost of tuition

Be flexible

For more practice of the key vocabulary, ask students to discuss these questions in pairs.

1 Do you think vocational training is a **credible alternative** to university education for most people? Explain your answer.

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- 2 What has been the most important **technological advance** in education? Why do you think this?
- 3 Do you think **online degrees** will ever widely accepted? Why / Why not?

Challenge **more advanced students** to write questions using three of the remaining target vocabulary items (in the box on page 44). Students take turns asking and answering.

Exercises 2–3 page 44

Answers will vary.

Exercise 4 page 46

13 24 32 41

Exercise 5 page 46

1 face-to-face 2 distance 3 distance 4 both 5 distance 6 distance 7 both

Exercise 6 page 46

Suggested answers:

- 1 Because regardless of possible differences like curriculum, syllabus, instructor or other things that may or may not differ, we know for sure that the systems differ in this basic way.
- **2** Because the teacher and student rarely meet, it may be more difficult for the teacher to understand the student's learning needs. Students are more responsible for staying focused, doing the work and keeping up.
- 3 Mentioned in the text: helping students understand the key course sections; deciding how to present and sequence the material and topics; creating assignments; helping with resources; providing feedback. *Other possible answers*: answering questions, evaluating/ grading student work.
- **4** The author does not appear to take a side on this. He/ She states that 'it is difficult to state whether one form of learning is better than the other'.

Exercise 7 page 47

Answers will vary.

LANGUAGE DEVELOPMENT

Learning objectives

- Identify the definitions of educational vocabulary – assignment, degree, journal
- Identify the definitions of academic vocabulary - alternative, virtual, motivation
- Use academic words to complete sentences about university courses

Exercise 1 page 47

1 assignment 2 term 3 semester 4 Plagiarism
5 journal 6 lecturer 7 seminar 8 tutor 9 degree
10 dissertation 11 examination

Exercise 2 page 48

1d 2a 3f 4g 5h 6i 7e 8c 9b

Exercise 3 page 48

1 alternative2 significant3 aspect4 principles5 motivation6 specific7 core8 virtual

Be flexible

Ask students to write three new sentences of their own. Each sentence should use one item from the Education vocabulary list (in Exercise 1 on page 47) and one item from the Academic words list (in Exercise 2 on page 48). Students then share their sentences with a partner, who can give feedback on appropriateness.

If this exercise is too easy for **more advanced students**, ask students to do it as a gap-fill activity. Students exchange and complete their partner's exercise. Emphasize that their sentences should make the meaning of the missing words as clear as possible.

CRITICAL THINKING

Learning objectives

- Use ideas maps to generate ideas about key features of subjects
- Use Venn diagrams to analyze similarities and differences between two subjects

UNLOCK TEACHER DEVELOPMENT

BE INFORMED

→ Analyzing similarities and differences is an important skill for students because: (1) Doing this is crucial in any form of academic writing (notes, essays, lab reports, etc.) in all academic disciplines; (2) Writing which does not examine similarities and differences is unlikely to include a strong argument; (3) A Venn diagram is one of the most common tools for analyzing similarities and differences, and is both easy and highly effective.

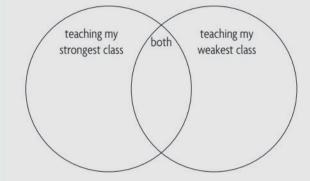
BE CONFIDENT

→ Develop this skill for yourself by doing the following activity:

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Think about the similarities and differences between teaching your strongest class and your weakest class. Complete the Venn diagram below. The things which you do similarly with both classes should be included in the middle section.



When you have done this, reflect on the following questions:

- 1 Did anything about this analysis surprise you?
- 2 Did you find more similarities than differences?

Lead-in

Give students a minute to read the writing task and to ask you any questions they might have.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on page 49.

→ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

➔ Are your answers true for all students in your class?

➔ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

One option to consider, especially if not all students have managed to generate enough ideas in Exercise 3, is to draw the Venn diagram on the whiteboard and ask the whole class to contribute ideas. This is a quick and easy way to share ideas as a whole class. Note: It is not essential for students to do this activity for 'language' and 'Mathematics'. They can choose subjects they are more interested in, or which are more relevant to their studies.

Exercise 1 page 49

Answers will vary. Suggested answers:

Studying a language:

access to authentic material in the new language is beneficial

learners will benefit from visiting the country where the language is spoken

plenty of practice required

students must be highly motivated, well organized and self-disciplined, especially if they are not living in the country where the language is spoken

learners need core vocabulary and grammar to build on

Studying Mathematics:

completely objective, meaning there is only one right answer

all learners will have done some Mathematics at school plenty of practice required

learners need to understand key concepts before moving on

can use Mathematics to solve real-world problems

Exercises 2–3 page 49

Answers will vary.

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

Think about the following questions:

→ Look at the differences in your Venn diagram, i.e. the things which you only do with your strongest or weakest class. Are there any things which you only do with your strongest class which you think you could/should also do with your weakest class? And vice versa?

→ How frequently are your students using Venn diagrams in their planning and analyzing? As they become more independent, they need to develop their academic practice through using tools such as this.

BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peercollaborate. Why not share the ideas you generated in the *Be ready* section, and their outcome?

UNIT 2 419

GRAMMAR FOR WRITING

Learning objectives

- Use transition words and phrases to show comparison and contrast across sentences -Similarly, ... In the same way, ... Conversely, ...
- Use adverb clauses with while and whereas to show contrast within sentences - The main difference between them is that teachers are paid, whereas parents are not. While a distance-learning teacher may need to provide written feedback, a classroom teacher may be able to correct a student directly.
- Punctuate sentences showing contrast with while and whereas correctly

Exercise 1 page 50

1 Conversely; In contrast 2 In the same way; Similarly

3 In contrast; Conversely 4 Similarly; In the same way

Exercise 2 page 50

Answers will vary.

Exercise 3 page 51

1 Academic courses focus on subjects like Maths, Science and Literature, while/whereas vocational courses focus on practical skills.

While/Whereas vocational courses focus on practical skills, academic courses focus on subjects like Maths, Science and Literature.

2 A university is a very large institution which offers undergraduate and graduate degrees, while/whereas a college is a smaller institution which typically offers only undergraduate degrees.

While/Whereas a university is a very large institution which offers undergraduate and graduate degrees, a college is a smaller institution which typically offers only undergraduate degrees.

3 Academic courses are theoretical, while/whereas vocational subjects are not.

While/Whereas academic courses are theoretical, vocational subjects are not.

4 More men tend to graduate with degrees in Maths or Science, while/whereas more women tend to graduate with degrees in language or Literature.

While/Whereas more men tend to graduate with degrees in Maths or Science, more women tend to graduate with degrees in languages or Literature.

Exercise 4 page 52

1b 2b 3a

Exercise 5 page 52

1 Some professions only require a bachelor's degree, while others require a graduate degree.

- 2 Whereas Japanese students can get a bachelor's degree in Law, Canadian students cannot.
- 3 While Business is considered a university subject that will lead to job offers, Philosophy is usually not.

Exercise 6 page 52

Answers will vary. Suggested answers:

- 1 While some students choose to go to university, others choose to get a full-time job.
- 2 Engineering study requires good mathematics skills, whereas Literature study requires good reading and writing skills.
- 3 Some universities require students to study both STEM and humanities subjects, whereas others require students to specialize in just one area.

ACADEMIC WRITING SKILLS

Learning objectives

- Identify run-on sentences and comma splices
- Use and, semicolons or new sentences to correct run-on sentences and comma splices -Engineering and Business are both popular subjects; they both use mathematics. Business is a more popular subject than Engineering, and it also has a smaller gender gap. Business is a more popular subject than Engineering. It also has a smaller gender gap.
- Understand the key features of comparison and contrast essays.

Exercise 1 page 54

2 C; Possible answer: ... university course. It is not as popular ... 3 R; Possible answer: ... focuses on numbers, but language learning ... 4 C; *Possible answer:* ... very popular; you can even ... 5 R; *Possible answer:* ... academic subjects; other students ... 6 R; Possible answer: ... charge tuition, but some are ...

Exercise 2 page 54

- 1 run-on; Suggested answer: Not everybody needs to go to university; there are some rewarding careers that do not require university degrees.
- 2 comma splice; Suggested answer: The two oldest universities in the UK are Oxford and Cambridge. They were both founded in the Middle Ages.
- 3 run-on; Suggested answer: Students getting PhD degrees work as research assistants. It is part of their arrangement with the university.
- 4 comma splice; Suggested answers: The experience of going to university is not just an academic one. Students also make valuable lifelong friendships there. / The experience of going to university is not just an academic one; students also make valuable lifelong friendships there.

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Optional activity

Ask students to look back at Exercise 1 and correct the sentences in a different way. Suggest that they use adverbs as transitions to mark any contrasts. For example:

Some students prefer to study academic subjects, whereas other students prefer vocational courses. While all universities charge tuition fees, some are more expensive than others.

Exercise 3 page 55

1 differences 2 both (but differences are more significant) 3 Reading 2

WRITING TASK

Learning objectives

- Use a table to plan the content of an essay discussing similarities and differences between studying a language and studying Mathematics
- Write a thesis statement for your essay
- Draft an essay comparing studying a language and studying Mathematics
- Review and revise the content and structure of your essay
- Review and revise the use of language in your essay

Exercises 1-7 pages 55-56

Answers will vary.

RESEARCH PROJECT

Design a test to assess your knowledge of English from this unit.

Divide the class into groups. Explain that the students will need to identify the language and skills that they most need to test from the unit. Point out the different question types available to test vocabulary, such as the following: multiple choice, matching, ordering tasks, short-answer questions, gap-fill tasks, sentence writing and extended writing. Ask them to think of the number of questions and write the answer key, instructions and criteria by which the exam should be graded. Students can use paper, a word processor or an online quiz website. Each group produces a test.

When the tests are submitted, they should be copied and distributed to the groups. Each group then takes the test and the scores are analyzed. The class then rates which test was the most effective. If there is time, ask students to give reasons for their decision.

CLASSROOM APP

Exercises 1–2

Answers will vary.

Exercise 3

1 pursue 2 gender gap 3 Distance learning
4 discipline 5 underrepresented 6 Technological advances 7 significant difference 8 launch

Exercise 4

1 dissertation, assignments, plagiarism 2 semesters, terms 3 degree, journals 4 lecturer, seminars, tutor

Exercise 5

1 virtual 2 motivation 3 significant 4 alternative5 core 6 specific 7 principles 8 aspects

Exercise 6

- 1; they found ; , and they found
- 2 , so there will be; . There will be
- 3, whereas other people; , but other people
- 4 . You should ; , so you should
- 5, but in the winter, there are ; . In the winter, there are

UNIT 2 42

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MEDICINE

UNIT OBJECTIVES	
Watch and listen	Watch and understand a video about robots used in surgery.
Reading skill	Annotate a text.
Critical thinking	Evaluate ideas.
Grammar	Use articles; use transitions to show concession.
Academic writing skill	Use sentence variety.
Writing task	Write an opinion essay.
♂ Teacher development	Help your students become better at evaluating ideas .

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows employees inside a Traditional Chinese Medicine (TCM) pharmacy in Beijing, China. TCM refers to various treatments, such as herbal medicine, acupuncture, massage therapies (called *tui na*) and exercise and diet regimes. Outside of China, acupuncture and herbal medicine are often seen as alternative medicine. Other forms of alternative medicine include Ayurveda, homeopathy and naturopathy. These therapies have been practised in different parts of the world for centuries. Chiropractic massage, t'ai chi, yoga, reiki and meditation are also used as alternative or complementary treatments.

Lead-in

Mime an illness or symptom, such as a headache or backache, and ask students to say what it is. Students then work in small groups. One person in the group mimes a health problem and the others have to say what it is. The person who guesses the problem correctly mimes a different problem. Give them two minutes to do as many as possible. They should keep count and cannot repeat any that have already been mimed. The person with the most correct answers in the group is the winner. Monitor to help with language.

page 59

Answers will vary. Possible answers to Question 1:

a cold: take some cold medicine, have some hot tea with honey, eat raw garlic

a headache: take some painkillers, drink lots of water **a cut on your hand:** bandage it and raise it, go to a hospital if it is serious

toothache: go to the dentist, take painkillers

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obesity: eat less, exercise more

depression: talk to a therapist, take anti-depressants **stress:** work less, exercise more

WATCH AND LISTEN

Learning objectives

- Listen and understand the main ideas in a video about robotic surgery
- Listen and note supporting details
- Make inferences about the ideas in the video and their wider implications
- Practise talking about technology

Exercise 1 page 60

Answers will vary.

Exercise 2 page 60

Possible answers:

1 They involve robots. 2 They show medical procedures / surgery. 3 His arm is artificial/red. 4 It is printing the artificial arm.

Exercise 3 page 60

1T 2 DNS 3T 4 F; It is not possible yet. 5T 6T

Exercise 4 page 61

Possible answers:

 Robots can perform surgery in places that are too small or delicate for human surgeons.
 Some robots are the width of a human hair.
 Robots can create new body parts.
 D printers are much cheaper than earlier technology.

Exercise 5 page 61

Answers will vary. Possible answers:

1 Surgeries that take a very long time. 2 This would reduce the risk of infection. 3 People who can pay the

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high cost; in other words, rich people. **4** Once a program for the limb is developed, the process is automatic. The material is also inexpensive.

Exercise 6 page 61

Answers will vary.

READING 1

Learning objectives

- Understand key vocabulary for alternative
 medicines proponent, conventional, substance
- Skim the headings and introduction of an article about homeopathy and identify the topic
- Read an article and identify and annotate opinions
- Understand details in an article about a controversial form of health treatment
- Identify which perspectives on homeopathy match the author's in the article
- Make inferences to evaluate statements about homeopathy
- Explain and justify personal opinions on alternative treatments

Background information

The reading text in this section refers to the NHS, the British National Health Service. This provides free or very cheap healthcare for all UK citizens and is paid for by the government through taxation. The text features a general practitioner, or GP. This is a doctor who provides general medical treatment for people who live in a particular area. In the UK, if you are ill, you first visit the GP. You only go to hospital in an emergency or if your GP has made an appointment for you to see a specialist there.

Exercise 1 page 62

1b 2b 3a 4a 5b 6b 7a 8a

Exercise 2 page 63

3

Exercise 3 page 63

Answers will vary.

Exercise 4 page 63

1 F; Most health systems use conventional medicine.
2 T 3 T 4 DNS 5 F; Abigail Hayes thinks that homeopathic remedies have much more than just a placebo effect. 6 T 7 DNS 8 T

Optional activity

This activity is particularly applicable to L1 speakers of Arabic.

To help students remember which words are spelt with p and which ones with b, display the following words from the text:

belief	benefit	homeopathy	patient
placebo	popular	powerful	practitioner
proof therapy	proponent	spend	supporter

Alternatively, you could say the words and students find them in the text. Students look at the words and count how many examples of p (14) there are in the words and how many examples of b (3). Remove the displayed words and ask students to close their books. Show them the following gapped words and ask them to complete them adding p or b:

homeo_athy	thera_y	_lace_o
_atient	_ractitioner	_owerful
_ro_onent	_roof	_elief
_o_ular	_enefit	s_end
su orter		

Say the words or give clues to the meanings, if necessary.

Alternatively, you could ask students to learn the words and do this at the beginning of the next lesson. Students read the text to check their answers.

Exercise 5 page 65

1 Piers Wehner	2 Abigail Hayes	3 Piers Wehner
4 Abigail Hayes	5 Abigail Hayes	6 Abigail Hayes
7 Piers Wehner	8 Piers Wehner	5

Exercise 6 page 65

Possible answers:

- 1 Conventional medicine is very expensive because it needs a great deal of testing and the pharmaceutical companies want to make a large profit.
- 2 There is a great deal of evidence to show that if people believe they are being cured, they get better. This is called the 'placebo effect'. People are less stressed if they believe that they are well.
- **3** People may be less worried if they have shared their medical problems and know that somebody is looking after them. They may also be more motivated to look after themselves.
- **4** Most mainstream doctors will say this, and this opinion is widespread and can be found everywhere.
- **5** Conventional medicine is based on science. Doctors also have to prove that they are not wasting money when using homeopathy.

Exercise 7 page 65

Answers will vary.

UNIT 3 423

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READING 2

Learning objectives

- Understand key vocabulary for healthcare systems – burden, consultation, contribution
- Skim the headings and introduction of an article about healthcare funding and identify the topic
- Read and use your knowledge to analyze main ideas about healthcare systems
- Read and relate details of healthcare models to specific healthcare systems
- Scan the article for synonyms for *people*, *money* and *healthcare*
- Make inferences about the appeal of different healthcare models to different people
- Synthesize information from an article about homeopathy and an article about healthcare funding in a discussion

Lead-in

Ask students to describe the healthcare system in their country. What happens when they go to the doctor? The hospital? Do they have to pay for each visit? If not, who pays for the treatment? Do they know of other places around the world with different healthcare systems?

Exercise 1 page 66

1 burden 2 treatment 3 regardless 4 safety net 5 consultation 6 contribution 7 labour

Exercise 2 page 66

Answers will vary.

Exercise 3 page 67

1

Exercise 4 page 68

1 Answers will vary. 2 Possible answers: public; private

Exercise 5 page 68

1 public 2 private 3 public 4 mixed 5 private

Be flexible

Ask students to work in small groups to discuss (1) which system (of those described in Exercise 5) they think works best and why, and (2) to reconsider the same question for a country that has limited resources (in other words, in a country in which it would be difficult for the government to provide free healthcare to all citizens). If this exercise is too challenging for **lower-level students**, they can simply discuss their own healthcare system, specifying the system (from those in Exercise 5) it most closely resembles, and stating the aspects of the system they like (or consider successful) and those they don't like (or consider less successful).

Exercise 6 page 68

synonyms of *people*: residents, citizens, workers, patients, individuals

synonyms of money: taxes, income, contribution, costs, funding, salaries, profit

related to *healthcare:* healthcare, consultations, treatments, medicines, hospitals, medical services, health insurance, medical costs, preventative medicine, infectious diseases

Exercise 7 page 68

Answers will vary. Possible answers:

- 1 A person with a long-term illness might prefer free or public healthcare because of the continuing costs of treatment.
- **2** A person with a high income might prefer a private system because they could afford high-quality care.

Exercise 8 page 69

Answers will vary.

LANGUAGE DEVELOPMENT

Learning objectives

- Use medical vocabulary to complete sentences about healthcare – *sedentary lifestyle, patient, underfunding*
- Use academic adjectives and nouns to describe medical issues – Hospitals can suffer adverse conditions such as underfunding. Conventional medicine involves the use of drugs. Several surgeons may be needed in complex medical operations.

Exercise 1 page 69

1 epidemic 2 underfunding 3 Drug dependency4 sedentary lifestyle 5 preventable illness 6 patents

Exercise 2 page 70

1 adverse 2 professional 3 illegal 4 physical
5 complex 6 adequate 7 conventional 8 precise
9 medical

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Optional activity

Ask students what adjectives 2, 3, 4, 7 and 9 have in common. They all end in the sound /l/ and all end in the letters *-al*. Point out that academic adjectives that end with this sound usually end with the letters *-al*. Ask students to think of more or look through a text related to their field of study and find more *-al* words. Students record them.

Exercise 3 page 70

1 illegal 2 professional 3 adequate 4 Conventional 5 complex 6 physical 7 adverse 8 medical 9 precise

CRITICAL THINKING

Learning objectives

- Understand the variety of ways in which diseases can be prevented
- Use a Likert scale to evaluate your opinion on responsibility for disease prevention
- Analyze different ways to prevent diseases in relation to a set of questions
- Rank a list of preventative actions that people can take against disease and justify your ranking
- Describe ways that individuals and families or governments can encourage or take preventative actions
- Analyze statements which support different positions on responsibility for healthcare

UNLOCK TEACHER DEVELOPMENT

BE INFORMED

→ Evaluating ideas is an important skill for students because: (1) Not all ideas which students have are strong, and the weaker ones need to be identified; however, the brainstorming process is still very valuable for ensuring all ideas are collected as a starting point; (2) One way of doing this is to use a Likert scale, which can help you identify what you think about a particular issue; (3) By evaluating ideas, students can identify both the arguments which support and do not support their position.

BE CONFIDENT

→ Develop this skill for yourself by doing the following activity:

Circle the number on the Likert scale according to how you think critical thinking is best taught.

1	2	3	4	5	6	7
1			1		1	
Critical			Critical	1		Critical
thinking	king thinking think			thinking		
should		should be				should
be 100%		part-taught				be taught
integrated		within ELT				100% as a
and		and part-			S	tandalone
embedded		taught as a				subject
within ELT		standalone				
provision		subject				

After you have circled a number, reflect on the reasons why you think this. What evidence would you use to defend your position?

Lead-in

Give students a minute to read the writing task. Ask them to brainstorm what they do individually to prevent disease. Tell them to keep their brainstorming notes for later, when they begin to write their essay.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on pages 71–72.

→ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

→ Are your answers true for all students in your class?

→ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

Exercise 4 could be done as a whole-class activity. Write the numbers one to seven on separate pieces of paper and put them in a line on a wall. Students should stand next to the number which represents their view. You can then ask each group why they think that, and encourage discussion between the students. Students can then move to a new number if they change their opinion.

Exercises 1–7 pages 71–72

Answers will vary.

Exercise 8 page 72

1 in favour 2 in favour 3 in favour 4 against5 against 6 against 7 against 8 against 9 in favour

UNIT 3 425

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

Think about the following questions:

→ Did the Likert scale activity work well with your students? Did you feel comfortable using it? It is a very versatile tool – you could potentially use it more extensively in your teaching practice.

→ How well were your students able to cope with this critical thinking section? There were eight exercises, which is more than usual. Did you have to do anything differently within (or outside) the class for this section?

BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peercollaborate. Why not share the ideas you generated in the *Be confident* section, and their outcome?

GRAMMAR FOR WRITING

Learning objectives

- Understand rules relating to the use of articles in English and identify examples
- Complete sentences about healthcare with the correct article (*a*, *an*, *the* or zero article)
- Use simple and complex transition words and phrases to introduce opposing arguments – Homeopathy seems to be ineffective. However, people claim that it works. In spite of the fact that homeopathy seems to be ineffective, people still use it. Despite its ineffectiveness, people still use it.

Exercise 1 page 74

1f 2d 3h 4b 5g,g 6c 7e,e 8c 9i 10e,e 11j

Exercise 2 page 74

1 Ø; a 2 Ø; Ø 3 The 4 The; the 5 Ø 6 Ø; an 7 Ø; an 8 Ø; an; Ø 9 the 10 Ø; Ø

Optional activity

Ask students to return to the first paragraph of Reading 2, this time looking at examples of zero article. Ask them to explain why no article is needed for: *healthcare, residents, health insurance, citizens.*

Exercise 3 page 75

Answers will vary. Suggested answers:

1 in spite of 2 Even though 3 other people claim that4 However 5 Even though

ACADEMIC WRITING SKILLS

Learning objective

• Produce sentences of different lengths on the topic of healthcare

Exercise 1 page 77

- **2** Although my country's healthcare system is not perfect, it is better than many others.
- 3 This is the medication that I need to take for my illness.
- **4** All (of the) people in our society should have access to affordable healthcare. It is their right.
- 5 On this subject, doctors agree the most.
- **6** A good healthcare system can save money, and it can also save lives.

Be flexible

Challenge **more advanced students** to review a piece of writing they did in the past. Is there enough sentence variety? They should revise a paragraph to increase sentence variety, using at least three of the five techniques from the Skills box on page 76.

⁴²⁶ READING, WRITING & CRITICAL THINKING 4

WRITING TASK

Learning objectives

- Use a table to plan the content of an essay discussing responsibility for disease prevention.
- Draft an essay discussing responsibility for disease prevention.
- Review and revise the content and structure of your essay
- Review and revise the use of language in your essay

Exercises 1-7 pages 77-78

Answers will vary.

RESEARCH PROJECT

Create a website describing how medicine has changed over time.

Explain to the class that they are going to research how medicine has changed over time, which could include nutrition, surgery, the diagnosis and treatment of diseases, preventive medicine, or another field of the students' choice. They will use this information to create a website on the topic. Students should be encouraged to find out about traditional remedies as well as modern medicine.

They could find science journals and websites for information or interview elderly family members. Alternatively, they could make videos, pictures and recordings to populate their website.

CLASSROOM APP

Exercises 1–2

Answers will vary.

Exercise 3

1 surgery 2 safety net 3 consultation 4 funded 5 controversial 6 burden 7 contribution 8 chief

Exercise 4

epidemic 2 sedentary lifestyle 3 patent
 drug dependency 5 Preventable illnesses
 underfunding

Exercise 5

- 1 profession, profession2 complex, complexity3 adequacy, adequate4 medicine, medical
- 5 precise, precision 6 illegality, illegal

Exercise 6

- 1 In the past 2 If medicine causes sickness
- 3 which employs over 2,000 4 and
- 5 which has angered passengers

UNIT 3 427

THE ENVIRONMENT

UNIT OBJECTIVES				
Watch and listen	Watch and understand a video about population and water.			
Reading skill	Identify cohesive devices.			
Critical thinking	nalyze a case study; evaluate arguments.			
Grammar	Express solutions using it.			
Academic writing skills	Develop ideas; use parallel structure.			
Writing task	Write a problem-solution essay.			
∂ Teacher development	Help your students become better at analyzing a case study and evaluating arguments .			

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows floods in central Phetchaburi, Thailand. The floods were caused by a tropical storm, Kirogi, which caused the local river to overflow. As a result of the flood, people had to be evacuated from their homes, many roads and highways were cut off, and local businesses and schools had to close. Heavy rains are the usual causes of floods, especially when there is no appropriate water draining system. Droughts are periods of time when there is less rain than normal, which can cause water shortages. Apart from floods and droughts, other natural disasters include hurricanes, tornadoes, volcanic eruptions, earthquakes and tsunamis. Natural disasters can destroy and damage buildings and important infrastructure, like roads and power stations, force people to leave their homes and can cause disease and death.

Lead-in

Show the students the word *weather* written vertically top to bottom in capitals. They have to write words related to weather going across that include those letters. Show as an example that the letters *sno* could be written before *W* to make the word *snow* and that the capital letter can be anywhere in the word. Students work in pairs to try to complete the other six words.

Possible answers:

snoW	hurricanE	rAin	
droughT	Hail	tEmperature	thundeR

page 81

1 Floods can occur when a lot of rain falls in a short period of time, especially after a long period of dry weather; they can also occur when rivers get too full after prolonged rainfall.

Droughts can be the result of unusual weather patterns, e.g. changes in the prevailing wind direction or jet stream.

Both weather conditions can affect the economy because people cannot travel to work or damage is caused to roads, bridges and buildings. They can also severely affect agriculture, damaging crops and making it difficult to feed animals, causing food prices to increase.

2-3 Answers will vary.

WATCH AND LISTEN

Learning objectives

- Listen and understand facts and figures about water around the world
- Make inferences about implications for society from the information in a video about water use
- Practise describing issues related to water use

Exercises 1-2 page 82

Answers will vary.

Exercise 3 page 82

1 F; Only 1% of the fresh water is available for human use. 2 T 3 T 4 F; Water shortages are the result of increasing population, poor infrastructure, politics, poverty or living in a dry part of the world.
5 F; The Aral Sea once covered more than 25,000 square miles. It is now 10% of its original size.

Exercise 4 page 83

170% 2 distribution 3 population 4 infrastructure5 common 6 space 7 drought

Exercises 5–6 page 83

Answers will vary.

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READING 1

Learning objectives

- Understand key vocabulary for natural disasters identify, devastating, measures
- Skim an article to identify the topic
- Read and understand detailed information in an article about disaster mitigation
- Understand referencing with cohesive devices in an article about disaster mitigation
- Make inferences about the opinions of an interviewee in an article about disaster mitigation
- Explain the impacts of rainfall and flooding in a discussion

Lead-in

Ask students to name different kinds of extreme weather and describe where they typically occur. Let students know that similar weather phenomena may have different names in different parts of the world (e.g. *typhoon/cyclone/hurricane*). Write the words on the board.

Exercise 1 page 84

1 measures 2 identify 3 crucial 4 devastating 5 community 6 maintenance 7 reduction 8 criticize

Exercise 2 page 85

1 levee 2 tsunami 3 dam 4 hurricane 5 flood barrier 6 sandbagging

Exercise 3 page 86

1 'Controlling the flow' is the best title because the interview is about ways to control the flow of water in a flood.

2 'What to do about risk' is not as good because it is too general and does not mention water or flooding.

3 'A way to protect people from flooding' is not as good because the interviewer says there are several ways, and people also have to help themselves in a flood situation.

4 'Protect your house against flooding' is not as good because the text is not just about protecting houses.

Exercise 4 page 87

1 F; Dan Smith works for a government agency.
2 T 3 DNS 4 T 5 DNS 6 T

Exercise 5 page 87

1 attempting to minimize the impact of natural disasters both before and after they happen
2 earth-wall defences
3 because of their environmental impact
4 both the government and individuals

Exercise 6 page 87

- 1 risk reduction and risk analysis 2 risk reduction
- 3 the construction and maintenance of levees
- 4 a tsunami 5 new flood prevention solutions
- **6** construction of seas walls and bulkheads; the redesign of power stations and subway tunnels; the Thames Barrier
- 7 expensive early-warning systems

Be flexible

Students can do a similar activity with any text. Encourage them to take a text from their own field of study, highlight the pronouns and general nouns (such as *case, measures, areas*) and work out what they refer to.

It may be useful for **lower-level students** to work together on the same text (for example, Reading 2 in Unit 2 would work well). They can work in pairs or on their own. Be sure to point out examples when the pronoun *this* refers to an entire idea.

Exercise 7 page 88

Dan Smith would probably only agree with statement 5.

Exercise 8 page 88

1–2 Answers may vary. **3** Possible answers: Bangladesh, China, India, Pakistan. Heavy monsoon rains and global warming means snow and ice on the Himalayas is melting into rivers and increasing the risk of flooding in these countries.

READING 2

Learning objectives

- Understand key vocabulary for natural disasters casualty, disrupt, infrastructure
- Understand the function of each paragraph in an essay about disaster mitigation
- Read and understand detailed information in an essay about disaster mitigation
- Understand referencing with cohesive devices in an essay about disaster mitigation
- Make inferences about key considerations and background information in an essay about disaster mitigation
- Synthesize information from two texts about disaster mitigation in a discussion

UNIT 4 429

Lead-in

There are several country names in this unit, so it is worth spending some time on the spelling of these. Ask students to work in groups of three or four. In one minute, they should think of as many countries as they can ending in a letter or group of letters you give them. One person writes down the countries that the others suggest. They should not look up the answers at this stage. Ask questions such as the following (possible answers are given, although there are many more):

- 1 Which countries end with *-land*? (England, Ireland, Thailand, Poland, Switzerland, Finland, Iceland, New Zealand)
- 2 Which countries end with the letter a? (China, Kenya, Saudi Arabia, Algeria, Argentina, Canada, Botswana, Indonesia, India, Romania)
- 3 Which countries end with the letter *n*? (Jordan, Afghanistan, Oman, Sudan, Japan, Spain, Pakistan, Kazakhstan)

Exercise 1 pages 88-89

1 disrupted	2 casualti	es	3 strategies	4 issue	
5 monitor	6 rely on	7	infrastructure	8 policy	

Exercise 2 page 89

Droughts are most common in countries that have little rain. These are predominantly found in sub-Saharan Africa. Australia also suffers badly, but as a richer country, it is better able to mitigate the problems arising from little or no rain. On the map, the areas with the highest temperatures (in red) and little rainfall are the ones most likely to suffer from drought: Africa and Australia.

Exercise 3 page 89

Possible answers:

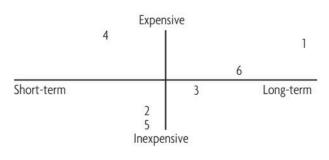
Drought kills animals and crops and causes starvation.
 Bottles of drinking water can be brought into the drought area.
 Drought monitoring, rainwater harvesting and water recycling.
 Many long-term drought solutions are expensive and need technical knowledge that may not be available.

Exercise 4 page 91

a6 b5 c1 d4 e3 f2

Exercise 5 page 91

```
Possible answers:
```



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Exercise 6 page 91 **1**b **2**b **3** a

Exercise 7 page 92

Answers will vary.

LANGUAGE DEVELOPMENT

Learning objectives

- Form and use academic noun phrases in sentences about natural disasters *risk analysis, disaster mitigation, flood protection*
- Use adjective-noun collocations to describe natural disasters – minor problem, major disaster, seasonal drought

Exercise 1 pages 92–93

- 2 Risk reduction 3 water-management system
- 4 government report 5 flood protection
- 6 Community-based projects

Exercise 2 page 93

2 natural 3 controlled 4 long-term 5 seasonal

Exercise 3 page 93

2 natural disasters
3 Controlled floods
4 Large-scale/
Wide-reaching disaster mitigation projects
5 devastating/
5 devastating/
7 seasonal
drought
8 terrible/major disaster

Optional activity

Ask students to find collocations for the following nouns, related to solutions to water-related disasters in Reading 2. Ask them to identify the N+N noun phrase in the list.

- ____ strategies (long-term)
- _____ solutions (long-term)
- ____ measures (preventative)

CRITICAL THINKING

Learning objectives

- Identify the strategies used in two case studies of environmental disaster prevention
- Evaluate the cost and timeframe of disaster prevention strategies simultaneously
- Evaluate how easy different disaster prevention strategies are to implement for a developing country which experiences wildfires or dust storms and choose the three best strategies
- Suggest new disaster prevention strategies for a developing country which experiences wildfires or dust storms

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UNLOCK TEACHER DEVELOPMENT

BE INFORMED

→ Analyzing a case study and evaluating arguments

are important skills for students because: (1) Case studies are often a rich, interesting and empirical source of information, and therefore extremely useful for students; (2) Evaluating arguments using different criteria is sometimes challenging for students, so they need both more practice and specific techniques; (3) The diagram presented in this unit is a useful graphic way of analyzing and evaluating arguments.

BE CONFIDENT

→ Develop these skills for yourself by doing the following activity:

Write the following verbs in the correct place on the diagram below. As you do this, think about what the verb means, and why you are putting it at that particular point.

calculate demonstrate design evaluate	list listen measure modify	paraphrase recognize role play translate
-	rder critical hinking skill	
common in daily li	ife	not common in daily life lower-order critical thinking skill

Lead-in

Give students a minute to read the writing task. Ask students to brainstorm environmental problems that interest them. They should keep any notes they make for later, when they begin to write their essay.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on pages 94–96.

→ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

→ Are your answers true for all students in your class?

→ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

Some classes may find Exercise 2 challenging. If they are unable to do it by themselves, or you think they will struggle, you could do it either as a whole-class activity or in pairs. Alternatively, whilst some students may not find the content difficult, they may not understand some of the terminology (e.g. x/y axis), and so you may need to explain this.

Exercise 1 pages 94–95

1B 2A, B 3B 4A 5A 6B 7A 8B 9A

Exercise 2 page 95

Answers will vary. Suggested answers: expensive, short-term: 1, 9 inexpensive, short-term: 2, 4, 5, 8 expensive, long-term: 3, 6 inexpensive, long-term: 7

Exercises 3-4 page 96

Answers will vary.

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

Think about the following questions:

 \rightarrow Have you considered talking to teachers of other subjects in your educational institutions about case studies? It may be useful to talk to business studies teachers, since case studies are commonly used in this subject.

→ How well did students understand how to use the diagram? As it is a very useful academic tool, it may be beneficial to ask students over the next few weeks whether they are using it for their studies. If they are not, encourage them to do so.

UNIT 4 431

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BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peercollaborate. Why not share the ideas you generated in the *Be ready* section, and their outcome?

GRAMMAR FOR WRITING

Learning objective

• Use *it* as an empty subject in sentences with particular structures – *It is important to prepare for natural disasters. It is worth preparing for natural disasters. It is a sad fact that many lives were lost.*

Exercise 1 page 97

Answers will vary. Possible answers: 1b 2f 3c 4a 5h 6e 7d 8g

Exercise 2 page 97

Answers will vary. Possible answers:

1 using sandbags to stop water
2 in a flood zone
3 harvesting and storing rainwater
4 to get people to agree on a strategy
5 that they are expensive
6 rebuild communities

Exercises 3–4 page 97

Answers will vary.

Be flexible

Students look at a report from their own field of study and find examples of these types of *it* phrases. They share examples with a partner.

Challenge **stronger students** to write some of their own *it* phrases, based on information in a report they have chosen from their own field. They should write one of each type of *it* clause (infinitive, gerund, *that* + clause).

ACADEMIC WRITING SKILLS

Learning objectives

- Organize ideas in a logical sequence in a body paragraph of an essay
- Correct non-parallel structures in sentences with ideas linked with conjunctions
- Use parallel structure for ideas linked with conjunctions in sentences about natural disasters

Exercise 1 page 98

1b 2c 3a 4e 5d 6f

Exercise 2 page 99

1 'talk to their friends and neighbours' needs to be a noun phrase: 'their friends and neighbours'

2 'they should establish desalination plants' needs to be a gerund phrase: 'establishing desalination plants'

3 'he analyzes risk' should be a noun phrase: 'risk analysis'

4 'the expense is surprising' should be an adjective phrase: 'surprisingly expensive'

5 'typhoons can also occur' needs to be a noun with no verb: 'typhoons'

Exercise 3 page 99

Answers will vary. Possible answers:

1 an emergency kit and a torch (answer should be a noun or a noun phrase)
2 roads (answer should be a noun or noun phrase)
3 using satellite images and following fires (answer should be a gerund phrase)

Be flexible

Have students compare their answers. Ask them what part of speech each example requires (1 noun phrase, 2 verb phrase [a noun phrase is also possible], 3 gerund). Challenge **stronger students** to expand the first sentence of Exercise 3 into a paragraph. They should write three additional sentences with parallel structure.

WRITING TASK

Learning objectives

- Prepare an outline of an essay suggesting solutions to an environmental problem in a developing country
- Draft an essay suggesting solutions to an environmental problem in a developing country
- Review and revise the content and structure of your essay
- Review and revise the use of language in your essay

Exercises 1-7 pages 99-100

Answers will vary.

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RESEARCH PROJECT

Calculate your environmental impact and take measures to reduce it.

This is initially an individual project. Tell the class that they will calculate their environmental impact. Students should think about how much and how they travel, flights they have taken, the size of their home and how much energy it uses, whether they recycle or not and their diet. They could use an online calculator to help them.

They can then compare their impact, in groups, and make a graphical representation of this compared to the country as a whole, and other countries. They can then formulate their own class pledge to reduce their impact, sign this and then try and promote this idea to others.

CLASSROOM APP

Exercise 1

Answers will vary.

Exercise 2

1 community 2 crucial 3 casualties 4 issue 5 criticized 6 rely on 7 maintenance 8 policy

Exercise 3

Answers will vary.

Exercise 4

- 1 train's late arrival / late arrival of the train
- 2 difficulty of the exercise / difficult exercise
- 3 Climate change 4 dangerous driving
- 5 job losses 6 the safety 7 waste management plan

Exercise 5

1 seasonal drought2 natural disasters3 severe floods4 minor problem5 long-term disaster

Exercise 6

- 1 more environmentally friendly
- 2 thoroughly
- 3 go out in the evenings
- 4 that they would deliver them on time
- **5** to improve air quality
- 6 a large amount of cash

UNIT 4 433

ARCHITECTURE

UNIT OBJECTIVES	
Watch and listen	Watch and understand a video about government grants for energy-efficient homes.
Reading skill	Skim a text.
Critical thinking	Create a persuasive argument.
Grammar	Use correct register in academic writing.
Academic writing skills	Order information; prioritize arguments.
Writing task	Write a persuasive essay.
♂ Teacher development	Help your students become better at creating a persuasive argument.

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows the Tokyo Tower in Tokyo, Japan. The design resembles the Eiffel Tower in Paris, but the Tokyo Tower is painted white and orange to meet air safety regulations. The tower was built in 1958 and it is 333 metres high. In the background, we can see the modern skyscrapers and apartment blocks of the Tokyo skyline. In Tokyo, around 62% of people live in apartments. To the right of the Tokyo tower, we can see low, traditional Japanese buildings. This is the Zojoji temple, built in 1393.

Lead-in

Students look the photo of the Tokyo skyline and in pairs say in what ways it is similar to and different from the skyline of their own town or city. If your class is in Tokyo, ask students to look at a photo from another city, like London or Dubai. Monitor to help with language and guide students to talk about any architectural features. Check answers with the class.

page 103 Answers will vary.

WATCH AND LISTEN

Learning objectives

- Listen and understand the main ideas in a video about housing
- Listen and complete a detailed summary of the ideas in the video
- Make inferences about the ideas in the video and their wider implications
- Practise talking about energy-efficient housing

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Exercises 1–2 page 104

Answers will vary.

Exercise 3 pages 104–105

1 T 2 T 3 F; It will take much longer – 100 years 4 F; Builders already know how to construct energyefficient homes. 5 T 6 T

Exercise 4 page 105

1 Twenty-five percent / A quarter 2 insulation
3 reduction/decrease 4 energy-efficient / zero carbon
5 temperature 6 rising/increasing 7 'zero-carbon home standard' 8 scrapped/dropped 9 confused/uncertain

Exercises 5-6 page 105

Answers will vary.

READING 1

Learning objectives

- Understand key vocabulary for architecture conservation, durable, efficiency
- Skim the images, title, introduction and conclusion of an article to identify the topic
- Evaluate what was the most useful indicator of topic when skimming
- Skim the text of an article about green buildings to identify the topic of paragraphs
- Read and identify detailed information about different types of green building
- Read and understand detailed information
- Make inferences about the ideas and implications of the article
- Give opinions on issues relating to green buildings

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Lead-in

Ask students what the word green has come to mean. Then ask them how the word applies to buildings: in other words, what is a 'green' building? Expect answers about conservation of resources such as water and energy and the use of recycled or lowimpact materials. Introduce the term sustainability if it is not already familiar to students.

Exercise 1 page 106

Answers will vary.

Exercise 2 page 106

1 durable 2 compromise 3 efficiency 4 conservation 5 second-hand 6 sector 7 relevant

Exercise 3 page 107

d

Exercise 4 page 107 Answers will vary.

Exercise 5 page 107 a2 b4 c1 d6 e5 f3

Be flexible

Ask students to locate the thesis statement in Reading 1 (the last sentence of the first paragraph). Then ask them to look for both the examples of sustainable practices and some of the barriers to green building.

Challenge **more advanced students** to create an outline of Reading 1. This will encourage them to find the main idea and supporting details in each paragraph.

Exercise 6 page 109

1HH 2HH 3RC 4N 5HH 6HH 7RC 8HH

Exercise 7 page 109

1 T 2 DNS 3 F; Environmentally friendly practices become less practical / too costly for large-volume construction. 4 DNS 5 F; Fossil fuels are nonrenewable. 6 T 7 T

Exercise 8 page 109

Answers will vary. Suggested answers:

1 the benefits will be for the environment 2 because they needed to know about and plan for them before construction began, to make sure they could be most easily and efficiently implemented 3 to teach students about the importance of recycling

Exercise 9 page 109

Answers will vary.

READING 2

Learning objectives

- Understand key vocabulary function, civilized, reputation
- Skim an essav about form v function in building design for the writer's opinion
- Read and complete a summary of the essay
- Identify paraphrases of ideas and opinions from the essay
- Apply real-world knowledge to make inferences about the design ideas in the essay
- Synthesize information from an article about green buildings and an essay about form v function in building design in a discussion

Lead-in

Ask students to consider a building they know well that they consider beautiful. What makes it beautiful? Then get them to think of a building that they use that does not work very well for them (e.g. the bathrooms are too far away, there is not enough light, the rooms get wet during rainstorms, etc). Introduce the terms form and function.

Exercise 1 page 110

1b 2a 3a 4a 5b 6a 7b

Exercise 2 page 110 Answers will vary.

Exercise 3 page 110

The writer thinks that both are equally important.

Exercise 4 page 112

Possible answers: 1 function 2 beauty 3 architects 4 reflect 5 mood/

happiness 6 building 7 users 8 celebrated

Exercise 5 page 112

1b 2a 3f 4c 5e 6d

Optional activity

Ask students to paraphrase (1) the definition of functionality in the first paragraph of the reading and (2) the first sentence of the second paragraph.

Possible answers:

(1) an approach to architecture in which the design of the building is shaped by its purpose.

(2) Addressing a building's purpose is a basic first step in its design.

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Exercise 6 page 113

Possible answers:

1 They can create a more positive and inspired workforce. They allow the users of the building to function well. They can give a positive impression of the owner to other people.

2 It maximizes the number of planes that can fit in the airport terminal and makes it easier and quicker for passengers to access the planes.

3 The buildings might reflect badly on them.

4 Poor lighting, lack of or poor view from windows, the temperature inside the building (either too cold or too hot), decoration

5 If workers have been provided with a comfortable and pleasant working environment, they may feel more appreciated and want to work harder for the employer.

Exercise 7 page 113

Answers will vary.

LANGUAGE DEVELOPMENT

Learning objectives

- Record word families by part of speech in a table – function, functionalism, functional, functionally
- Use the correct word form to complete sentences about buildings
- Use architecture and planning vocabulary to describe opinions about buildings Green belt land is important because it is the lungs of a city. When building skyscrapers, it is important to consider wind factors. Urban sprawl has a negative effect on the environment because it impacts on animals' habitats.

Exercise 1 page 114

environmental 2 environmentally 3 depression
 depress 5 depressingly 6 responsible 7 responsibly
 architecture 9 architectural 10 architecturally
 efficiency 12 efficient

Exercise 2 page 114

environmental 2 Functionalism 3 efficiently
 responsibly 5 depress 6 architecture 7 environment
 8 responsible 9 depression 10 architectural

Exercise 3 page 115

1 structural engineer2 Skyscrapers3 urban sprawl4 green belt5 Suburban, outskirts6 amenities

Exercise 4 page 115

Possible answers:

 to design environmentally friendly, cost-effective buildings.
 consider their environmental impact.
 it is important to protect the Earth.

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4 ... it protects the countryside from urban sprawl. **5** ... municipal buildings and sport facilities. **6** ... it increases people's dependence on cars.

CRITICAL THINKING

Learning objectives

- Analyze the advantages of different focuses in architecture
- Evaluate your arguments
- Support arguments with evidence and reasons

UNLOCK TEACHER DEVELOPMENT

BE INFORMED

→ Creating a persuasive argument is an important skill for students because: (1) One of the key underlying factors of all academic writing is that you are trying to persuade the reader; (2) Students sometimes think that all evidence / supporting information is the same; that what is important is just to add evidence, regardless of how relevant it actually is; (3) Students must focus on information and evidence which is relevant, looking at quality, not just quantity. They need to understand why and how they can do this.

BE CONFIDENT

→ Develop this skill for yourself by doing the following activity:

Prescriptive grammar is a set of rules about language based on how people think language should be used – there is correct and incorrect language. Descriptive grammar is a set of rules based on how people actually use language.

Complete the T-chart below.

advantages of teaching prescriptive grammar	advantages of teaching descriptive grammar

Look at your chart. Highlight the points which you think are the most persuasive in each column. Put an X next to the ideas which you think are the least persuasive.

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Lead-in

Give students a minute to read the writing task. Ask students to brainstorm to what they think is the most positive quality of the building they live in now. Tell them to keep their brainstorming notes for later, when they begin to write their essay.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on pages 116–117.

→ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

→ Are your answers true for all students in your class?

→ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

After doing Exercise 4, you could ask students to look at the arguments which they wrote an X next to, and think of whether there is any way they could make them more persuasive; for example, by changing the emphasis or adding new evidence.

Exercise 1 page 116

Answers will vary. Possible answers:

Advantages of focusing on beauty (in addition to students' own ideas):

beautiful buildings are a symbol of a civilized society; they can create a more positive and motivated workforce; they give a good impression; they are 'warmer' than strictly functional buildings; they can be more interesting

Advantages of focusing on function (in addition to students' own ideas):

ease of use; possible greater ease of movement within the building, more practical

Exercises 2-4 pages 116-117

Answers will vary.

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

Think about the following questions:

→ Do your English teaching colleagues share the same view as you about prescriptive and descriptive grammar? Discuss your views with them. If you are teaching the same students, this may be confusing for them if the way you and your colleagues approach the subject is very different.

→ When you assess your students' work, do you give specific feedback about how persuasive their argument is? Doing so could help them develop this ability.

BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peer-collaborate. If you followed the suggestion in the *Be flexible* section, tell a colleague whether or not it was successful.

GRAMMAR FOR WRITING

Learning objectives

- Identify informal language in a text
- Rewrite a text using equivalents with a more formal register
- Complete sentences using a consistent register

Exercise 1 page 117

1 fundamentally
2 Undoubtedly
3 critical
4 considerable investment
5 calculate
6 can be justified
7 there is no real benefit
8 has a positive impact on
9 and desire to work effectively
10 approximately
11 This supports the accuracy of this notion.

Exercise 2 page 118

Possible answers:

1 provide the space and facilities that are needed 2 how much money an eco-friendly building will save in the long term 3 the well-being of the local community 4 there is plenty of sunlight 5 the people who use the buildings 6 constructing ugly buildings

Optional activity

Ask students to review Reading 2 and to find formal equivalents of the following:

mostly (primarily); mix x2 (combine, blend); make x2 (create, produce); build (construct); often (repeatedly)

UNIT 5 437

ACADEMIC WRITING SKILLS

Learning objectives

- Use paraphrases to reference previous ideas in academic writing – When choosing a new house, the most important consideration may be location. Areas near good schools are often popular.
- Use pronouns and other phrases to reference previous ideas – Some families prefer to expand their existing houses. This allows all family members to live together.
- Complete texts with appropriate words, phrases
 and paraphrases to refer to previous ideas
- Evaluate and prioritize supporting arguments

Exercise 1 page 118

1 In spite of this 2 this profession / it 3 This combination 4 it / this profession 5 For this reason

Exercise 2 page 119

1 This style 2 the columns 3 They 4 these Greek architects 5 These structures

Exercise 3 page 120

1a 2a 3a 4b 5a

Optional activity

Ask students to write persuasive examples to support the following statements:

- 1 The most important thing to do after a natural disaster is to build shelters quickly. Their quality is less important.
- 2 Most people don't really notice the buildings that they work in.
- 3 Great buildings endure long after their style has gone out of fashion.
- 4 A building's design affects the interaction of the people who work or live in it.

Exercise 4 page 120

1b 2a 3c 4b 5a 6c

WRITING TASK

Learning objectives

- Prioritize your arguments for an essay evaluating the importance of size against location when building or buying a home
- Draft your essay
- Review and revise the content and structure of your essay

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Exercises 1–7 pages 121–122 Answers will vary.

RESEARCH PROJECT

Create an online architectural tour of a famous building in your country.

Divide the class into groups and ask them to think about an online guide or documentary for tourists to their country, or the country they are in. Ask them to take pictures or make videos of an interesting architectural building. If it isn't possible for students to take pictures or make videos, they can use pictures they have researched online.

Using presentation software or an online tool, they can create an interactive tour of the building with descriptions and photos of architectural features and historical facts. Alternatively, they can use a movie app to make their own documentary.

CLASSROOM APP

Exercises 1–2

Answers will vary.

Exercise 3

1 depressing 2 demonstrated 3 durable 4 reflect 5 Second-hand 6 civilized 7 compromise 8 relevant

Exercise 4

1 environmental 2 responsibility 3 efficient 4 architect 5 depressingly 6 functional

Exercise 5

1 Suburban2 skyscrapers3 Urban sprawl4 amenities5 outskirts6 green belts

Exercise 6

1 Despite this, hunting them is permitted in certain countries.

- **2** This demonstrates the importance of not using your phone before sleeping.
- **3** A higher salary would allow her to buy a house.
- **4** These items can be seen at the national museum.
- **5** For this reason, passengers are advised to book early.

ENERGY

UNIT OBJECTIVES		
Watch and listen	Watch and understand a video about wind power.	
Reading skill	Work out meaning from context.	
Critical thinking	Evaluate benefits and drawbacks; organize ideas for an essay.	
Grammar	Use defining and non-defining relative clauses.	
Academic writing skills	Introduce advantages and disadvantages; make academic writing coherent.	
Writing task	Write an advantages and disadvantages essay.	
C Teacher development	Help your students become better at evaluating benefits and drawbacks .	

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows an engineer cycling next to solar panels, in a solar power station in Ain Beni Mathar, Morocco. The purpose of this power station is to increase people's access to renewable energy and to reduce the country's dependency on oil. Using renewable sources of energy, like solar, wind and hydro energy, can reduce the use of fossil fuels. Fossil fuels such as coal, oil and natural gas are formed from plants and animals that lived millions of years ago. The main disadvantages of using fossil fuels are that they are non-renewable, and they release carbon dioxide when they burn, which, in turn, pollutes the Earth's atmosphere and contributes to climate change.

Lead-in

Students work in groups. They imagine that they have got lost in the desert. It is mid-afternoon and very hot and sunny, but it will be very cold when the sun goes down so they need to make a fire. They have no matches, lighter or glass with them. However, they do have a can of cola and a bar of chocolate. Around them there are some small pieces of wood. Students discuss how they can light a fire with only these objects. Allow five minutes for discussion. Students share their ideas with the rest of the class. If nobody gives the correct answer, explain it using the answer below.

Suggested answer:

It is claimed that you can start a fire by rubbing the bottom of a drinks can with chocolate to make it smooth and shiny. You alternate rubbing with chocolate and rubbing with the chocolate wrapper (it does not matter what this is made of). You may have to do this for up to an hour! Once the bottom of the can is very shiny, you point it at the sun with a piece of the chocolate wrapper held to it. The sun will soon reflect strongly enough to set the paper on fire. You use that to light a small piece of wood and then bigger ones. **Warning:** should your students ever try to do this, they should not eat the chocolate as it will be full of aluminium!

page 125

1 solar power **2** Fossil fuels like coal and oil are formed underground from plant and animal remains millions of years ago. Renewable energy like solar and hydropower is produced using the sun, water, etc. **3–4** *Answers will vary.*

WATCH AND LISTEN

Learning objectives

- Listen and understand the main ideas in a video about wind power
- Listen and note supporting details
- Make inferences about the ideas in the video and their wider implications
- Practise talking about wind power

Exercise 1 page 126

Answers will vary.

Exercise 2 page 126

Possible answers:

1 onshore versus offshore wind farms2 how a wind turbine works3 the advantages of wind power

Exercise 3 page 127

1 F; five percent 2 T 3 T 4 F; more expensive 5 DNS 6 T

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Exercise 4 page 127

Possible answers:

 The energy is renewable and the wind itself is free.
 It is very windy. 3 People are less likely to object to the appearance and noise of turbines that are offshore or far from their homes. 4 The turbines are noisy and unattractive.

Exercise 5 page 127

Possible answers:

There is widespread support because: the UK is windy, people want to reduce CO₂ emissions. There is also opposition because: people think the turbines spoil the landscape, they are noisy.
 Experts know that fossil fuels will run out and we will need to switch to renewable sources of energy.

Exercise 6 page 127

Answers will vary.

READING 1

Learning objectives

- Understand key vocabulary for energy offshore, inexhaustible, generate
- Read an article about energy and select the best title
- Read and identify detailed information about different sources of energy
- Read and understand the meaning of unfamiliar words and phrases from their context in the article
- Give opinions and make predictions on energy sources

Lead-in

Ask students the difference between renewable and non-renewable energy. Ask them for examples of each. You may need to provide translations or explanations of terms such as *coal* and *hydropower*.

Exercise 1 page 128

1 wind power2 geothermal energy3 solar power4 hydropower

Exercise 2 page 128

a initial **b** generate **c** aquatic **d** offshore **e** universal **f** utilize **g** inexhaustible

Exercise 3 page 130

C

Be flexible

In pairs, ask students to explain their choice of answers to Exercise 3, including why they rejected the alternatives (e.g. It can't be (e) because the discussion is limited to energy consumption/ conservation, not <u>all</u> types of conservation). Then ask them to point to passages in the text that support their choice (i.e. subheads and paragraphs that provide both pros and cons).

If **lower-level students** have difficulty with this activity, help them break down each choice. For example, (a) is about fossil fuels. Skim the subheads. Are all of them about fossil fuels? No? Then this is not a good choice. Continue with the other choices.

Exercise 4 page 130

1 solar 2 biomass 3 geothermal 4 hydropower 5 solar 6 geothermal

Exercise 5 page 130

1 hydropower2 wind3 biomass4 solar5 geothermal6 hydropower7 biomass

Exercise 6 page 131

1 of or from the sun 2 easily damaged, broken or harmed 3 when something is put or kept somewhere for use in the future 4 involving or produced by the heat that is inside the Earth 5 animals that live independently of people in natural conditions 6 to put into the ground 7 to have a border with

Exercise 7 page 131

Answers will vary.

READING 2

Learning objectives

- Understand key vocabulary for natural resources *alarming, diminish, vital*
- Use your knowledge to make predictions about the future of natural resources and their conservation in an article about maintaining natural resources
- Read and understand the writer's opinions on strategies for maintaining natural resources
- Complete a set of detailed notes about the article
- Make inferences about the implications of the ideas in the article
- Synthesize information from an article about renewable energy and an article about maintaining natural resources in a discussion

Lead-in

Introduce the topic by reminding students that they have read about *energy* conservation and renewable *energy* sources. Ask them what other natural resources they use on a daily basis (e.g. water) and if they are renewable. Ask them what happens when these resources become scarce. What can be done to make sure they don't run out?

Exercise 1 page 132

1 urgent 2 alarming 3 adopt 4 address 5 diminish 6 vital 7 resistant 8 instigated

Exercise 2 page 132

Possible answers:

2 droughts, problems with growing crops, the death of livestock and other animals **3** less food and fewer habitats for animals; flooding due to excess water runoff **4** food prices would rise and there could be riots, starvation and death **5** prices of metals would rise sharply; consumer goods would be more expensive

Exercise 3 page 133

Possible answers:

2 build water storage facilities (dams, irrigation channels, etc.)
3 protect forests; create national parks; plant new trees; build dams to stop serious flooding
4 reduce food waste through education; encourage people to eat produce that needs less land, enforce fishing quotas
5 find new sources of metal; ensure that metal is recycled from old items

Exercises 4-5 page 133

Possible answers:

Reduce means to consume and use less. We can reduce our use of electricity, gas, oil and chemicals for example.

Re-use means to use things again, for example plastic bags from the supermarket or plastic containers.

Recycle means to collect and treat rubbish in order to produce useful materials. Paper, glass and some metals and plastics can be recycled.

Optional activity

Point out that all three verbs start with the prefix *re-*. Ask students what this often means (*again*). Ask students for some more words that begin with the prefix *re-*: *rewrite*, *repaint*, *reconsider*, *redevelop*, *refill*, *refresh*, etc. Students record any useful words.

Exercise 6 page 133

1 He implies that reducing is the easiest to do, but does not say that one is better than the other.

2 They may not be available to people in certain places because of environmental limitations; they can be expensive; they can be time-consuming to install the required elements.

3 It is crucial for the future of the planet to follow the 'reduce, re-use, recycle strategy'.

Exercise 7 page 133

2 motorized 3 medical; food storage 4 metals 5 fossil fuels 6 solar; geothermal 7 the planet

Exercise 8 page 135

 because people will be more careful about how they use or waste energy if it gets more expensive 2 because it uses so much energy 3 because it may not be safe or clean, and handling it could cause illness 4 because following these laws could force them to raise their costs or reduce their profits

Exercise 9 page 135

Answers will vary.

LANGUAGE DEVELOPMENT

Learning objectives

- Recognize common compound nouns and adjective-noun collocations related to the topic of energy *fossil fuel, power source, environmental problem*
- Complete sentences with the correct collocations of nouns or adjectives
- Use formal academic verbs in sentences Resources are beginning to diminish; soon they will run out. If people consult the documents on our website, they can see how biofuel is made. Advocates of biofuels sometimes omit key details.

Exercise 1 page 135

1 fuel 2 energy 3 pollution 4 source 5 production 6 problem

Exercise 2 page 136

1 nuclear 2 health/medical 3 source 4 Fossil 5 Alternative/Renewable 6 water

Exercise 3 page 136 1d 2h 3g 4f 5c 6b 7a 8e

Exercise 4 page 136

1 diminish2 deliver3 contested4 consult5 instigate6 utilizes7 omit8 secure

UNIT 6 441

CRITICAL THINKING

Learning objectives

- List the benefits and drawbacks of renewable energy sources and evaluate them
- Choose the three best renewable power sources for your country
- Provide support for your choices of renewable power sources

UNLOCK TEACHER DEVELOPMENT

BE INFORMED

→ Evaluating benefits and drawbacks is an

important skill for students because: (1) Going through the process of evaluating benefits and drawbacks is a useful strategy for students to work out what their specific opinion on a topic is; (2) Evaluating benefits and drawbacks is a common type of essay question, so they will need a good understanding of this skill to answer these questions successfully; (3) Students many not have mechanisms and techniques for doing this effectively, so developing these skills – through a table, for example – is very helpful for them.

BE CONFIDENT

→ Develop this skill for yourself by doing the following activity:

Choose one of the topics below. Then, complete the table accordingly.

- All classes should be mixed ability
- All classes should be optional for students
- Smartphone use should be encouraged in class

What are the drawbacks?	Is it effective for your educational institution? What would be the impact?
	are the

What did you learn by doing this activity? Are there any practical implications for you or your educational institution?

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Lead-in

Give students a minute to read the writing task. Ask student to brainstorm what types of energy sources (renewable and non-renewable) are already used in their country. Tell them to keep their brainstorming notes for later, when they begin to write their essay.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on pages 137–138.

➔ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

→ Are your answers true for all students in your class?

→ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

An interesting extension to Exercise 4, probably for more advanced groups, would be to compare what they have written with the actual government energy policy in their country. This would obviously require some research. If the class were collectively able to research this information, it would be interesting to note the similarities and differences.

Exercise 1 page 137

In the last column, 'Is it effective for your country? What is the impact of producing it?', answers will vary.

	What are the benefits?	What are the drawbacks?
hydropower	inexhaustible amount of energy	negative impact on aquatic wildlife; endangers boats; dams can flood land; expensive
wind power	Can be large- or small-scale; relatively cheap; no pollution	ugly; noisy; rely on wind; threat to wildlife
solar energy	inexhaustible resource; no pollution; adaptable	large area of land needed to produce a large amount; requires sunlight; photovoltaic cells are fragile

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	What are the benefits?	What are the drawbacks?
biomass energy	can re-grow; universal; reduces the need for burying rubbish	produces greenhouse gases; can be expensive
geothermal energy	simple technology; no pollution; inexhaustible	regionally limited; high initial costs

Exercises 2-4 pages 137-138

Answers will vary.

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

→ Think about what you did in the *Be confident* section. Is there another question more relevant to your educational institution which would have been more interesting to ask?

→ How successful were your students in integrating information from the two readings into the table in Exercise 1? Synthesizing data from more than one text is often a challenge for students. If so, it may mean that they require more practice in doing this.

BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peercollaborate. Why not share the ideas you generated in the *Be ready* section, and their outcome?

GRAMMAR FOR WRITING

Learning objectives

- Use the correct relative pronoun or adverb in defining relative clauses *Rachel Carson was the environmentalist who wrote the book Silent Spring. This was the book which instigated the modern environmental movement. The UK is the country where the first clean air law was passed.*
- Use commas around non-defining relative clauses – Wind turbines, which may be offshore, provide clean, renewable energy. Rachel Carson, who wrote Silent Spring, began her career as a biologist. Nuclear energy, which is primarily generated by splitting atoms, provides 11% of the world's energy supplies.

Exercise 1 page 139

1 who first split the atom (Enrico Fermi) 2 whose houses are near nuclear power stations (people) 3 where the electricity is located (cupboard) 4 when fewer people are using it (at night) 5 which is made from sugar found in certain crops (ethanol)

Optional activity

Tell students they are going to play a game. Divide the class into two teams. Give each team slips of paper with different words that are related to energy and energy production/innovation (e.g. *coal, Saudi Arabia, Thomas Edison,* etc.). Each team must make up a sentence with a relative clause to define or describe it by saying the word followed by a relative clause (e.g. *This is a kind of fuel that is renewable but results in carbon emissions. This is the country that produces the second largest amount of oil per year.*). The other team has to guess what it is within a specific amount of time (e.g. 30 seconds). If they guess correctly in time, the asking team gets a point – in other words, it is in the team's interest to make their definitions clear and easy to guess.

Exercise 2 page 140

 that/which (no commas required)
 Solar power, which is a form of renewable energy, is very popular in southern Spain.
 that/which (no commas required)
 that/which (no commas required)
 who/that (no commas required)
 Al Gore, who is a key supporter of alternative energy, won the Nobel Prize in 2007.

Exercise 3 page 140

1 which 2 who 3 which 4 that 5 which 6 which

ACADEMIC WRITING SKILLS

Learning objectives

- Use phrases to describe advantages or disadvantages in sentences about renewable energy – One advantage of wind power is that it is inexhaustible, so it will never run out. One other apparent advantage of wind power is that it produces no harmful emissions. Another potential drawback of biofuels is the amount of methane generated by their production.
- Use a variety of techniques for creating coherence in a paragraph about alternative energy sources.

Exercise 1 page 141

Answers will vary. Suggested answers:

2 A serious disadvantage of biomass is that it produces greenhouse gases.
3 One major drawback of biomass is that large areas of land are needed.
4 The most obvious benefit of hydropower is that energy can be stored and

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used as needed. **5** One other inherent disadvantage of geothermal energy is that it is only available in certain places.

Exercise 2 page 142

1 For example 2 however 3 they 4 this 5 In the same way 6 they

Exercise 3 page 142

Answers will vary. Suggested answer:

Turbines and hydropower plants both change the landscape of an area. Even though some people think they alter the natural landscape in an unattractive way, others think that they are important sources of alternative energy. It is important to use alternative energy sources so that we are less dependent on fossil fuels, which have been linked to global warming. There is resistance to this idea, however. Some people are more concerned about using fossil fuels than other people are. Also, some think it is more important to save money than to reduce global warming, and alternative energy production facilities can be expensive to construct.

WRITING TASK

Learning objectives

- Prepare an outline of an essay describing the advantages and disadvantages of three types of renewable energy and which would work best in your country
- Draft your essay
- Review and revise the content and structure of your essay

Exercises 1-7 pages 143-144

Answers will vary.

RESEARCH PROJECT

Transform an area of your learning environment so that it is more energy efficient.

Ask the class to find ways to reduce their energy usage in their learning environment. They may want to look at areas such as air conditioning / heating alternatives, lighting, insulation, energy efficiency guides, electrical equipment, etc.

Tell students that they have to start a campaign to change an area of their learning environment and encourage others to do the same. They need to think of marketing, branding, issuing information and presentations, etc.

CLASSROOM APP

Exercises 1–2

Answers will vary.

Exercise 3

1 generated2 initial3 resistant4 utilize5 alarming6 universal7 urgent

Exercise 4

1 renewable; green2 industrial; Air3 serious; major4 clean; alternative5 energy; power

Exercise 5

1 consult2 secure3 omitted4 delivered5 contest6 utilize7 instigate8 diminish

Exercise 6

1 They claim 2 These factors 3 For example 4 Although 5 but

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ART AND DESIGN

UNIT OBJECTIVES	
Watch and listen	Watch and understand a video about an art district in Beijing.
Reading skill	Scan to find information.
Critical thinking	Understand and evaluate analogies.
Grammar	Paraphrase quotations; use substitution; use ellipsis.
Academic writing skill	Write arguments, counter-arguments and refutations.
Writing task	Write an argumentative essay.
C Teacher development	Help your students become better at understanding and evaluating analogies .

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows a sculpture called *The Accident* by the Spanish artist Julio Lafuente (1921–2013). The sculpture is situated in Jeddah, Saudi Arabia, on the coast of the Red Sea. The artwork shows five cars which have crashed into a huge concrete cube. The artist worked as an architect in Jeddah in the 1970s, and it was his idea to create large monuments at important junctions in the city in order to help people find their way around. Jeddah is famous for its street art, where many roundabouts are used to display works of art.

Lead-in

Students choose an object from the classroom or from their personal possessions that they have with them. They show their group and discuss which features of it are purely functional (they exist because they do a job), which are non-functional (only included for decorative purposes), and which are a combination. For example, on a pair of trainers a blue stripe may only be decorative whereas a yellow one may help the wearer be seen better. The treads on the bottom of the shoe are functional, but the design of the treads may be decorative.

page 147 Answers will vary.

WATCH AND LISTEN

Learning objectives

- Listen and identify the main ideas in a video about art in Beijing
- Listen and complete a detailed summary of the ideas in the video
- Identify inferences which can be made from the ideas in the video
- Practise talking about places where artists are encouraged

Exercises 1-2 page 148

Answers will vary.

Exercise 3 page 149

3

Exercise 4 page 149

1 military factory
2 artists
3 large works of art
4 painters, sculptors
5 popular
6 gift shops and cafés
7 afford to work
8 new locations

Exercise 5 page 149

2, 3

Exercise 6 page 149 Answers will vary.

READING 1

Learning objectives

- Understand key vocabulary for art *aesthetic*, *conceptual*, *contemporary*
- Scan an essay about art to locate information about four artists

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- Read and understand details about the writer's definition of art
- Make inferences about artists' views on the nature of art
- Give opinions on the nature of art

Lead-in

Ask students how they would define art. What criteria would they use to decide if something is or is not art? Ask if they have seen pieces that are presented as art, but they think are not. They should explain their reasoning.

Exercise 1 page 150

1 conceptual2 aesthetic3 contemporary4 distinction5 established6 significance7 notion

Exercise 2 page 151

1c 2d 3a 4b

Exercise 3 page 151

a 3 b 4 c 2 d 1

Optional activity

Give students another short text about an artist or several artists and ask them to scan for key information, such as their names, dates or names of works.

Exercise 4 page 153

- 1 T 2 F; Metalworking is an example of applied art.
- 3T 4 DNS 5 DNS

6 F; 'Art for art's sake' refers to fine art. 7 DNS

8 F; Damien Hirst's assistants produce his art, although the ideas are his own.

Exercise 5 page 153

1 Hirst 2 Warhol 3 Duchamp 4 Banksy 5 Hirst 6 Kusama

Exercise 6 page 153

Answers will vary.

READING 2

Learning objectives

- Understand key vocabulary for photography *perceive, mechanical, medium*
- Scan an essay about photography as art to find the main idea of each paragraph
- Make inferences about the writer's arguments about photography as art

- Identify paraphrases of ideas and opinions from the essay
- Make inferences about photographers' views on the nature of photography
- Evaluate statements about photography and express your opinions
- Synthesize information from an essay about art and an essay about photography as art in a discussion

Lead-in

Ask students to think back to their definition of art before Reading 1 and to apply it to photography. Ask them to consider which kinds of photographs might qualify as art and why. Would they include smartphone photos? All of them or only certain ones? Why?

Exercise 1 page 154 *Answers will vary.*

Exercise 2 page 154 1 a 2 b 3 a 4 b 5 a 6 a 7 b 8 a

Exercise 3 page 154 1 paragraph 1 2 paragraph 3 3 paragraph 2 4 paragraph 4

Exercise 4 page 156 1 b **2** a **3** a

Exercise 5 page 156 1 d 2 c 3 a 4 e 5 b

Exercise 6 page 157 1 c 2 d 3 a 4 e 5 b

Be flexible

Ask students to write paraphrases for the opinions expressed in Exercise 6.

Provide more support for **lower-level students**. Students exchange and compare paraphrases. What elements of the original text have they changed? What elements have they kept? Are their versions sufficiently different to be considered a paraphrase? Why / Why not? This will help provide a foundation for the Language development section.

Exercise 7 page 157

Answers will vary.

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LANGUAGE DEVELOPMENT

Learning objectives

- Paraphrase famous quotations about art and creativity
- Use adjectives related to art and design to complete sentences describing artworks abstract, avant-garde, decorative

Exercise 1 pages 158-159

Possible answers:

 Horace pointed out that a picture is like a work of literature without words.
 Henri Matisse felt that being creative required overcoming cowardice.
 Leonardo da Vinci stated that a painter uses his or her mind and hands to paint unlimited subjects.

Exercise 2 page 159

Answers will vary. Possible answers:

 Creativity involves making connections between things or ideas that do not seem to be connected at first.
 Creating art helps me feel better when I am feeling bad.
 When we create art, we can understand ourselves better and we can also escape from our usual identity.

Exercise 3 page 159

1 monumental	2 moving	3 decorative	4 lifelike
5 avant-garde	6 Abstract	7 figurative	8 expressive

Optional activity

Focus students on the adjectives *decorative*, *figurative* and *expressive*. Ask the following questions:

- 1 What do these adjectives have in common in terms of spelling and pronunciation? (*They all end in -ive and are pronounced* /1v/. Check that students are pronouncing this ending with a short /1/ sound.)
- 2 Do you know any other adjectives ending in -ive? (descriptive, native, comparative, active, administrative, attractive, creative, effective, expensive and many more)

Suggest students keep a list of these adjectives and add to it when they find more.

CRITICAL THINKING

Learning objectives

 Analyze the presentation of opposing views (counter-arguments) and ways to argue against them (refutations) in an essay about photography

- Understand whether opinions on fashion, cooking or video games support or challenge the idea of these genres as fine art
- Evaluate opinions on fashion, cooking or video games and express your opinions
- Create analogies between fashion, cooking or video games and fine art

UNLOCK TEACHER DEVELOPMENT

BE INFORMED

→ Understanding and evaluating analogies is an important skill for students because: (1) Students may be unfamiliar with analogies in English, and the concept may not be common in their native language; (2) Although analogies can be useful in academic writing, students must be careful not to overuse them, or to use analogies which are considered too informal; they need to understand what kind of analogies are acceptable; (3) Analogies are very common in day-to-day English, and therefore have a wider relevance for students.

BE CONFIDENT

→ Develop these skills for yourself by doing the following activity:

Read through the analogies below. Can you explain what they mean? Do you have similar analogies in your own language?

- 1 Your memory is like a computer, in that it saves things differently for the short and long term.
- 2 Writing an essay is like climbing a mountain.
- 3 A doctor diagnoses diseases in the same way a detective investigates crimes.
- 4 Learning a language is mostly walking through water, but sometimes you get to swim.

Lead-in

Give students a minute to read the writing task. Ask students to work in small groups and discuss which one of the three they might want to write about and why. Tell them to keep any notes they make for later, when they begin to write their essay.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on pages 160–161.

→ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

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➔ Are your answers true for all students in your class?

→ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

A useful addition to Exercise 4 would be to ask pairs to present their analogies to the rest of the class. The class then evaluates whether they think they are good analogies, and also whether they would be appropriate in a piece of academic writing.

Exercise 1 page 160

paragraph 2 argument: Photography has similarities to other art, but artists can sell their pieces in the higher- priced, fine- art markets, whereas photographers usually cannot.	argument against author's opinion: A photograph can be a deliberately created image with its own artistic features. As Ansel Adams said, we don't 'take' a photograph, we 'make it'.	why the other side is wrong: It is rare for a photographer to get a high price for his/her 'art', unlike other artists.
paragraph 3 argument: Photography cannot really be 'abstract' in the way that other art can.	argument against author's opinion: Sometimes it can, but not as easily.	why the other side is wrong: Beauty that is perceived in a photograph comes from the time and place where it was taken, the equipment used, and luck.

Exercise 2 page 161

1 challenge 2 support 3 support 4 challenge 5 challenge 6 support

Exercises 3-4 page 161

Answers will vary.

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

Think about the following questions:

→ Did you refer to analogies in your own language during the class? If you did, did it help students understand how they could be used? If you did not, do you think it would have helped? If your class is multilingual, did students talk about the use of analogies in their own languages?

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→ Do you think your students now feel confident to use analogies in their academic writing? Monitor their writing over the next few weeks to see if they use any – and if so, how effective they are.

BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peercollaborate. Why not share the ideas you generated in the *Be ready* section, and their outcome?

GRAMMAR FOR WRITING

Learning objectives

- Identify synonyms and substitutions used to avoid repetition in a text about a car
- Use ellipsis and substitution to avoid repetition in a text about a famous painting

Exercise 1 page 162

The two-seater roadster; the fastest sports car; the car; the E-type; the machine's; the car's; the most beautiful car in the world

Exercise 2 page 163

The Scream is the popular name given to each of four paintings of The Scream by the artist Edvard Munch, who painted **them** The Scream between 1893 and 1910. The National Gallery in Oslo holds one painting of The Scream, the Munch Museum holds two more paintings of The Scream, and the fourth version of The Scream sold for \$119 million at Sotheby's on 2 May, 2012. To explain the picture of The Scream, the artist Edvard Munch wrote in his diary, 'One evening I felt tired and ill. I stopped and looked out over the sea – the sun was setting, and the clouds were turning blood red. I sensed a scream passing through nature; it seemed to me that I heard the scream.'

Optional activity

Ask students to continue to practise the skills used in Exercise 2 in the following paragraph:

Robert Rauschenberg was one of the first artists to create 'Combines'. Combines are works that are made of odd bits of old things – tyres, furniture or pieces of wood that artists find on the street. Rauschenberg used this approach and many others started to use this approach too. One of his most famous works is called *Bed.* Rauschenberg made *Bed* in 1955. Rauschenberg took a pillow, a sheet and a quilt. He scribbled with pencil and splashed paint all over the pillow, the sheet and the quilt. Then he put a frame around his work of art. He said his work of art was a form of personal expression. Many critics think this is an important work of personal expression that relates to both art and life.

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ACADEMIC WRITING SKILLS

Learning objectives

- Compare the strength of arguments and identify the stronger
- Evaluate the weaknesses in arguments about art
- Refute counter-arguments in sentences about art

Exercise 1 page 164

1 a stronger b weaker; the statement does not support the idea that photography has the properties of other art as convincingly.
2 a stronger b weaker; no details are provided to persuade the reader.
3 a weaker; It is too subjective and not evidence-based like the other statement. b stronger

Exercise 2 page 165

Answers will vary. Suggested answers:

1 Critics of mandatory art education say that art is not as important as academic subjects. Even though that might be true, art education is still important since it encourages students to use their creativity.

2 Some people believe that art is only for the rich. However, all people should be able to see great art.

3 Opponents of public funding for art think that it is not a good use of public money. Nevertheless, public art beautifies our town and enriches our community culture.

Exercise 3 page 165

1 Refutation: However, it does take creativity to choose an image to photograph and to frame it in a certain way.
2 Refutation: Just because something violates the law, this does not mean that creativity and artistry have not gone into the work.

Be flexible

Tell students to return to the (strong) arguments on page 164. One student comes up with a counterargument and the other student offers a refutation. Then pairs can compare their work with what other pairs have written.

Challenge **more advanced students** to consider other issues they have studied in this book (e.g. the depletion of natural resources, green buildings, the cost of healthcare). Ask them to create an argument/ counter-argument/refutation sequence (as in Exercise 3) for one of these issues.

Exercise 4 page 165 Answers will vary.

WRITING TASK

Learning objectives

- Plan the body paragraphs of an essay which argues whether either fashion, cooking or video games is fine art
- Draft your essay
- Review and revise the content and structure of your essay
- Review and revise the use of language in your essay

Exercises 1-7 page 166

Answers will vary.

RESEARCH PROJECT

Plan an arts and crafts exhibition.

Explain to the class that they are going to plan an art exhibition of local artists and crafts. Crafts could include weaving, jewellery-making, costumes, leatherwork, metalwork, pottery, etc. Tell them to research local artists and craftspeople, by visiting galleries and searching online. They should look at the artists and their work or the history of the craft. Students could also interview local artists or craftspeople.

Ask students to present this information and images of the artists' work or examples of local crafts as part of an exhibition.

CLASSROOM APP

Exercises 1-2

Answers will vary.

Exercise 3

- 1 objective 2 acknowledged 3 contemporary4 notion 5 distinction 6 deliberately 7 sophisticated
- 8 significance

Exercise 4

1 use synonyms, use reported speech 2 use synonyms, sequence the ideas differently 3 change part of the speech, sequence the ideas differently 4 use synonyms, change part of the speech 5 use antonyms, sequence the ideas differently

Exercise 5

1 abstract2 expressive3 monumental4 lifelike5 moving6 avant-garde7 decorative8 figurative

Exercise 6

1 are not 2 will 3 was too 4 there are only two 5 It 6 refused 7 didn't

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UNIT OBJECTIVES	
Watch and listen	Watch and understand a video about a walking group for retired people.
Reading skill	Identify evidence in a text.
Critical thinking	Draw appropriate conclusions from graphical data.
Grammar	Use verb phrases to show cause and effect; use language of prediction; use the first conditional.
Academic writing skills	Use numerical words and phrases; interpret graphs and charts.
Writing task	Write an analysis essay.
Preacher development	Help your students become better at drawing appropriate conclusions from graphical data .

UNLOCK YOUR KNOWLEDGE

Background note

The photo shows an older woman hiking in the mountains. In many cultures, there are some common stereotypes associated with the elderly. Older people are often considered to be ill or weak. They are often stereotyped as physically unattractive and not as mentally quick as younger people. However, as the world's population ages and life expectancies become longer than ever, our ideas of old age are changing. Many people who are now in their 60s and 70s are healthier and more active than people who were that age only a few decades ago.

Lead-in

Students think about the oldest person in their extended family, perhaps a grandparent or great aunt or uncle. In small groups, they describe this person, mentioning their relationship to the person, their age, their character, their role in their family, etc. They also discuss how the world has changed in that person's lifetime. Ask some students to share their stories with the class.

page 169 Answers will vary.

WATCH AND LISTEN

Learning objectives

- Listen and identify the main idea in a video about retired people
- Listen and note details
- Make inferences about the ideas in the video
- Practise talking about exercise and the elderly

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Exercises 1–2 page 170 Answers will vary.

Exercise 3 page 171

Exercise 4 page 171

1 It can prevent cancer, heart disease and poor mental health. 2 You don't need special equipment or a gym membership to walk. 3 People in the UK are 20% less active than they were in the 1960s. 4 They may be alone most of the time. Walking may be one of the few times they see other people.

Exercises 5-6 page 171

Answers will vary.

READING 1

Learning objectives

- Understand key vocabulary for society demographic, adapt, voluntary
- Use your knowledge to predict the main ideas in an article about ageing populations
- Read and understand detailed information about ageing populations
- Identify supporting evidence and evaluate its effect in the article
- Describe and make suggestions for the population where you live

Lead-in

Ask students how they envision their lives when they are older (65+). Will they continue to work? If they retire, how will they support themselves? Do they plan to travel? Spend time on a hobby? Ask students to discuss their plans in pairs or small groups.

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Exercise 1 page 172

a capacity **b** demographic **c** leisure **d** voluntary **e** adapt **f** undertake

Exercise 2 page 172

Answers will vary.

Exercise 3 page 172

Possible answers:

1 A great deal in many countries. People are able to live far longer due to improved healthcare and the prevention/cure of many diseases.

2 People are living longer in most regions.

3 Old people may be unable to care for themselves for health reasons.

4 If old people are retired and not paying taxes but still need healthcare, this could put a strain on social systems.

5 The benefits could be that less money is needed for education. Older people may have saved money to spend on themselves and their families and may give time to voluntary organizations or be able to help care for younger family members.

Exercise 4 page 173

Answers will vary.

Exercise 5 page 174

1 DNS **2** T **3** F; In many countries, an increasing number of older people are living by themselves, often without any relatives living nearby. **4** T **5** F; Supermarkets have responded by providing more home-delivery services, and there has been a significant growth in companies providing services that would have traditionally been undertaken by family members. **6** F; In countries where the percentage of children and young people is lower, there are lower costs in the education system. **7** DNS **8** T

Exercise 6 page 174

1 look after 2 social activities 3 private nursing care4 economic impact 5 savings, leisure time 6 voluntary

Optional activity

Ask students to think about other possible changes that may come with an ageing population. Specifically, ask them to brainstorm about new products and services that could serve this population. Point them to the references to grocery delivery services in the reading as a starting point. Discuss as a class.

Exercise 7 page 175

 Italy has Europe's oldest population; people in Italy are now living 30 to 40 years beyond retirement; the number of needy pensioners there is rising.
 It is evidence that older people in Japan tend to have more savings and more leisure time.
 They are authoritative, credible sources which provide convincing support for the writer's main ideas.

Exercise 8 page 175

Answers will vary.

READING 2

Learning objectives

- Understand key vocabulary for society *documented, median, proportion*
- Use your knowledge and read and understand the main ideas in an essay about Saudi Arabia's young population
- Read and complete sentences about facts
 and figures
- Read and understand the meaning of fixed expressions using context clues
- Synthesize information from an article about ageing populations and an essay about Saudi Arabia's young population in a discussion

Lead-in

Remind students that they have just read an article about the problems a country faces when a large percentage of the population is older. Ask them to brainstorm about the kind of challenges a country might face with the opposite problem – a bulge in the population of young people in their 20s and younger.

Exercise 1 page 175

Answers will vary.

Exercise 2 page 176 1 a 2 b 3 a 4 b 5 c 6 a 7 c

Exercise 3 page 176

Possible answer:

High education costs, risk of increasing unemployment and increased demand for housing.

Exercise 4 page 178

1 young **2** 27 **3** 19 **4** 27; Japan **5** education **6** sectors **7** expansion

Exercise 5 page 178

1 if you consider the facts carefully2 spending3 very specific problems that require specific solutions4 as a result or effect of something

Exercise 6 page 178

1 It does not have to cope with the demands of an ageing population. Because the country has relatively fewer old people, the costs of healthcare and pensions are lower. This allows more funds to be allocated to improving the lives of young people. 2 Because the government can collect more taxes and has more resources to provide for its citizens. 3 Answers will vary.

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LANGUAGE DEVELOPMENT

Learning objectives

- Use academic collocations with prepositions in sentences about age and society – There is a tendency to identify with the problems of the elderly. To sum up, the main recommendation is that more should be saved toward pensions. Young people, in contrast, have too little time.
- Use simple verb phrases to show cause and effect between ideas – Ageing results in greater life experience and wisdom. Ageing leads to greater life experience and wisdom.
- Use more complex linkers to show cause and effect between ideas – As a result of ageing, the elderly have greater life experience and wisdom. Ageing leads to greater life experience. As a consequence the elderly have the benefit of wisdom.

Exercise 1 page 179

1 in 2 of 3 on 4 up 5 with 6 in 7 on 8 in

Be flexible

Ask students to review the two readings and find markers of cause and effect. They should underline the marker and label the cause (C) and effect (E).

Challenge **stronger students** to write three more sentences expressing cause and effect, using information from either of the two readings. Encourage them to try using more complex linkers.

Exercise 2 page 179

1 rely on 2 In contrast 3 range of 4 focus on5 In brief 6 in theory 7 identify with 8 sum up

Exercise 3 page 180

 b; An ageing population leads to / results in lower education costs.
 b; Encouraging immigration leads to / results in more young people.
 b; An increasingly older population leads to / results in economic problems.

Exercise 4 page 180

Possible answers:

Some people never have children. Consequently, they have no family to care for them when they get old.
 In some cultures, elderly people commonly live with their adult children. As a result of this, the grandchildren have somebody to care for them while the parents are at work. 3 It is not always easy for a country to predict how its population will change. Because of this, it's a good idea to encourage immigration.

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CRITICAL THINKING

Learning objectives

- Analyze the information presented in a graph about Saudi Arabia's demographics
- Analyze the information presented in a graph about Japan's demographics
- Work out the meaning of expressions to describe demographics
- Identify which topics could be a problem for a society with an ageing population
- Connect topics to different contexts in a society
- Evaluate and rank the advantages of older populations

UNLOCK TEACHER DEVELOPMENT

BE INFORMED

→ Drawing appropriate conclusions from

graphical data is an important skill for students because: (1) Graphs and charts are commonly used in many academic subjects, especially the sciences; (2) Students often find it challenging to interpret graphs and charts; they either insert them into essays without comment, or focus on less relevant issues; (3) This kind of knowledge is very important in dayto-day life, especially in the business world.

BE CONFIDENT

→ Develop this skill for yourself by doing the following activity:

Look at the graphs on page 177 and page 181 of the Student's Book, but do not look at Reading 2. Answer the following questions:

- 1 What are the main points shown in these graphs?
- 2 What are the main implications of these graphs?
- 3 How do the graphs differ in terms of how the data is presented?

Lead-in

Give students a minute to read the writing task and to ask you any questions they might have about it.

UNLOCK TEACHER DEVELOPMENT

BE READY

Look at the Critical Thinking section in the Student's Book on pages 181–182.

→ Which elements of the lesson do you think your students will find easiest / most difficult / most useful? Why?

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➔ Are your answers true for all students in your class?

→ How can you adapt your teaching or the material to meet your students' needs?

BE FLEXIBLE

For Exercise 3, especially with smaller classes, it might be useful to divide the items between pairs/ groups to ensure that all ten items are covered. It is important for students to understand all these terms.

Exercise 1 page 181

1 2016 2 28,160,273 3 under 65 4 more men

Exercise 2 page 181

1 January 2012 2 approximately 125 million 3 over 65
4 The graph shows that Saudi Arabia has a much younger overall population than Japan does. Saudis have been having more children and larger families than Japanese people in recent years.

Exercise 3 page 182

1 youth unemployment: when young people in a society do not have jobs 2 housing shortages: when there are not enough homes for the people in a society to live in 3 higher pension costs: when the government has to spend more of its budget on retired people because the population is ageing 4 increased healthcare costs: when the government or health insurers have to spend more money to provide healthcare for people 5 stress on the education system: when the resources for educating young people (money, teachers, schools) are no longer enough 6 lower consumer **spending:** when people in a society spend less money to buy things 7 declining birth rate: when women in a society have fewer children than before 8 higher taxes: when the government collects more money from citizens than before 9 increased emigration: when more people move out of their home country to another country **10 increased immigration:** when more people move into a new country from their home country

Exercise 4 page 182

Answers will vary. Suggested answers: 3, 4, 6, 7

Exercise 5 page 182

Increased healthcare costs
 youth unemployment
 Higher taxes
 higher pension costs
 declining birth rate
 increased immigration

Exercise 6 page 182

Answers will vary.

UNLOCK TEACHER DEVELOPMENT

BE REFLECTIVE

Think about the following questions:

→ How many of the terms in Exercise 3 did your class already know? Depending on their background or area of study, students may have a very good (or very poor) understanding of these terms. Knowing this may help you plan better in the future.

→ To what extent has your students' understanding of critical thinking developed across this course? Is there anything you would do differently if (or when) you teach it again?

BE COLLABORATIVE

Your development is more meaningful when it is shared. See page 14 for ideas on how to peercollaborate. Why not share the ideas you generated in the *Be ready* section, and their outcome?

GRAMMAR FOR WRITING

Learning objectives

- Use phrases to make stronger and weaker predictions – be predicted to, may be, be unlikely to
- Write sentences expressing strong and weak predictions about the future
- Use the first conditional with *provided that, as long as* and *on the condition that* in sentences about ageing populations

Exercise 1 page 183

1b 2a 3e 4d 5g 6c 7f

Exercise 2 page 183

Answers will vary. Possible answers:

1 The population is likely to increase in the future.

- 2 Oil prices may come down this year. 3 Unemployment is
- predicted to remain at the same level in the coming months.
- **4** The cost of living is set to rise over the decade.
- **5** A reduction in the number of schools is unlikely.

Exercise 3 page 184

1 will face; ages 2 continues; will live 3 will move in; agrees 4 does not create; will face

Exercise 4 page 184

Answers will vary. Possible answers:

1 If a country has an ageing population, the result will be fewer children. 2 Fewer people will pay income taxes if more people retire. 3 Provided that a country provides better education, its young people will find good jobs in other countries. 4 As long as the population continues to get younger, the government should prioritize public funds for the young over the ageing.

UNIT 8 453

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ACADEMIC WRITING SKILLS

Learning objectives

- Use numerical words and phrases to describe data in a pie chart about Japan – minority proportion, quarter
- Follow guidelines on writing about information in graphs and write sentences about the demographics shown in a graph
- Evaluate descriptions of data in terms of their usefulness in a topical essay

Exercise 1 page 185

1 majority 2 minority 3 times 4 proportion 5 double 6 triple 7 half 8 quarter

Exercise 2 page 186

Answers will vary. Possible answers:

1 By 2050 the global population will be 9 billion if the projected figures are correct.
2 If the ageing population continues to grow, 16% of the population will be 65 or over.
3 The world will have fewer young people in the future if birth rates continue to decline.

Exercise 3 page 186

1 not good; very specific data, not necessary to mention.
2 not good; not relevant to the data 3 good; explains a trend 4 good; mentions the main topic of the data 5 good; a prediction

WRITING TASK

Learning objectives

- Plan and draft an essay using graphical support about population trends in Japan including implications for the future
- Review and revise the content and structure of your essay
- Review and revise the use of language in your essay

Exercise 1 page 187

2 Presentation and description of the data from the graphs
4 Second related challenge
3 First related challenge
6 Summary of the challenges but also a mention of an advantage
5 Third related challenge
1 Introduction

Exercise 2 page 187

Answers will vary. Possible answer:

The graph shows the proportion of three age ranges of the population of Japan since 1950 and predicts what those ranges will be through to the year 2050.

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Exercises 3–11 pages 187–188 Answers will vary.

RESEARCH PROJECT

Produce a podcast which explores the concerns of the elderly for the future.

Divide the class into groups. Explain that they will be producing a podcast on the elderly. Ask them to interview elderly relatives about their concerns for the future. They could ask them how things have changed, where the world is heading, health, the home and travel. The group thinks of the questions for the interview and each student asks their relatives, before bringing together their answers as a group to create and broadcast the podcast.

CLASSROOM APP

Exercise 1

Answers will vary.

Exercise 2

1 voluntary2 cope with 3 pension4 adapt5 undertake6 range7 allocate8 leisure

Exercise 3

Answers will vary.

Exercise 4

1 In theory 2 focus on 3 In brief 4 rely on 5 sum up 6 In contrast 7 range of 8 identify with

Exercise 5

- 1 Exercising regularly leads to better health.
- **2** As a result of the growing population, food demand has increased.
- **3** Meditation can result in a decrease in stress levels.
- **4** As a consequence, they stay more active.
- **5** Because of this, elderly people are being advised to stay indoors.
- 6 As a result of this, many young people are moving abroad.

Exercise 6

1 half 2 half 3 triple 4 times 5 majority 6 minority
7 double 8 proportion