

Second Edition

Skillful 3

Stacey Holliday Hughes
Series Consultant:
Dorothy E. Zemach

Reading & Writing



Teacher's Book

*The skills for success at
university and beyond*

B2



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	Video	Reading	Vocabulary
1 IDENTITY PAGE 8 Society ➤ Article: Social identity Psychology ➤ Article: How permanent is your personality?	Wearable tech	Recognize and understand classification in texts Read and understand substitution words	Practice and use vocabulary for describing personality
2 DESIGN PAGE 26 Industry ➤ Article: Beautifully broken Technology ➤ Interview: Community development: A new business in town	Man versus machine	Read to recognize internal paraphrasing Read and understand exemplification	Practice and use adjectives for describing products
3 THOUGHT PAGE 44 Cognitive neuroscience ➤ Article: The development of thought Psychology ➤ Article: Emotional thinking	Virtual reality treatment	Read to understand how ellipsis is used to eliminate unnecessary words and refer backwards Read and understand the function of questions in texts	Practice and use language for comparing and contrasting
4 FIRE PAGE 62 Environment ➤ Article: The top five causes of wildfires Environment ➤ Article: Controlling the uncontrollable	Slash and burn	Read and use word parts to understand meaning Read and identify point of view	Practice and use collocations with <i>problem</i>
5 MOVEMENT PAGE 80 Environment ➤ Article: The Panama canal: A brief history Environment ➤ Article: Dangers and opportunities in the Arctic circle	Nomads and desertification	Read and annotate a text Read and recognize text structure	Practice and use verbs for talking about change

Grammar	Writing	Study skills	Unit outcomes
Use reflexive pronouns	Practice methods of brainstorming Plan, write, and edit an essay debating whether personality changes over time	Self-awareness and self-evaluation	Recognize and understand classification in texts Recognize substitution words to understand what they refer to Brainstorm and compose an essay
Use <i>can</i> for universal truths	Practice organizing ideas Write an essay discussing the advantages of handmade products over machine-made products	Writing a first draft	Recognize and understand the technique of internal paraphrasing in texts Understand exemplification to support an argument Compose and edit an essay using reasons and examples to support your argument
Use adverbs to hedge the strength of statements	Practice organizing a compare-and-contrast essay Write an essay comparing and contrasting the importance of emotional and intellectual intelligence	Improving memory through association and mnemonics	Recognize and understand the use of ellipsis in texts Understand the function of questions in texts Organize and compose a compare-and-contrast essay
Use gerunds and reduced clauses	Practice developing your arguments with supporting information Write a problem / solution essay on wildfires	Smart reading	Recognize and use word parts to understand meaning Recognize sentence modifiers to identify point of view Brainstorm and compose a problem / solution essay
Use the future passive	Practice describing plans and predictions in the future Write a comparison essay of two maps	Set your priorities	Practice using annotations to understand a text Recognize and understand text structure Brainstorm and compose a comparison of two maps

	Video	Reading	Vocabulary
6 DISEASE PAGE 98 Biology ➤ Article: Fighting cholera Medicine ➤ Article: The economic impact of disease	Mosquito illnesses	Read and recognize text organization Read and identify sentence functions	Practice and use cause and effect language
7 SURVIVAL PAGE 116 Globalization ➤ Article: The death of languages Architecture ➤ Article: More than just survival	Water pollution	Read and find support for your opinion Read and use research questions to understand texts	Practice and use vocabulary for describing graphs
8 LAW PAGE 134 Society ➤ Article: Unethical behaviour Work ➤ Article: Right or wrong at work	Lifestyle and connectivity	Read and activate prior knowledge Read and summarize sections of a text	Practice and use legal vocabulary
9 SOUND PAGE 152 Physics ➤ Article: Seeing without your eyes Communication ➤ Article: A wireless world	Whales and noise pollution	Read and create a text map Read and take notes	Practice and use science verbs
10 TOMORROW PAGE 170 Technology ➤ Article: Products of the future Technology ➤ Article: New technology: Is greater regulation needed?	Li-Fi	Read and understand conclusions Read and identify text predictions	Practice and use science nouns

Grammar	Writing	Study skills	Unit outcomes
Use conditionals with <i>provided</i> and <i>unless</i>	Practice writing definitions for essays Write a cause-and-effect essay on research into disease	Use feedback from your tutors	Recognize and understand paragraph structure Practice identifying sentence functions Compose and edit a cause-and-effect essay
Use the present perfect progressive	Practice inferring reasons for change Write a description summarizing and comparing trends in animal populations shown on a graph and infer reasons for the changes	Avoiding self-sabotage	Practice identifying support for opinions Recognize and use research questions Brainstorm and compose a description of a graph
Use unreal conditionals in the past	Practice writing and supporting an essay thesis Write a for or against essay on speaking out about unethical colleagues	Argumentative writing	Practice activating prior knowledge Practice summarizing sections of a text Compose and edit a for or against essay
Use defining and non-defining relative clauses	Practice varying sentence length in explanations Write an essay on technology	Identifying what gets good marks	Understand and practice creating a text map Practice taking notes to understand key ideas Brainstorm and compose an essay
Use future perfect simple	Practice identifying and writing a stance for an opinion essay Write an opinion essay	Overcoming writer's block	Identify and understand conclusions Recognize and understand text predictions Compose and edit an opinion essay

Academic success requires so much more than memorizing facts. It takes skills. This means that a successful student can both learn and think critically. *Skillful* helps teachers prepare their students for academic work in English by teaching not only language—vocabulary and grammar—but the necessary skills to engage with topics, texts, and discourse with classmates.

Teachers using *Skillful* should:

- Encourage students to ask questions and interact. Many of the tasks and exercises involve pairwork, groupwork, and whole-class discussion. Working with others helps students solidify their understanding, and challenge and expand their ability to think critically.
- Personalize the material. Help students make connections between the texts in their book and their own world—home, community, and country. Bring in outside material from local sources when it's relevant, making sure it fits the unit topics and language.
- Provide a lot of practice. Review exercises and material from previous units. Use the *Skillful* digital components to develop the skills presented in the Student's Book.
- Provide many opportunities for review. Remind students of the skills, grammar, and vocabulary they learned in previous units. Have students study a little bit each day, not just before tests.
- Show students how to be independent learners. Point out opportunities to study and practice English outside of class, such as reading for pleasure and using the Internet in English. The Study skills section in every unit gives students valuable tips for successfully managing their own learning.

Learning skills, like learning a language, takes time and practice. Students must be patient with themselves as they put in the necessary time and effort. They should set and check goals. Periodic assessments the teacher can print, such as the unit tests, progress tests, mid and end tests in the digital components let students see their own progress and measure how much they've learned, so they can feel proud of their academic and linguistic development.

Opening page

Each unit starts with two opening pages. These pages get students ready to study the topic of the unit. There is a video to watch and activities to do before class.

Discussion questions

Infographic

Video activities

Unit aims

Opening image

Reading lessons

In every unit, there are two reading lessons and they present two different aspects of the unit topic and help students with ideas and language for their writing task.

Vocabulary to prepare students for the reading activities

Every reading section helps students use a new reading skill.

Students can listen to audio tracks for all the reading passages.

Glossaries help students understand higher level words from the reading text.

Develop your students' reading skills in each part of the reading lesson.

Writing lessons

After the reading lessons, there is a page for students to analyze a model answer to a writing task. This will help them organize their ideas and language and prepare for the final task at the end of the unit.

Students analyze the model answer.

Brainstorm and plan the final writing task.

Finally, write a paragraph or essay.

Next, discuss ideas.

1 IDENTITY

READING 1	Recognizing and understanding classification texts
READING 2	Recognizing substitution words
STUDY SKILL	Self-awareness and self-evaluation
VOCABULARY	Vocabulary to describe identity types
GRAMMAR	Reflexive pronouns
WRITING	Techniques for brainstorming

Warm-up

As this is the beginning of the semester, it's worth spending some time breaking the ice and laying the groundwork for everyone to get to know one another. The topic of *Identity* can help facilitate this.

Write *Identity* on the board and elicit a definition from students. You might draw a line under the "ID" in the word as a clue. *ID* is short for *identity*, e.g., in the case of an ID card.

Show a selfie or picture of yourself—ideally, project this for all to see, or bring in a printout of one. Ask students if they think it's a good one and what they think the picture says about your identity (e.g., a selfie might show that you are a happy person or an introspective one, that you like cooking, etc.). If appropriate, ask students to find or take a selfie on their phone or, if not, use the picture from their ID card.

Write these questions on the board:

Do you like the picture? Why / why not?

Do you think the picture shows your real identity? Why / why not?

In pairs, students share their selfies or other pictures, and ask and answer the questions. After feedback, tell students to turn off their phones and put them away for the remainder of the lesson.

Students will recognize the benefit of using their phones for class activities, but some students may try to take advantage of the opportunity. Set up some rules and guidelines for when phone use is allowed. An example rule is: only use your phone when asked to by the teacher for a class activity; after the activity, turn it off and put it away. Allow students to think of other acceptable uses for their phone—e.g., to look up a word in an online dictionary such as: <http://www.macmillandictionary.com/>.

Discussion point

Refer students to the *How I display my identity in person / How I display my identity online* infographic. Use questions to check that they understand the words and phrases used in the infographic, especially *gestures and body language, tone of voice, avatar, and fonts*. Give some examples to illustrate the meaning—e.g., illustrate *tone of voice* by saying a phrase with different tones of voice—stern, kind, unsure, etc.—and asking students to identify them. Note that an *avatar* is an icon or illustration that represents a person. Find out how many students use an avatar in gaming, on Internet forums, on social media, etc.

Discuss the infographic as a whole class: what do clothes, avatar choice, and the color and font we use online say about our identity? Students may not have considered before what these non-verbal things say about us.

Give students a few minutes to read and think about the discussion questions. Note that each question has an example answer prompt to support lower-level students. Students work in pairs to discuss and answer the three questions. Then, open the discussion to include the whole class. Ask four or five volunteer students to give you some information about what another student said. This will set the expectation that students should listen to each other during discussions.

Extension activity

Blogs are a great way to get students to practice writing in an informal and authentic context, and they provide a platform for sharing work, sending messages, handing out assignments, and providing students with extra learning materials. Start a class blog to introduce students to blogging—there are many online platforms (search: *blog sites for classroom use*). For their first blog, invite students to upload a selfie or avatar and write a short introduction about themselves. Provide an example for lower-level students by doing your own introduction first.

VIDEO

Before you watch

Introduce the topic of the video, and tell students to read the exercise. In pairs, ask them to complete the exercise. Remind students that there are no correct answers at this stage and that they are simply generating ideas and working to predict what the content of the video might be. This will help them apply any knowledge they already have when they watch the video.

While you watch

Give students time to read the questions before playing the video. Play the video for them to choose the correct answers. Students check in pairs and feedback to the class. If necessary, play the video a second time.

Extension activity

Post the video on the class blog so that students can watch it in their own time, outside of college.

ANSWERS

- 1 F (It only looks similar to a watch.)
- 2 F (You can use it to change your mood.)
- 3 T
- 4 T
- 5 F (And, so, it's kind of ... not a lot of data, but we're using it very smartly.)

See pages 106–107 for the video script.

After you watch

Students work in pairs to discuss questions 1–3. After a few minutes, open up the discussion to include the whole class. Encourage students to think of arguments for both sides, as a way to develop critical thinking by exploring different viewpoints. Go through their answers as a class.

READING 1

Social identity

Warm-up

Students will benefit from learning to use a good monolingual dictionary. If you have class sets, bring them into class. Otherwise, direct students to where they can buy one. Another alternative is an online dictionary such as <http://www.macmillandictionary.com/>. If you have a projector, go to the site and use it as needed during the lesson. There is the option to change the default dictionary to American English—this will ensure that the spellings and pronunciation are in American English.

This warm-up draws students' attention to the benefits of using the online dictionary. Display the dictionary using the projector. Type in the word *categorize*. Put students into pairs to answer the following questions:

- 1 What part of speech is the word? (verb)
- 2 What is the noun form of *categorize*? (categorization)
- 3 Which of the following can you do on this dictionary page:
 - find a synonym? (yes)
 - hear the pronunciation? (yes)
 - see a definition? (yes)
 - get information about how to use the Thesaurus? (yes)
 - read blogs about other words? (yes)
 - share the definition on social media? (yes)

Discuss with students why a dictionary such as this is useful and if they have a similar dictionary that they use. Play the pronunciation and ask students to repeat.

A Vocabulary preview

Students work alone to complete the sentences, using dictionaries to look up words they don't know. They check in pairs. Extend the learning of the new words through discussion. For example, ask: *Do you agree that girls mature quicker than boys? Why do you think that? What other qualities are desirable in a friend?* Monitor the activity and help with pronunciation where needed. Ask them to say how many syllables are in each word, and to identify the stressed syllable. Tricky words include: *consequences* (four syllables, stress on the first syllable) and *desirable* (four syllables, stress on the second syllable).

Students can also complete the *Vocabulary preview* section as homework before class.

ANSWERS

- 1 mature 2 desirable 3 tensions 4 consequences
- 5 define 6 debate 7 categorize 8 confirmed

Extension activity

Tell students to start a vocabulary notebook. One way to organize it is by unit. They should include the word with the stressed syllable underlined, the word form, a definition, and their own example sentence.

B Before you read

Preparing to read

This section teaches students the skill of thinking about the topic before they read a text. This makes the reading more accessible because students will have activated prior knowledge of the topic. In addition, they will have a reason for reading—to find out if their predictions were correct.

Ask students to read the *Before you read* section. They work in pairs to create a list of examples they think the reading will mention. Collate students' ideas on the board.

C Global reading

Recognizing classification

Check that everyone understands the word *classification* (= the process of putting people or things into particular groups according to the features that they have). Ask them to read the *Recognizing classification* box, then ask concept check questions to ensure they have understood: *Why is classification used in texts? What are three ways texts classify information?*

Ask students to skim the text to find the paragraph that contains three classifications and their definitions (**Answer:** paragraph 3).

Ask students to work alone to write the headings from the box into the text. This is a skimming exercise, so set a time limit of three minutes. They compare answers in pairs. Monitor and share feedback as a whole class. Ask students to say what clues they used to match the headings with the paragraphs. Ask them to highlight or underline these clues. This will help lower-level students who may be struggling to match the headings to the paragraphs.

ANSWERS

- 1 Types of identity traits
- 2 The importance of identity
- 3 Dangers of social identity
- 4 Implications

D Close reading

Scanning

Exam skills

Before referring to the exercise, check what students know about scanning. Ask: *What is the difference between skimming and scanning?* (Skimming is when your eyes pass over the text quickly, without reading every word, in order to understand the general idea. Scanning is searching quickly through a text for specific information.) Also ask: *How does using topic sentences help with scanning and finding information?* (Topic sentences identify the main idea of the paragraphs. This means you can quickly find the area you need to scan for specific information, rather than scanning the whole text.)

- 1 Ask students to work alone to find the definitions. Encourage them to use their own words where possible. In whole-class feedback, ask students to give you an example of each trait.

ANSWERS

- 1 An ascribed trait is one that you are born with.
- 2 An achieved trait is one you work for.
- 3 A chosen trait is something that you choose for yourself.

- 2 Students work in pairs to match the examples with the concepts. In feedback, ask students to say the concept and the example rather than the number and letter, and ask them why they think this is the correct match. This will reinforce the learning of the new terms. For example, ask: *Why is being the employee of a certain company an achieved trait?*

ANSWERS

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

Extension activity

Ask students to describe themselves using the concepts from Exercise 2. Put your own example on the board as a model for lower-level students.

E Critical thinking

Warm-up

Students may not be familiar with the concept of critical thinking, so it's worth spending some time helping them to understand what it is and why it's important. Ask students to close their books. Write this sentence on the board: *Everything you read in the newspaper is true.*

Ask students to say whether or not they agree with the statement. This will provoke a discussion about why the statement is probably not true. Point out that, in questioning the validity of the statement, students are using their critical thinking skills. Provide a definition of critical thinking: *analyzing an issue objectively in order to form a judgement; questioning ideas and assumptions instead of accepting them without question.* Point out that this is an important skill to learn as they move into academia.

Students discuss the questions in small groups. To facilitate group discussion, ask one student to be the "leader." The leader ensures that everyone has a chance to say what they think. This will help ensure that more talkative students don't dominate the discussion and give shyer students the opportunity to speak, too. In whole-class feedback, ask volunteers for contributions.

Extension activity

Ask students to choose one of the three critical thinking questions and write a response (one or two paragraphs) on the class blog.

STUDY SKILLS

Self-awareness and self-evaluation

Warm-up

Lead into the topic of self-awareness and self-evaluation by conducting a mingling activity. Write the following on the board, or put it onto a handout and give each student a copy. Students stand up and mingle to try to find someone for each of the categories below. They should find a different person for each.

Find someone who ...
is good at sports
has good study strategies
knows what job they want to do in the future
can play a musical instrument
has a good sense of humor
plans to go to graduate school
has their own blog
has a part-time job

- 1 Stella Cottrell's *The Study Skills Handbook* offers students invaluable advice, study tips, and techniques on how to become an effective and successful learner. Ask students to read the *Self-awareness and self-evaluation* box and complete the chart. Help students who are struggling by suggesting concrete examples—e.g., *Are you good at learning new vocabulary, thinking of ideas in writing, speaking without hesitation? Do you need to improve your strategies for planning writing?* They then compare their responses with another student or group.
- 2 Students work in pairs to decide which methods could be used to evaluate themselves in areas 1–4. In feedback, find out if students have any other suggestions.

READING 2

How permanent is your personality?

A Vocabulary preview

- 1 Students work alone to match the words with the definitions. Ask students to check in pairs then check as a whole class. If class time is short, students can do the *Vocabulary preview* section for homework.

ANSWERS

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

Extension activity

Review the target vocabulary with a teacher-led quiz. Write the words on the board. With books closed, give the definition and ask students to tell you the word. Correct and drill pronunciation. Hum the words and see if students can guess the word you are humming based on the stress pattern. For example: m-m-M-m = *correlation*; m-M-m-m = *participant*.

- 2 Draw students' attention to some common collocations in the sentences: *correlation between*; *suggest that*; *to be rated high or low* in something. Students work alone to complete the sentences. Ask students to check in pairs then check as a class.

ANSWERS

1 correlation 2 tend to 3 current 4 frustrated
5 suggest 6 participants 7 rated 8 modest

Extension activity

In pairs, students write sentences with blanks with the vocabulary words. They swap papers with another pair and complete the new set of sentences with blanks. Ask them to add the words to their vocabulary notebooks.

B Before you read

Preparing to read

Refer students to the picture on page 16 which shows someone demonstrating different personality aspects. Ask students what they think the picture shows. Give students three minutes to think about the question: *How permanent is your personality?* Put students into small groups to discuss the question. Go through their ideas as a class. Ask students to explain their ideas.

C Global reading

Understanding main ideas

Ask students to read the questions. Elicit the meaning of *intended audience*. Ask: *What is the difference between skimming and scanning?* (**Answer:** Skimming is when your eyes pass over the text quickly, without reading every word, in order to understand the general idea. Scanning is searching quickly through a text for specific information.) Set a three-minute time limit for them to complete the task.

POSSIBLE ANSWER

The tone is informal. It has a conversational style, and uses contractions, informal expressions, and non-academic vocabulary. It is intended for psychology students or people working in that area, or research students or people working in that field.

D Close reading

Recognizing substitution words

On the board, write:

I prefer the other book.

I like this book better than the other.

Ask students which sentence contains the word *other* as an adjective. How do they know it's an adjective? (**Answer:** *Other* in the first sentence modifies or refers to *book*). Ask students what part of speech *other* is in the second sentence (a noun). Point out that in the second sentence, *the other* could be replaced with *that book*. Ask them why they think we use *the other* instead. (**Possible answer:** It sounds better—there is less repetition.)

Refer students to the *Recognizing substitution words* box to find out (1) if *other* as a noun can be made plural (**Answer:** yes), (2) which refers to two people at the same

time: *each other* or *one another* (**Answer:** each other), (3) which refers to more than two people at the same time: *each other* or *one another* (**Answer:** one another).

Students work alone to find examples of *other*, *another*, *each other*, and *one another* in the text and decide what they refer to. Make sure they understand that the paragraph numbers are listed to help them find these words. To support lower-level students, break this task down into stages. First, ask students to find the words in the paragraphs and highlight them. Next, show students how the adjective *other* in the first paragraph refers to people to get along with. See if students can do the second one on their own and check their answer before letting them complete the exercise. Students compare answers in pairs before checking in feedback.

ANSWERS

- 1 other; people to get along with
- 2 each other; ratings in different years
- 3 other; people in general
- 4 each other; a person you knew in school
- 5 another (note that this is being used as a determiner); chance
- 6 one another; employees in a workplace

Extension activity

Give students time to read the article more carefully. They should underline or highlight the vocabulary words from the *Vocabulary preview* section and the glossary for the article. Ask students to summarize the article orally in pairs. As a whole class, write a one- or two-sentence summary of the article on the board, beginning with *This article ...* (**A possible summary:** This article shows research that suggests that people's personalities change over time, and gives implications for why this might be important.)

E Critical thinking

This section helps students practice the critical thinking skills of reflection, evaluation, explanation, and analysis. Students work alone to think about the questions and make some notes. Put students into groups and appoint a group leader whose task it is to ensure everyone has a chance to share their answers, and a group scribe whose job it is to write the answers down. In feedback, ask a volunteer from each group to share their responses.

Exam skills

Part 3 of the IELTS Speaking Test focuses on a discussion of the candidate's views on a range of related topics. The candidate is expected to expand on, justify, and clarify ideas put forward. Students should always try to participate fully in opportunities to do this in class. Equally, writing our thoughts can help to clarify them, as can putting our opinions into words and having to support them.

VOCABULARY

Vocabulary development

Vocabulary for identity types

Remind students of the three identity types—*ascribed*, *achieved*, *chosen*—from *Social identity*. Tell them they are going to learn eight more terms which describe identity types. Brainstorm some ideas on the board. Then ask students to read the information in the *Vocabulary for identity types* box and check if any of the identity types are the same as the ideas they brainstormed.

- 1 Ask students to work in pairs to complete the exercise, using a monolingual or online dictionary if needed. Encourage students to use the strategy of completing the sentences they are sure of first, then going back to use a process of elimination to complete the others. Monitor the activity and help with vocabulary where needed. To support lower-level students, ask students to highlight clues in the definitions: 1—*logical*; 2—*ideas and concepts*; 3—*rules and specific guidelines, orderly*; 4—*outgoing, sociable, interested in other people*; 5—*emotions and feelings*; 6—*inner world, alone*; 7—*different outcomes, anything is possible*; 8—*concrete information, evidence, seen, heard, felt*.
Go through the answers with the class.

ANSWERS

- 1 Thinking 2 intuitive 3 judging 4 Extroverted
5 Feeling 6 introverted 7 perceiving 8 Sensing

- 2 Students work in pairs to match the traits with their opposites. Students may struggle with the pair *sensing* and *intuitive*. *Sensing* uses the senses—concrete examples of what we see, hear, or feel. *Intuitive* is related to *intuition*—intuitive types draw their conclusions on what they know about the world.

ANSWERS

- 1 b 2 d 3 a 4 c

- 3 Ask students to work in a small group to discuss the questions. Choose a different student for the role of group leader. In feedback, you might point out that many companies do ask employees to take personality tests either as part of personal development or to find out who would be good to work together on a project. It is thought that a good team will have the full range of personality types to reflect the different roles in a team.

Extension activity

Ask students to complete a free online Meyers Briggs personality test to find out their personality types (search: *Meyers Briggs test*). These tests generally name 16 different personality types and indicate four strong types. In class, ask students to share their results and evaluate whether or not they think they are accurate and / or useful.

VOCABULARY

Academic words

Warm-up

As this is the first time students will be encountering the *Academic words* section, it's worth discussing the difference between everyday and academic words, and when each is used. Write these words on the board in random order: *help, aid, yearly, annual, make sure, ensure, take out, extract, change, manipulate, participate, take part in, assessment, test, the same, consistent, function, use, occur, happen, significant, important*. In pairs, students first pair the words, then sort them under the headings ACADEMIC WORDS / EVERYDAY WORDS. (**Answers:** ACADEMIC WORDS: *aid, annual, ensure, extract, manipulate, participate, assessment, consistent, function, occur, significant*; EVERYDAY WORDS: *help, yearly, make sure, take out, change, take part in, test, the same, use, happen, important*). In feedback, ask students when it's preferable to use each. (**Possible answer:** to use academic words when writing papers for university, or when discussing topics intellectually. People who use academic words in common, everyday situations can sound too formal. For example, you wouldn't expect to hear someone tell you: "Extract the trash, please.")

- 1 Students work alone to match the words with their definitions. They check in pairs and report back to the class. Check students can pronounce all the words: *comprehensive* /ˌkɑmpɹə'hensɪv/, *journal* /'dʒɜːn(ə)l/, *outcome* /'aʊtˌkʌm/, *scope* /skoʊp/, *variables* /'veriəb(ə)lz/, *volunteer* /ˌvɒlən'tɪr/. Focus particularly on the word stress by asking students to underline the stressed syllable in each. Ask them to record any difficult words in their vocabulary notebooks.

ANSWERS

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

- 2 Students work alone to complete the paragraph with the correct words, changing the form if necessary. Ask students to check in pairs then check as a class. Point out some common collocations: *a comprehensive study*; *a broad scope*; *to take variables into account*. Note that *to take something into account* means *to consider or include something*.

Using blank 2 as an example, ask students what makes the study *comprehensive* (**Possible answer:** It had a large group of people), and if the *scope* could have been broader, what other *variables* it might have included. (**Possible answer:** It might have included profession, level of education, nationality, etc.)

ANSWERS

1 journal 2 comprehensive 3 volunteers 4 scope
5 variables 6 outcome

- 3 Ask students to discuss the questions with a partner. Encourage students to use the target words while discussing the questions. When they are ready, ask volunteers to report back to the class.

Extension activity

Ask students to find a study related to their field of interest. They should evaluate the study—Is it comprehensive? How reliable is it and why? Does it have important implications? Students can share their evaluation and the link to their study in the class blog, or bring their evaluation to class to discuss in the next lesson.

CRITICAL THINKING

Generalization

Warm-up

Students close their books. Ask them what they think *generalization* means. Students may be able to work out the meaning by breaking the word up into word forms: *general* (adj)—not specific, *generalize* (v)—to make a statement about something without going into detail. So, a generalization would be a statement that is true in most, but not all, situations. Give an example: *Girls mature faster than boys*. This is generally true, but there are obviously many exceptions. Elicit some other examples. Note that many generalizations can be based on stereotypes which can be harmful.

Students read the *Generalization* box. Check that students have understood when generalizations are reasonable or not. Discuss the difference between the two generalizations about sport. Which one contains a hidden generalization? (**Answer:** The first one—it assumes that only boys who do well at sports develop social skills when in fact it's all children who develop these skills. This feeds the stereotype that only boys do sports.)

- 1 Students work alone to read the paragraph and find the two over-generalizations. In pairs, they reword them so that they are reasonable generalizations.

ANSWERS

a girl who talks too much; a possible change is: a person who talks too much
a guy who's too pushy; a possible change is: someone who's too pushy

- 2 Students work in pairs to analyze the statements. In feedback, ask students to say why the over-generalizations are not valid.

ANSWERS

b and c are over-generalizations
b not all women “abandon” their jobs; *abandon* is a strong word with a negative connotation—*leave* is a more neutral word; men may also leave their job in order to spend more time with their children
c shorter children may not have lower self-esteem (why would they?); other factors may affect self-esteem; teachers should take other things into account when forming study groups

- 3 Ask students to discuss the questions with a partner. In feedback, point out that over-generalizations in academic work lessens the validity of an argument, and so should be avoided. Ask students to consider whether over-generalizations they hear or use help to perpetuate harmful stereotypes.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Highlight that all the work done in this section will build towards the final task, supporting the students and helping them to produce a quality piece of writing. At the end of the unit, they can use this as a checklist for what they have learned.

Warm-up

Put students into pairs to think of three things they find difficult about writing. They write these on a piece of paper, then pass their paper to another pair. The students read each other's difficulties and think of possible solutions.

(**Example:** Difficult—organizing my writing; solution: write a plan of what you want to say.) If one pair can't find a solution, they should pass the paper to another pair who think they may have a solution. Students pass the papers back to the original pair to read. In feedback, ask volunteers to read one difficulty and a solution they found helpful. Find out if there are any difficulties that don't have solutions and offer some advice. Some other solutions might be: keep track of vocabulary by topic, and use your vocabulary notebook when writing; don't worry about the word you don't know—get your ideas down first, then go back and edit; use a computer and turn on spelling and grammar notifications; brainstorm / find words related to the topic before you start writing; after writing your essay, go back and check your line of argument, word choice, and grammar; ask a friend to read your essay to see if it makes sense to them; read the essay prompt carefully so you know what you need to write.

A Model

- 1 Understanding what is required in an essay is a key skill for students. Often, students lose points because they have gone “off topic” and failed to answer the essay question. Students work alone to complete the exercise, then compare answers in pairs. In feedback, stress the importance of answering the question and using it to plan the essay. Note that this is an agree / disagree type essay. In it, you must say whether you agree and give reasons to back up what you say.

ANSWERS

not born with a fixed identity
raised determines your personality
agree
reasons
relevant examples
own knowledge or experience

- 2 Ask students to read the model alone. To support lower-level students, ask them to highlight or number the parts of the model that are in the essay prompt and which answer the question.

ANSWERS

Yes, the student gave their own opinion and included reasons and examples.

B Analyze

- 1 Brainstorm with students the parts of an essay. Ask them to label each paragraph in the model essay with this purpose. In feedback, ask students if this essay follows a similar pattern to an essay in their native language. (Essays in English follow a set pattern that some students may not be familiar with.)

ANSWERS

1 introduction 2 supporting example
3 supporting example 4 conclusion

- 2 Make sure students understand what a thesis statement is. Point out that the thesis statement generally comes at or near the end of the first paragraph.

ANSWERS

Both research and personal experience have led me to think that the most important factor is the identity that people have from birth. It appears in paragraph 1.

- 3 Ask students to work in pairs to discuss the questions.

ANSWERS

Outside research appears first.
It is more convincing than just personal experience.

GRAMMAR

Reflexive pronouns

Warm-up

On the board, draw the table below, but with only the *Subject pronoun* column completed. Add the titles to the other columns and ask students to complete the table. Note that we don't generally use the possessive pronoun *its*—*It's its bowl*.

Subject pronoun	Object pronoun	Possessive determiner	Possessive pronoun	Reflexive pronouns
I	me	my	mine	myself
you	you	your	yours	yourself
he	him	his	his	himself
she	her	her	hers	herself
it	it	its	–	–
we	us	our	ours	ourselves
you	you	your	yours	yourselves
they	them	their	theirs	themselves

Tell students to read the *Reflexive pronouns* box and check their ideas.

- 1 Give students time to read through the information in the *Reflexive pronouns* box. Check that students understand when to use reflexive pronouns before asking them to complete the exercise. To support lower-level students, ask them to underline or highlight the noun that determines which pronoun to use and get them to say if it is singular or plural.

ANSWERS

- 1 themselves 2 yourself 3 ourselves 4 himself 5 herself

- 2 This exercise focuses on reflexive pronouns for emphasis. Students work alone to rewrite the sentences, then compare in pairs. In feedback, ask students why they might want to add emphasis in the sentences.

ANSWERS

- 1 You yourself are responsible for paying the fee.
- 2 I myself don't believe identity is very important.
- 3 Nobody was more surprised by the results of the study than the researchers themselves!
- 4 Ms. Jimenez herself couldn't believe the outcome of her research.
- 5 Jack created the contest, and then he himself won it!

- 3 Ask students to work in pairs to complete the exercise.

ANSWERS

themselves (paragraph 3): refers to *people*
yourself (paragraph 7): refers to *you*; used for emphasis
yourselves (paragraph 9): refers to *you and your (childhood) friends*
myself (paragraph 11): refers to the speaker
themselves (paragraph 11): refers to *patients*

WRITING

Writing skill

Techniques for brainstorming

Brainstorming is an important part of planning, and a part that many students leave out. Help students see the importance of this idea-generating phase, and if necessary, ask them to submit their brainstorm along with their essay. This will help you identify how students are generating their ideas and if they need more support in this area.

- 1 Students read the *Techniques for brainstorming* box and then label the examples. In feedback, ask for a show of hands of who prefers which method of brainstorming. Point out that the aim of brainstorming is to get as many ideas down as possible without

worrying about grammar or spelling—editing happens at a later stage, and worrying about accuracy can hinder the initial flow of ideas.

ANSWERS

- 1 word map 2 free writing 3 chart

- 2 Ask students to choose one topic and one brainstorming method. Set a time limit of five minutes for students to brainstorm the topic using their chosen method. When the time is up, ask students to choose a different method and brainstorm the same topic again, again with a time limit of five minutes.
- 3 Students discuss which brainstorming method they found generated the most ideas and which one would be easiest to write an essay from. Point out that the method is personal preference, but if one method is not working well, they should try another.

WRITING

Writing task

Warm-up

Students close books. Ask students what stages they use when writing—write these on the board. You may find that not many students plan, that fewer rewrite and edit, and that even fewer ask a friend to comment on their essay. Put students into pairs to look at the five stages of writing an essay on page 24. For each stage, they should write why they think it's important. Possible answers include:

brainstorming—to generate ideas

planning—to organize your ideas and plan the structure of what you will say. Planning also helps you see what parts of the essay question are missing.

writing—this is self-evident

share—this may be a new concept for some students and some may see it as either cheating or “doing the job of the teacher.” Point out that, although we shouldn't ask a friend to rewrite things for us, friends provide a “fresh set of eyes” and they can help us see things we might have missed. All professional journal articles are peer reviewed—peers in the field read and comment on articles before they are published to help make the writing better and more accurate.

rewrite and edit—although our words and thoughts are precious to us, we need to realize that they may be expressed better. If we look at what we have written and analyze it with a critical eye, we can improve the content and structure.

Point out to students that writing is more than just practicing grammar and vocabulary—it's about expressing ideas—and these stages will help them learn to express their ideas more clearly.

Brainstorm

Review the writing task as a class. Ask students to look at the task and underline or highlight the key things to include in their essay. Remind students of the brainstorming methods from page 23 and ask them to choose one. Tell them that this is a brainstorm stage, so there is no right or wrong answer. Set a time limit of five minutes for this stage. Put students into pairs to compare their brainstorms and see if their partner can suggest anything else to add. Go through their ideas as a class, adding ideas on the board.

Although it's tempting to assign writing tasks for homework, there are strong arguments for doing them in class. First, teachers can see what students do when they are writing—Do they stop to look up every word? Do they count words as they go along? Do they write without referring to their plan? These are examples of poor writing skills and students doing these need help in brainstorming, planning, and using their plan effectively. Second, by completing writing in class, students begin to realize that writing is as important as the other things they learn such as grammar and vocabulary. Another benefit is that you can be sure that the student actually wrote the essay him or herself—this means that you can find out their actual strengths and weaknesses so that you can help them overcome them. Too often students get “help” at home and the teacher doesn't realize until test time that the student is having a problem. Finally, you can be sure that every student follows the five stages in the writing process. This will be particularly useful for those students who find writing difficult or who “hate” writing.

Plan

Students look at their brainstorm and write their thesis, or the answer to the question, *To what extent do you agree with this idea?* Refer students back to the model on page 21 for ideas if needed. Remind them that they need an introduction, supporting detail paragraphs, and a conclusion. They may wish to use this structure as an outline in their plan. Give students the opportunity to make further notes or change their answers and / or examples if they wish.

Write

Give students 30 minutes to write their essays. Highlight the elements that should be included, as listed in the task instructions. If you have students who finish more quickly, ask them to look at the checklist in the *Rewrite and edit* section to evaluate their work.

Share

Some students may not have finished in 30 minutes, but assure them that that's OK. Tell students to look at the checklist on page 189. They use the checklist to compare their writing in pairs and offer suggestions for improvement. Each student should write their feedback on the essay paper.

Rewrite and edit

Students read their partner's comments and rewrite and revise their text, checking for errors. Remind them to pay particular attention to correct use of reflexive pronouns. This stage could be done for homework if class time is short, but tell students to turn in their brainstorm, plan, and first draft with peer comments along with their final essay. This will allow you to give feedback on all stages of the writing process and will let students know you are serious about the importance of each stage.

REVIEW

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class. Suggest ways to revise the vocabulary at home—with flashcards, by writing sentences, reviewing their notes, or with a friend. Another way to revise would be to re-do the exercises in the book.

Academic words review

Students work alone to complete the sentences. Ask students to check in pairs then check as a class.

ANSWERS

1 scope 2 volunteer 3 comprehensive 4 outcome
5 variables

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

READING 1	Recognizing paraphrasing
READING 2	Recognizing examples
STUDY SKILL	Writing a first draft
VOCABULARY	Adjectives to describe products
GRAMMAR	Using <i>can</i> to express universal truths
WRITING	Organizing your brainstorm

Warm-up

With books closed, ask students to guess how many people and how long they think it would take to do the things listed in the *What would it take to do these jobs by hand?* infographic by hand. Once they have made their guesses, ask them to read the infographic to see how close they were to a correct answer. Ask students if any of the figures surprise them.

Discussion point

Students work in small groups to discuss the questions. Ask students if they or anyone they know does creative work, such as knitting, craft work, furniture making, etc. by hand. Invite them to share pictures of their work on the class blog.

VIDEO

Warm-up

Bring in a handmade object that you admire, or find an image of one on the Internet to show students. Talk about why you admire it. For example, you may like the craftsmanship or appreciate the work that went into it. Find out if students have similar hand-crafted objects that they admire or cherish.

Before you watch

Students work alone to match the words with the definitions. Make sure students know the pronunciation of the words.

ANSWERS

1 c 2 e 3 a 4 b 5 d

While you watch

Introduce the topic of the video and give students time to read through the sentences first to make sure they understand what information they will be looking for. Play the video once. Ask students to check in pairs and then check as a class. If necessary, play the video a second time so students can check any answers or information they missed. Go through the answers with the class.

Extension activity

Post the video on the class blog so that students can watch in their own time.

ANSWERS

1 T 2 T

3 F (They compete by providing higher quality products.)

4 F (The artisans think the Tunisian government should help them.)

See pages 106–107 for the video script.

After you watch

Students work in pairs to discuss the questions. After a few minutes, open up the discussion to include the whole class. Encourage students to explore different viewpoints.

READING 1

Beautifully broken

Warm-up

Students close their books. Write the title of the article on the board: *Beautifully broken*. Ask the class what they think the title means. How can something be “beautifully broken”? Museums display many works of art—sculptures, pottery—that are broken. Are they still beautiful?

A Vocabulary preview

If class time is short, students can do the *Vocabulary preview* section for homework. In class, students work alone to match the words with the definitions. Ask students to check in pairs and then check as a class. Correct and drill pronunciation.

ANSWERS

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

Extension activity

Help students build their vocabulary with word forms charts. Once they know the meaning of a word, they can increase their use of it by learning the different word forms. Draw a word forms chart on the board. At the top of the columns, write: *noun, verb, adjective, adverb*. Add the vocabulary words and ask students to find the other word forms. Sometimes there isn't one, so they can just put a line in the space. They should underline the stressed syllable in each word form as sometimes it changes. Encourage students to add to their word forms chart as they progress through the course. To practice using word forms, students write a sentence with each word form: *It is good practice to check your work when you finish. I practiced playing the piano for five hours yesterday. Sarah is a practiced public speaker.*

noun	verb	adjective	adverb
practice	practice	practiced	—
value	value	valuable	—
flaw	—	flawed / flawless	flawlessly

Put students into pairs to write sentences with blanks with the vocabulary words. They write the sentence, but leave out the word. They can use any form of the word they wish. When finished, they swap with another pair to complete the sentences.

Extension activity

Students are already recording vocabulary from the unit in their vocabulary notebooks, but may not know how to study them effectively. Flashcards have been shown to be one of the most effective ways to study vocabulary, so encourage students to create their own set of flashcards. They write a word on one side of the card, underlining the stressed syllable and putting the word form in parentheses. On the other side of the card, they write the definition and sample sentence, leaving a blank where the word should go. To use the cards, students turn them word-side down in a pile. They pick up the card, read the definition and sentence, and say what the word is. This can be done in class in pairs, or at home for self-study. You can also ask students to make vocabulary flashcard sets online with an app such as Quizlet. This app allows students to play vocabulary learning games which may appeal to some learners. You can also display the sets on a projector in class for in-class vocabulary revision and revision games.

B Before you read

Preparing to read

Students discuss the questions in pairs or groups. After a few minutes, open the discussion to include the whole class. Introduce the expression “throw-away culture”—a culture that prefers to throw broken things away instead of repairing them. Find out if students come from a throw-away culture or if their culture prefers to mend broken items.

C Global reading

Understanding organization

Warm-up

Brainstorm some ways texts might be organized. Give examples to facilitate. Possible examples are: a novel (by events, chronologically); an instruction manual (by steps or stages); a scientific paper (by cause and effect); a manifesto (by problems and solutions); etc.

Students read the five different types of text organizations. Give them three minutes to scan the text to identify the type of organization it has. Ask volunteers to say which parts of the text helped them find the organization.

ANSWER

- 2 From definitions to examples to applications

D Close reading

Recognizing internal paraphrasing

- 1 Write the word *paraphrase* on the board and ask students if they know what it means. *Para* comes from Greek and means *beside*. *Phrase* means *a word*. Point out that to paraphrase well, we need to know synonyms for words and their word forms. Ask students to work alone to complete the exercise before comparing answers in pairs. Tell students to be aware that sometimes words change meaning according to the context. For example, a *vessel* can be something such as a bowl or glass that contains something, but it can also mean a ship. In the context of the text, it refers to a bowl. This is the same with *mistake*. In a language class, we might make a mistake or error, but in this context, a mistake is a flaw.

ANSWERS

- 1 c 2 c 3 a 4 b 5 b

Exam skills

This exercise is an exam-type task. It requires students to decide if the information is True, False, or Not Given. This type of task can be challenging for some students because some statements may be true or false, but are not stated in the text. Students need to learn not to choose what they think is true or false, but look to the text to see what it says. When dealing with this type of exercise, ask students to tell you where in the text they found the answer. If they can't find it in the text, then it is Not Given.

- 2 Ensure students understand what Not Given means, as they may not have encountered this type of exercise before. Students work alone to read the text and complete the exercise. Tell them to highlight or underline the part of the text where they found the answers. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 T 2 NG
- 3 F (Para 5: In fact, artists who value the *wabi-sabi* aesthetic create works that are deliberately imperfect)
- 4 T 5 NG

Extension activity

Ask students to go online to find examples of *kintsugi* pottery. In the next lesson, find out how many students appreciate this art form and who prefers flawless objects.

E Critical thinking

Give students some time to read and think about the questions. Put them into groups of three to four to discuss. Ask students if they know of similar stories that are probably not true, but that serve a cultural purpose. (Examples from American lore include: Paul Bunyon, who was a giant logger with a giant blue ox and was famous for being able to chop down trees in one chop; Johnny Appleseed, famous for planting the American west with apple trees; and John Henry, a railroad man renowned for his ability to drive the steel pins used in railway building into rock. He competed with a steel-driving engine and won.) These kinds of stories tell us about what a culture values.

Extension activity

Mistakes or failures are an inevitable part of success. Edison famously made hundreds of unsuccessful attempts at inventing the light bulb before he was successful. Ask students to find other examples of people who were not deterred by their mistakes or failures and who went on to become successful. They can share these in class or on the class blog.

STUDY SKILLS

Writing a first draft

Warm-up

Students close their books. Ask students to reflect on their writing assignment from the last unit—what did they do to edit their first draft? Put these ideas on the board. Ask students to read the *Writing a first draft* box to compare the class list with the tips. Check that students understand the word *hypotheses* (plural of *hypothesis*) and *line of reasoning*. Highlight the fact that reports and dissertations have headings, but essays don't.

- 1 Ask students to put the advice from the box into the correct column in the chart.

ANSWERS

Pre-writing / planning	Writing the first draft	Editing and revising
Focus on the assignment question. Clarify your core points.	Use your plan. Write headings and subheadings. Add in supporting details ... Link it up.	Stick to your plan.

- 2 The following exercises help students learn how to write an outline for their essay. Students work alone to interpret the question, then compare and discuss their interpretation with a partner. Ensure students have understood what the question is asking and what they need to include.

- 3 Ask students to discuss the topic with a partner and then make a list of the core points they would include in the answer. Give support to students as needed. Fast finishers can re-group with slower workers to share ideas.
- 4 Do one example on the board with the class to facilitate this exercise, as students may not be confident in coming up with headings. Use the following example or one taken from what the students have said:
Advantages of machine-made products:
 - cheaper
 - can be mass-produced
 - creates more jobs for people.
 Students work alone to put their main ideas under headings and subheadings.
- 5 Ask students to compare their headings and points with a partner. Collect these up so that you can see whether students have a good idea of how to structure this type of essay and if they are including the information needed to answer the question. Give feedback on each. Show some good examples of outlines—without mentioning the name of who wrote them.

READING 2

Community development: A new business in town

A Vocabulary preview

- 1 Ask students to do the *Vocabulary preview* section for homework and find at least one collocation for the words if they can. In class, collate the collocations on the board for students to copy. Review and extend the vocabulary. Ask students to add the new words to their vocabulary notebooks and word forms charts, and check and drill pronunciation. Note that *be on good terms with* is a phrasal verb that can't be separated. Practice the /θ/ sound in *thick* by asking students to put their finger vertically on their lips when they say the word. The tongue should come out and touch the finger. Put students into pairs to ask each other questions using each vocabulary word referring to the collocations on the board. For example, *Are you entirely confident that you can write a good essay?*

ANSWERS

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

- 2 Students work alone to complete the sentences with words and phrases from Exercise 1. Remind students that they might need to change the word forms. Monitor and provide guidance where necessary. Ask students to check in pairs then check as a class.

ANSWERS

- 1 on good terms with
- 2 entirely
- 3 romantic
- 4 harm
- 5 objections
- 6 thick
- 7 functional
- 8 delicate

Extension activity

Ask pairs to rewrite sentences 2–8, but using a different word form. Give an example on the board (sentence 2): *The entire boot is not made of leather.* Ask volunteers to write their sentences on the board.

B Before you read

Preparing to read

Warm-up

Tell the students to imagine that a company wants to build a large factory near the college. Divide the class in half. Half should think of reasons this might be a good idea, and the other half thinks of reasons it might be a bad idea. Give them five minutes to list their reasons. Share ideas with the whole class.

Students read the *Before you read* section. Ask students to work in pairs to make a list of the questions the reporter will ask and a list of what the company representative will want to offer. Pairs group with another pair to share answers. Ask students if their reporter questions show that the reporter is in favor of, against, or neutral about the factory. Ask them what kind of information the company representative wouldn't want to offer, and how he / she might try to convince the reporter that the factory is a good idea. If appropriate, introduce the idea of *spin* (= to present information in a particular way, especially in a way that makes something seem good or less bad).

C Global reading

Reading for tone

- 1 Allow students three minutes to skim the text to find out if the people mostly agree or mostly disagree. Ask volunteers to say what led them to their conclusion.

ANSWER

Mostly disagree

- 2 Elicit from the class the meaning of *tone* (= the general attitude of a speaker or text). Ask students to identify and share parts of the text that show the tone is friendly.

ANSWER

Yes. They each acknowledge the other person's opinion.

D Close reading

Understanding exemplification

Write the word *exemplification* on the board. Ask students what word they see in the word (*example*) and what part of speech it is (noun). Note the word has a primary and secondary stress: *exemplification* and that the verb is *to exemplify*. Tell students to read the *Understanding exemplification* box to find out how writers and speakers use exemplification.

Ask students to work alone to match the examples from the reading with the idea they are supporting or explaining. Check these before asking students to find the word or phrase the author used to signal the example. Ask students to highlight these in the text.

ANSWERS

- 1 e; That is 2 d; as one example 3 a; One example is
4 c; that's another example of 5 b; to name just a few

E Critical thinking

Assessing the impact of changes is an important critical thinking skill. This assessment can take place on a personal level (How does this affect me?) and on a broader, more general level (How does this affect society / young people?). Ask students to form small groups and elect a group leader to discuss the questions. Ensure students understand the word *biased* (= preferring one person, thing, or idea to another in a way that is unfair) and *bias* (= an attitude that makes you treat someone in a way that is unfair), and check their pronunciation.

See if students remember the concept of *wabi-sabi* from *Beautifully broken*. Monitor and provide help where necessary, pointing out that the adjective choice *brave* shows a certain amount of bias. Another example is her line of questioning—talking about the objections, for example, though you might argue that it is good journalism to question two sides of an issue.

VOCABULARY

Vocabulary development

Adjectives for describing products

- 1 Write the word *romantic* on the board. Ask students if they think this word is a positive one, a negative one, or if it's neutral. In general, it's positive. It has a positive connotation. See if students can think of a situation in which it could have a negative connotation. Since adjectives show our feelings about things, they can have different meanings to different people. Then ask students to find the meaning of the words and put them into the correct categories. They can use a dictionary if needed. Note that answers may vary. Discuss any disagreements about the words' connotations.

POSSIBLE ANSWERS

Positive: appealing, durable, innovative, multifunctional

Negative: generic, fake

Neutral: contemporary, mass-produced

- 2 Students work alone to think of products which fit the descriptions. Ask students to check in pairs and then check as a class.

Extension activity

Do some collocation work with the adjectives. Students should use a monolingual dictionary, online dictionary, or a concordance such as the Corpus of Contemporary American English (at time of writing: <http://corpus.byu.edu/coca/>). This could be done for homework and shared in the next class.

VOCABULARY

Academic words

- 1 Ask students to match the words with the correct definitions. Students could do Exercises 1 and 2 for homework. After checking, see if students can find synonyms for each word. (**Possible answers:** enhance—improve / optimize; notion—thought / idea; overseas—abroad; philosophy—belief; survive—come through / last / endure; tradition—custom)

ANSWERS

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

- 2 Students complete the sentences, changing the form where necessary.

ANSWERS

1 survived 2 notion 3 philosophy 4 tradition
5 enhanced 6 overseas

- 3 Students work in small groups to discuss the questions, using the vocabulary from Exercise 1. Give each student six cards or squares of paper. They write one of the words from Exercise 1 on each. As they discuss the questions, they try to use the words. When they do, they can discard the card with the word on it. Students should try to discard all of their cards, and help others discard theirs by prompting with questions and turn-taking.

Extension activity

Give each student ten cards or squares of paper. Tell them to look back through Units 1–2 to find vocabulary words. They write one word on each card or piece of paper. Put students into pairs. Students combine and shuffle their cards and place them face down in front of them. Student A takes a card and gives a definition, synonym, or example—but not the word or word form itself—so that Student B can guess the word. Student A continues in this way for one minute with Student B trying to guess as many words as possible in that time period. After one minute, the teacher calls time, and the students swap roles. Repeat once or twice more, depending on class time. This activity improves fluency and practices the skill of explaining a word without using it. It is useful when you don't know a word, but need the other person to provide it.

CRITICAL THINKING

Flawed arguments

- 1 Read through the information about flawed arguments in the *Flawed arguments* box with the students. In pairs or small groups, ask them to discuss the examples, and then to read the texts and match them with the type of flawed arguments in the box.

ANSWERS

- 1 Repeatedly restating the claim
- 2 Attacking the opposing view
- 3 Using irrelevant evidence

- 2 Students work with a partner. Pairs choose a text and discuss ways to improve it. After a few minutes, open the discussion to include the whole class.

WRITING

Writing model

Warm-up

Divide the class into group A and group B. Group A brainstorms advantages of handmade products. Group B brainstorms advantages of machine-made products. Give them five minutes to brainstorm. Put students into pairs—one from group A and one from group B—to compare and discuss their lists. Tell students to keep these lists as they will be useful for the writing task.

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Ask students to identify what they will learn about (**Answer:** using *can* to express general truths and how to organize and edit your ideas) and what they will do (**Answer:** write an essay expressing advantages and disadvantages). At the end of the unit, they can use this as a checklist for what they have learned.

A Model

- 1 Students work alone to read the essay prompt and underline the key words. Ask students to check in pairs and then check as a class.

ANSWERS

some advantages
specific reasons and examples

- 2 Students read the model alone. To support lower-level students, ask them to highlight the advantages. After the students have answered, point out that writers generally save their most important point to last—the argument builds to end on the key point.

ANSWER

three advantages; students' own answers

B Analyze

- 1 Students highlight or underline the thesis statement. Discuss the second question as a whole class. Point out that the first sentence is very broad and introduces the topic. The second sentence is more specific and gives more information to introduce the topic.

ANSWERS

Thesis statement: While it's true that handmade pieces can be very beautiful, there are three important advantages to machine-made items.

Two sentences come before the thesis statement. Their purpose is to give context and introduce the comparison.

- 2 Students highlight or underline the signal phrases the writer uses. To support lower-level students, help them identify the reasons (i.e., the advantages) and the examples in the second paragraph (reason = *machine-made items are inexpensive*; example = *A shirt that looks almost exactly the same in a store, however, can cost \$50, or even less if it is on sale.*).

ANSWERS

First,
For example,
Another important reason
Finally,
such as
This means that

- 3 Students discuss the question in pairs. In feedback, point out that an argument is stronger, not weaker, by acknowledging the opposing view. It shows that you have thought about the opposing view, but that you don't agree with it entirely and have a stronger argument against it.

ANSWER

The writer mentioned handmade products a few times to show the other side and to strengthen their own argument by showing consideration for the opposite view.

GRAMMAR

Using *can* for universal truths

Warm-up

Write a strong statement on the board: *Handmade items are more expensive than machine-made items*. Ask students if this is true—to elicit that sometimes it's true, and other times it's not. Point out that strong statements like this are only valid if backed up by facts. To back up this statement with facts, you would have to know the cost of every handmade item and its machine-made counterpart. As this is impossible, we need to *hedge*—use words or phrases to soften a strong statement. Change the sentence on the board to *Handmade items are sometimes more expensive than machine-made items*. Ask students if the statement is now acceptable. Note that in our first sentence, someone could disagree with it and provide arguments against it—that would weaken our argument; however, in the second statement, it would be hard to argue against it. Ask students to read the *Using can for universal truths* box to find out other ways they can hedge a strong statement. Ensure students understand that *can* is not used for ability in this case. Draw students' attention to word order in the example sentences in the *Using can for universal truths* box. *Sometimes, often, and usually* come between *can* and the bare infinitive. The other phrases come at the beginning or end of the sentence.

- 1 Students work alone to reorder the words. They should write out the entire sentence. Ask fast finishers to write their own sentence using *can* and an adverb. Students compare in pairs before checking in feedback.

ANSWERS

- 1 It can take a very long time to sew a quilt.
 - 2 It can be difficult to tell if a scarf was knitted by machine or by hand.
 - 3 Works of art can usually be found in people's homes as well as in museums.
 - 4 The culture of a country can often be understood through its traditions.
 - 5 Some people can identify the maker of a piece of furniture just by looking at it.
 - 6 Many craftsmen believe that no piece of art can be perfect.
- 2 Use the example to show students how the grammar of the sentence has to change when adding *can*. *Can* is followed by the infinitive, so *is* has to change to *be*. Rules for the position of adverbs also apply. Students work alone to rewrite the sentences before comparing in pairs. Fast finishers can put their answers on the board.

ANSWERS

- 1 It can be relaxing to create art by hand.
- 2 People can sometimes be reluctant to pay more for imperfect items.
- 3 Machinery can be used to create things more quickly.
- 4 Factories can be located in both cities and small towns.
- 5 Quilts can be made by machine as well as by hand.
- 6 People can usually understand why handmade items cost more.

WRITING

Writing skill

Organizing your brainstorm

Exam skills

Students need to understand that brainstorming and writing an outline are not just things they do for class assignments—they are important skills that will help them in exams. Not taking the time to organize their writing could lead to a disorganized paper, or one with few ideas. This will cost them points. Contrary to what some students believe, organizing writing is a time-saver and so should be part of every writing exam.

- 1 Ask students to read the *Organizing your brainstorm* box which gives ideas on how to organize ideas after brainstorming. Ask students to work with a partner to discuss the brainstorm and why some ideas have been crossed out. (**Possible answer:** doesn't have enough to say about these ideas; doesn't think they are strong enough arguments; doesn't have enough time / space to include all; prefers the other arguments)
- 2 Students number the supporting points from least to most interesting or important, and discuss with a partner. Point out that it's up to the writer to decide what his or her most important points are, but that sometimes, with certain topics, it's clear that some are more important than others.
- 3 Students work alone to write the topic sentences. When sharing, ask students to evaluate what is good about each topic sentence, and whether they could be improved.

Writing task

Brainstorm

Review the writing task as a class. Ask students to look at the essay question and underline or highlight the key things to include in their essay. Check that students have the key points before proceeding.

Remind students of the brainstorming methods from page 23, and remind them that in the brainstorm stage, they should write whatever comes to mind. Set a time limit of five minutes for this stage. Put students into pairs to compare their brainstorms and see if their partner can suggest anything else to add. Open the discussion to include the whole class, adding ideas on the board.

Plan

Students look at their brainstorm and write their thesis statement. Refer students back to the model on page 39 for ideas if needed. They then cross out any irrelevant ideas from their brainstorm. Remind them to write a topic sentence for each of their main ideas, as suggested in the *Organizing your brainstorm* box on page 41.

Ask students to share their plan with a partner to get feedback and suggestions.

Write

Give students 30 minutes to write their essays. Highlight the elements that should be included, as listed in the task instructions. If you have students who finish more quickly, ask them to look at the checklist in the *Rewrite and edit* section to evaluate their work.

Share

Some students may not have finished in 30 minutes, but assure them that that's OK. In pairs, they provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Each student should write their feedback on the essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section and then consider their partner's comments. They rewrite and revise their text, checking for errors. Remind them to pay particular attention to correct use of *can* to express general and universal truths. This stage could be done for homework if class time is short, but tell students to submit their brainstorm, plan, and first draft (with peer comments) along with their final essay so you can assess their essay development.

Extension activity

Everything that we purchase was designed by someone—from the design of the packaging to the item itself. Some designs are better than others, while some are simply more appealing than others. Brainstorm a list of things that are designed, noting answers on the board. Ideas include: lamps, furniture, clothing, cars, phones, shoes, pens, their favorite team's sportswear, a building, etc. Ask students to choose one of the items. They must conduct Internet research to find an item in their category that they think has an appealing, practical, or quality design. The item can be handmade or machine-made. They download a picture of the item and write a short paragraph which includes:

- how and where it was made
- who designed or made it (If the designer is unknown, they can list the company.)
- what they find appealing about the design
- the price of the item and whether they think the price is justified
- anything else they would like to say about the item
- the URL(s) where they found the information.

Students can share their work on the class blog, or in class. Encourage creative ways of displaying their research—with an infographic or poster, for example.

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

1 survive **2** enhance **3** journal **4** philosophy
5 tradition

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

READING 1	Understanding ellipsis
READING 2	The function of questions
STUDY SKILL	Improving memory–association and mnemonics
VOCABULARY	Language for comparing and contrasting
GRAMMAR	Language for hedging
WRITING	Organizing a comparison-contrast essay

Warm-up

Bring in or draw a picture of the brain. Put students into small groups to brainstorm what they know about the brain. Give them a few minutes to make their lists then open the discussion to include the whole class. Ask students to look at *The brain's control centre* infographic on page 44 to find out the parts of the brain and what each part controls. Ensure students understand the terms *digestion*, *hemisphere*, and *dominant*, and make sure students can pronounce the words *cerebellum* /,serə'beləm/, *cerebrum* /sə'ribrəm/, and *hemisphere* /'hemi,sfɪr/.

Discussion point

Students read the questions and discuss in pairs or small groups. Open the discussion to include the whole class, and find out if students know of any brain research that has been done, such as studies with MRIs (Magnetic Resonance Imaging). Discuss the difference between brain studies in the past versus those we do today. (**Examples:** In the past, we couldn't look inside the brain like we can today with MRIs; in the past, the only tool researchers had were EEGs (electroencephalograms).) They could use their smartphones in class to research using the Internet, but ask them to switch off and put their phones away after they finish.

Extension activity

Ask students to go online to find a left-brain / right-brain test (search: *left brain right brain test*) to get a better idea of which side of their brain they use the most. Emphasize that, although we might appear to be more left- or right-brained, we can train other parts of our brain—the brain is very flexible. An alternative activity is for students to research to find out how true left-brain right-brain theory is. They should cite any sources they find, and in discussion, students can decide whether the source cited is a credible one.

VIDEO

Before you watch

To introduce the topic, refer students to the picture on page 44 which shows an image of a suit used to follow body movements, or use a projector to show the image. Ask students what they think these kinds of suits are used for. (**Possible answers:** to create CGI (computer-generated imagery) in movies and video games, military, sports, robotics, and medical applications)

Students work alone to match the words with the definitions. Ask students to check in pairs and then check as a class. Monitor the activity and help with vocabulary where needed, checking pronunciation. Point out that the *p* in *psychologist* is silent. Extend the vocabulary learning by asking questions. Ask: *Can you give an example of when someone showed compassion / was compassionate towards you? Why do people go to see a psychologist? Have you ever had treatment for an injury or illness? What kinds of things do you think virtual reality headsets are used for?*

ANSWERS

1 b 2 d 3 c 4 a

While you watch

Give students time to read through the sentences. Students watch the video and choose the correct ending for each sentence. Play the video a second time if needed, allowing students to compare answers first. Go through the answers with the class.

ANSWERS

- 1 cameras track your movements
- 2 comforting
- 3 help prevent
- 4 get their treatment at home

See pages 106–107 for the video script.

After you watch

Ask students to discuss the questions with a partner. Ask volunteers to share their answers with the class. Encourage students to explore different viewpoints.

Extension activity

Virtual reality headsets are becoming more sophisticated and are being used for a wider variety of purposes. Ask students to research to compare the features of different VR headsets. (Some possible research questions: are they tethered (tethered headsets are connected to a PC or game console) or mobile (mobile headsets use your smartphone)? What game consoles do they work with? How much do they cost? Which has the best display quality?)

READING 1

The development of thought

Warm-up

Ask students if they remember some things they found difficult to do as a child that now seem simple. Tying shoelaces is a typical example. Ask them why they think these things are easy now but not then. Steer the discussion towards the idea of development and growth—we develop skills as we gain more control over our body and mind.

A Vocabulary preview

If class time is short, students can do the *Vocabulary preview* section for homework. In class, students work alone to complete the sentences. After a few minutes, write the answers on the board so students can self-check. Check and drill pronunciation, and ask students to underline the stressed syllable in each word. Note that the *s* in *fascination* is silent, and that you have to drop the *e* in *hypothesize* when adding *-ing*. Ask students which part of speech each word is, and get them to find the other word forms of each and add them to their vocabulary notebooks and word forms charts. Ask pairs to write a sentence with a blank for each word, then pass them to another pair to complete.

ANSWERS

- 1 constantly
- 2 sort
- 3 fascination
- 4 logical
- 5 point of view
- 6 concrete
- 7 lead to
- 8 hypothesizing

Extension activity

Periodically collect students' vocabulary notebooks. This has a dual purpose: first, it sends a message to the students that keeping one is important. The very act of creating the notebook helps students learn and internalize the vocabulary. Second, it allows you to see how students are recording the vocabulary so that you can help them find better strategies for keeping track of vocabulary. For example, you might find that students are only writing the translation. This is poor practice because words change according to context. A much better strategy is to put the word in a contextualized sentence, and use synonyms and definitions to define it. Students should also be recording common collocations, different forms of the words, and the pronunciation or stress pattern of the words. Avoid grading the notebook, but offer tips and suggestions instead.

B Before you read

Making predictions

Exam skills

Reading is more effective when we think about what might be in it because it activates our background knowledge or experience, and aids comprehension. This is important when reading for exams, especially as there is increased time pressure to understand a text quickly. Good readers do this automatically. Students may have this skill in their native language but need to develop it when reading in English so that it becomes automatic.

Ensure students understand the term *prediction* (= what you think might happen, or might be). Put students into pairs or small groups to discuss the questions. Ask students what they think the reading will be about based on what they have discussed, based on their predictions. After reading, ask students if the questions helped them read the text, and point out that predicting content will help them become better readers.

C Global reading

Scanning

- 1 Students scan to find out who each person is. Ask them to highlight the information in the text.

ANSWERS

Jean Piaget: French psychologist
Jacqueline: Piaget's daughter
Gerard: Piaget's nephew

- 2 Students read the article more carefully in order to find out how accurate their predictions were from *B Before you read*. Encourage them to highlight, underline, and make notes on the page. As a class, find out who was most accurate in their predictions and if any of the information surprised them.

ANSWERS

Most children know that when they can't see an object, it still exists at around 21 months old.
Most children learn through playing from two to six years old.
Most children begin to think more about the feelings of other people from six or seven to 11 years old.

D Close reading

Understanding ellipsis

- 1 Write the word *ellipsis* on the board and explain that it comes from the Greek word meaning *to leave out*. Explain that writers use it to be more concise and to eliminate unnecessary words. Ask students to read the *Understanding ellipsis* box to find examples of ellipsis. Make sure students understand *the former*—the information that came before, and *the latter*—the information that came after. Write this example on the board and draw a line from *right brain* to *the former* and then a wavy line from *left brain* to *the latter* in order to demonstrate:

People use both their (right brain) and (left brain). They use (the former) when they express emotions and (the latter) when they do math problems.

Ask students to work alone to complete the activity, drawing a line to the part of the sentence the ellipsis is referring to. Ask students to check in pairs and then check as a class.

ANSWERS

1 c 2 a 3 c

E Critical thinking

Give students a few minutes to read and think about the questions. Students work in small groups with a group leader. Ask volunteers from each group to share their responses.

Extension activity

Ask students to choose one of the groups—parents, teachers, or other adults—and create an infographic showing the stages of development. They should think about their target audience, why they need the information, and how they will use it. Students can search online for an infographic maker, or make an infographic poster by hand. Ideally, they would share these with their target audience and get feedback on the information it presents. They could also share on the class blog.

STUDY SKILLS

Improving memory–association and mnemonics

Warm-up

Put students into groups of six and ask them to stand facing one another. One student in each group starts by saying, *I like to ...* + an activity. The person to his or her left then says, *I like to ...* + the activity the first student said, and one more activity. This continues clockwise around the circle with each student saying all the activities that came before and adding their own. See how long the lists become before it is too long for the students to remember. In feedback, ask students what strategies they used to remember the activities. Ask them to read the *Improving memory–association and mnemonics* box to find out how they can improve their memory. Ask students if they ever use association or mnemonics—note the *m* is silent and it's pronounced /nɪ'manɪks/.

- Students match the mnemonic with the information. You may need to explain that coordinating conjunctions are those which can link two independent clauses: *She is left-brained, but he is right-brained*. Note that the coordinating conjunctions are preceded by a comma. Explain that *vile* means *extremely unpleasant*.

ANSWERS

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

- Quickly remind students of the stages. Students then try their hand at making their own mnemonic, then share with a partner or group.

Extension activity

To practice improving memory by association, ask students to look back at the text, and write a note about information that reminds them of another reading or other information. Alternatively, they can use a text from another course they are studying. They share associations in pairs.

READING 2

Emotional thinking

A Vocabulary preview

- Students work alone to complete the exercise. Monitor the activity and help with pronunciation where needed. *Guilt* is tricky—the *u* is silent and makes the *g* have a hard sound: /ɡɪlt/. *Anxiety* is also difficult: /æŋ'zaɪəti/. Ask them to add them to their vocabulary notebooks. Draw students' attention to the prefix *in-* in *inappropriate*. This is a negative prefix which makes the word opposite—*appropriate* / *inappropriate*. Ask them to find a word in the list which uses *ir-* to make its opposite. (**Answer:** *rational* / *irrational*) Ask students to test each other in pairs: Student A has his or her book closed. Student B gives a definition and Student A says the word. Swap roles after four words.

Extension activity

Ask students to use a dictionary or thesaurus to find synonyms and / or antonyms of the words in the list. (**Possible answers:** anxiety—worry, concern / calmness; deadline—time limit; emotions—feelings, passions / logic; encounter—discover, meet; guilt—shame / pride; inappropriate—unsuitable / appropriate, suitable; rational—realistic, sensible / irrational; strengthen—weaken)

ANSWERS

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

- Students complete the sentences with words from Exercise 1. After checking answers as a class, ask students to work in pairs to agree or disagree with each of the sentences, saying why. For example, for sentence 1: *I agree. I often feel anxious before a presentation because I don't like standing up in front of people.*

ANSWERS

- anxious
- inappropriate
- rational
- encounter
- emotional
- strength
- guilty
- deadlines

B Before you read

Preparing to read

Ensure students understand the terms *gut feelings* and *instincts* (= a feeling that you are certain is right, although you can give no good reason why). Give students two minutes to think of their responses to the questions before putting them into groups to discuss.

C Global reading

Identifying text type

Ask students to read the questions. Remind students what *tone* (= the general attitude of a speaker or text) means. Ask students how they might know who the audience is from reading a text. A possible answer relates to text type. A very academic article about science would be aimed at scientists; it would include lots of terms that only scientists would understand. An essay's audience is a teacher or other students. An advertisement for a VR headset is aimed at people who are interested in gaming or technology—it would use adjectives and persuasive techniques to convince someone to buy the product. Many articles are written for a general audience. Articles generally give information and are aimed at people interested in the topic. Writers have to keep their audience in mind when writing so that the language, vocabulary, and tone is appropriate. Ask students to identify why the writer uses bullet points and what they show. Students scan the article and discuss the answers in pairs before feeding back to the rest of the class.

POSSIBLE ANSWERS

- 1 a general adult audience or people who are interested in psychology; informal
- 2 To mark the four key functions. The bullets make it easy to locate each function.

Extension activity

Bring in two very different text types or ask students to find two. Ask them to work in pairs to compare the type of information given and the language used.

D Close reading

Recognizing the function of questions

- 1 Tell students to highlight all the questions in the text. Ask them why they think the writer uses questions. Note that questions in a text are sometimes rhetorical—questions that don't require an answer. Ask students to read the *Recognizing the function of questions* box to identify two different functions. Ask students to read the text again and decide the purpose of the questions. Ask students to check in pairs and then check as a class. Ask volunteers to explain their answers.

ANSWERS

- 1 Interest
- 2 Importance
- 3 Interest
- 4 Importance
- 5 Importance

- 2 Students work in pairs to complete the exercise. If students are struggling with this, ask them to highlight or underline the information in the text that answers the questions.

ANSWERS

- 2 Para 1: Even people who pride themselves on being logical, rational thinkers may be more influenced by their emotions than they realize.
- 4 Paragraphs 7–9
- 5 Para 10: build extra time into your decision-making process; give yourself time to logically evaluate situations; make a list of advantages and disadvantages

E Critical thinking

Ensure students understand the term *evolved*, but be sensitive to the idea that evolution might be controversial in some cultures. In this context, it means to *gradually change and develop over time*. Students take a few minutes to think about the questions, then share answers in pairs or small groups.

Vocabulary development

Language for comparing and contrasting

Warm-up

If you asked students to write a comparison of VR headsets as an extension activity after the video, you could get them to share their comparisons now. Alternatively, put them into pairs to compare and contrast people who think with their head versus people who think with their heart. Once you have completed the *Vocabulary development* section, ask them to compare and contrast again, using the words and phrases they learned.

- 1 Students work in pairs to categorize the words. Go through the answers with the class and help with pronunciation where needed.

ANSWERS

Words and phrases that compare:

by the same token, equally, similarly, in the same way

Words and phrases that contrast:

despite, in spite of, on the contrary, whereas

- 2 Ask students to choose the correct word or phrase to complete each sentence. Draw students' attention to the use of commas in each sentence. Note the ellipsis that occurs in sentence 3—ask students what *they* refers to. (**Answer:** gut feelings) Read each sentence aloud, emphasizing the intonation pattern of the phrases and the pause where the comma falls. After drilling, ask students to practice saying the sentences with correct intonation and pausing in pairs.

ANSWERS

- 1 on the contrary 2 Despite 3 In spite of this
4 Equally 5 By the same token 6 whereas
7 Similarly 8 In the same way

Extension activity

It might be useful to review the use of *despite* and *in spite of*—both of which are generally followed by a noun. Write this sentence on the board: *Despite / In spite of his calm appearance, he was really very anxious.* We wouldn't say: *Despite / In spite of he was really very anxious, he had a calm appearance.* To use the structure of the second sentence, we would have to add *the fact that*. That is, *Despite / In spite of the fact that he was really very nervous, he had a calm appearance.* Note that both sit in the dependent clause which could come at the end of the sentence: *He was really very nervous despite / in spite of his calm appearance.*

Academic words

- 1 If time is short, students can complete the *Academic words* section for homework, and add them to their vocabulary notebooks and word forms charts. In class, after checking answers, draw a word forms chart on the board, and ask volunteers to fill in one row each. Check and drill pronunciation. In pairs, students test each other on the meaning of the words.

ANSWERS

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

- 2 Students work alone to complete the sentences. Go through the answers with the class.

ANSWERS

- 1 depressed
2 solely
3 interpret
4 maximize
5 reluctant
6 categories
7 complex
8 abstract

- 3 Ask students to think about the questions, then form pairs or groups to discuss. Open the discussion to include the whole class.

Extension activity

Conduct a class Bingo competition with the academic vocabulary learned so far. Ask students to draw a large 4x4 grid on a piece of paper. In each square, they write one academic vocabulary word from Units 1–3. Ensure they pick words from all three units. There are 20 words in total, but the grid will only hold 16. Instead of you calling out the word, give a definition. If a student has a word that fits the definition, they cross it out. The “winner” is the person who gets four in a row horizontally, vertically, or diagonally. If a student missed a word because she or he didn't know the definition, then that shows them which words they need to revise.

CRITICAL THINKING

False analogy

- 1 Ask students to close their books. Write the word *analogy* on the board. Students should recognize that this is the noun form of the word *analyze*. Give an example such as the following to help students define the meaning: *Just as the sword is the weapon of a warrior, a pen is the weapon of a writer*. What is the writer comparing in the analogy? Is it accurate? Tell students that analogies use simile and metaphor to compare two things. For example, a simile compares two things using *like* or *as*: *He is as brave as a lion*; *The children's cheeks were like roses*. Metaphors state the comparison in a more direct way: *He's a lion!* *The children's cheeks were roses*. Ask students to read the *False analogy* box to learn about false analogies.

Now ask students to discuss the questions with a partner. After a few minutes, open the discussion to include the whole class. Ask volunteers to explain why they think the analogy is or is not accurate.

ANSWER

- 1 *Ignoring emotional intelligence would be like serving dinner without dessert*. The two situations being compared are emotional intelligence and dinner.

- 2 Students evaluate the analogies and discuss in pairs. Note that the example analogies use similes.

ANSWER

- 2 is the only reasonable analogy. Because emotional and intellectual intelligence both make up a person's personality, it can be compared to all three primary colors making up the color wheel.

- 3 Students work alone to write their own analogy. In pairs or small groups, they evaluate each other's analogies. Volunteers share their analogies. Lower-level students can work in pairs to create their analogies.

Extension activity

Students go online to find examples of analogies. They can search *common analogies* or *example analogies*. They can bring their examples to class to share, or share them on the class blog.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Highlight that all the work done in this section will build towards the final task, supporting the students and helping them to produce a quality piece of writing. At the end of the unit, they can use this as a checklist for what they have learned.

A Model

Students read the prompt and brainstorm their ideas. They compare brainstorms in pairs.

B Analyze

Students read the model and answer the questions. Ask them to highlight the information in the text.

POSSIBLE ANSWERS

- 1 The writer said nurture is more important.
- 2 The writer gave two supporting points. This was previewed in the introduction.
- 3 Yes—you know from the thesis sentence that family influence will be the first body paragraph and peer influence will be the second body paragraph.

Adverbs for hedging

Warm-up

Students close books. Write a strong statement on the board: *People who think with their emotions make better decisions.* Ask students if this is true to elicit that sometimes it's true, and other times it's not. Point out that strong statements like this are only valid if backed up by facts. To back up this statement with facts, you would have to do a very broad study. If we don't have the research, we need to *hedge*—use words or phrases to soften a strong statement. Change the sentence on the board to: *In some cases, people who think with their emotions make better decisions.* Ask students if the statement is now acceptable. Note that in our first sentence, someone could disagree with it and provide arguments against it—that would weaken our argument; however, in the second statement, it would be hard to argue against it. Ask students to read the *Adverbs for hedging* box to find out other ways they can hedge a strong statement.

- 1 Students work alone to reorder the sentences. They should write out the entire sentence. Ask fast-fininishers to write their own sentence(s). Ask students to check in pairs and then check as a class.

ANSWERS

- 1 Most girls both walk and talk at an earlier age than boys.
- 2 Many people feel somewhat depressed in the winter because of the lack of sunshine.
- 3 Some people believe that the power of thought can cure almost any illness.
- 4 For some people, thinking can be more difficult in the middle of the afternoon.
- 5 Most teachers believe that positive thinking can help almost every student get better results.
- 6 In most cases, people can be taught to think more logically.

- 2 Students work alone to add a hedging adverb to the statements. Ask students to check in pairs and then check as a class. As there are many possible answers, it might be a good idea to collect students' sentences for checking.

POSSIBLE ANSWERS

- 1 In some cases, people think better during the day if they eat breakfast.
- 2 Thinking too much at night makes it difficult to sleep for some people.
- 3 Many bilingual people have thoughts in one language they don't have in the other.
- 4 Teens develop abstract thinking at approximately age 12, for the most part.
- 5 Most right-brained people are often good at playing music.

WRITING

Writing skill

Organizing a compare-and-contrast essay

Exam skills

Compare-and-contrast essays are common exam type questions. Students will be expected to include both a comparison and a contrast. They should present the opposite view first, then the view that they support. In the model, the writer presents an argument for nature, but refutes it with arguments for nurture.

- 1 Ask students which organization the writer uses. Tell them to highlight the arguments for nature in one color and arguments for nurture in a different color to help them see this point-by-point organization.
(**Answers:** Paragraph 2—Nature—A person is born with certain physical characteristics—eye color, hair color, and height, for example. While I do believe it's true that children are born with personality traits, like patience, stubbornness, and curiosity ...
Paragraph 2—Nurture: it is their parents and other authority figures who reinforce or discourage these traits. A parent can encourage, discourage, or ignore a child's behaviors, which will almost always influence how likely a child is to behave in the same way again.)

Paragraph 3—Nature: Some people point to the different personalities of twins as proof that nature is more important. They offer examples of two children who were raised in the same house with the same parents, but still developed different personalities. Paragraph 3—Nurture: After all, for the most part, even twins have different teachers, different coaches, different friends, and of course, different experiences. So these different outside influences will have different effects on children, even those who share almost all the same genes.)

ANSWERS

It uses point-by-point organization: in each body paragraph, the writer first discusses nature, then nurture.

- 2 Students work alone to write the outline. Tell them not to write complete sentences—they are working backwards to create the outline, so should just include notes. They then compare in pairs. In whole-class feedback, write the outline on the board with input from the students. This will help ensure all students understand what an outline should look like and, more importantly, ensure they have the right information in it.

(Example:

- I Introduction. Thesis statement: Nurture is more important.
- II Traits
 - A physical—eye color, hair color, height; personality—patience, stubbornness, curiosity, etc.
 - B parents & authority figures reinforce or discourage personality behaviors and traits
- III Twins
 - A different personalities of twins—same house, same parents, different personalities
 - B different teachers, coaches, friends, experiences—outside influences → different effects
- IV Conclusion Outside influences have more influence on personality than what born with)

Extension activity

Ask students to rewrite the outline so that it is organized as a block essay. Which outline do they feel most comfortable with?

WRITING

Writing task

Brainstorm

Remind students of the ideas about emotional intelligence and intellectual intelligence in the workplace from *Emotional thinking*. Then ask students to look at the essay question and underline or highlight the key things to include in their essay. Check that students have the key points—workplace, emotional intelligence, intellectual intelligence—before proceeding. Students work alone to brainstorm their ideas in a double-columned chart. Ask them to compare charts in pairs and add ideas as needed.

Plan

Students look at their brainstorm and decide which side they support. They then write their outline. Give support to lower-level students as needed, or pair them up with a higher-level student.

Write

Give students 30 minutes to write their essays. If you have students who finish more quickly, ask them to look at the checklist in the *Rewrite and edit* section to evaluate their work.

Share

Some students may not have finished in 30 minutes, but assure them that that's OK. In pairs, they provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Each student should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section and consider their partner's comments before rewriting and revising their text, checking for errors. Remind them to pay particular attention to correct use of adverbs for hedging. This stage could be done for homework if class time is short.

Extension activity

Ask students to research the kinds of tasks or jobs that require emotional intelligence versus those that require logical intelligence and why.

They should briefly describe the aspects of the jobs that require each one and evaluate whether they agree. Were they surprised at what they found? Which jobs do they think they would be suited for?

Students can share on the class blog, or share in class in a class discussion.

REVIEW

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 notion 2 complex 3 interpret 4 abstract
5 maximize

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

4 FIRE

READING 1	Using word parts to understand meaning
READING 2	Recognizing sentence modifiers
STUDY SKILL	Smart reading
VOCABULARY	Vocabulary for talking about wildfires
GRAMMAR	Gerunds as subjects
WRITING	Organizing an argument essay

Warm-up

Find out how many students have been to a forest—hiking, camping, collecting mushrooms, or just driving through. Ask them to describe the forest: *What kinds of trees were there? Were there a lot of bushes and undergrowth* (as in a deciduous forest), *or nothing but trees* (as in a coniferous forest)? *Was it a managed forest or wild? Was the path marked in some way? Did it feel frightening or peaceful? What animals live there, and did you see any? Were you allowed to build a fire?* Refer students to the picture on page 63. In pairs, they describe what they see in the picture and what they think is happening.

Discussion point

Students read the *Who owns U.S. forests?* infographic. Ensure they understand the terms *federal government* and *Native American tribes*, and that they know how to pronounce % (*percent*). They discuss the questions in pairs or small groups. After a few minutes, open the discussion to include the whole class.

Extension activity

There are many different kinds of forests. Ask students to find out the different kinds of forests including the types of plants and species of trees, the climate and animals, and where these forests are located geographically. They can share answers in a class discussion or on the class blog.

VIDEO

Warm-up

Refer students to the image still taken from the video. Ask the students to describe what they can see, and to speculate about what is happening and why.

Before you watch

Introduce the topic of the video and ask students to work alone to match the words with the definitions. Monitor the activity and help with pronunciation where needed. Ask students to check in pairs and then check as a class.

ANSWERS

1 c 2 d 3 a 4 e 5 b

While you watch

Give students time to read through the statements, then watch the video and choose the correct answer. Ask students to check in pairs and then check as a class. Play the video again if needed.

ANSWERS

- 1 man-made process
- 2 canceled
- 3 are
- 4 change

See pages 106–107 for the video script.

After you watch

Put students into pairs to discuss the questions. After a few minutes, open the discussion to include the whole class.

READING 1

The top five causes of wildfires

Warm-up

Write the word *wildfires* on the board. Ask students what it means and if they can give any examples of wildfires that have been reported in the news. What is so dangerous about wildfires?

A Vocabulary preview

If class time is short, students can do the *Vocabulary preview* section for homework, adding the words to their vocabulary notebooks and word forms charts. In class, ask students to work alone to complete the sentences. Go through the answers with the class.

ANSWERS

- 1 supervise
- 2 enforce
- 3 costly
- 4 to melt
- 5 wilderness
- 6 maintenance
- 7 rural
- 8 beneficial

Extension activity

Ask students to underline the stressed syllable in each word. Draw students' attention to the word *supervise* which ends in *-ise* instead of *-ize* or *-yze* (unlike *categorize*, *maximize*, *analyze*, and *organize* from previous units). Note that *wilderness* has the base word *wild* /waɪld/, but is pronounced with an /ɪ/ sound: /'wɪldərnəs/. The word *maintenance* is tricky to spell. See if students can create a mnemonic to remember the spelling. Ask students to find the opposite word to *rural* (urban). Put students into pairs to test each other on the definitions.

B Before you read

Activating prior knowledge

Warm-up

Students close books. Ask students what they think causes wildfires. Write a list of their ideas on the board, then ask them to look at the list in the *Before you read* section to see which of their ideas is one of the top five causes of wildfires.

Students work in pairs to rank the causes of wildfires from least common (5) to most common (1). Ask students about their ranking: *Why did you choose that as the least / most common?* Ask volunteers to share their ideas with the class. After reading the text, students re-visit their ranking to see how close their predictions were, and if there were any surprises.

C Global reading

Reading for tone

Remind students what *tone* (= the general attitude shown by the author in a piece of writing) and *audience* (= who the piece of writing is aimed at) mean before setting the activity. Students read the questions, then read the text.

ANSWERS

- 1 c 2 b 3 b

D Close reading

Using word parts to understand meaning

Warm-up

Students may already be familiar with suffixes and prefixes, and how they work to change the word form from a verb to a noun, for example. This section deepens that understanding and helps students use those word parts to understand the meaning and grammatical function of words. Write the word *deforestation* on the board and ask students how many parts are in the word. Underline each part: de forest ation. Ask students which is the main word, or *root* (= forest). Ask them what they think the prefix *de-* means (= take away / remove) and what the suffix *-ation* does to the word (= shows the part of speech). Refer students to the *Using word parts to understand meaning* box to find out how to use roots, prefixes, and suffixes to help them remember the word.

- 1 Ask students to read the text again. Students find and highlight the words in the text which use the roots in the exercise. Allow the use of a monolingual or online dictionary if needed. Ask fast-finishers to find one more word with the same root which they can then share with the whole class.

ANSWERS

- 1 gradual; slowly
 - 2 capable; able to do something
 - 3 reduce; to make smaller
 - 4 clarified; made clear
 - 5 unsupervised; not being watched or taken care of
- 2 Refer students to the table with the suffixes categorized by word form. Point out that these endings are used with different words to create word forms. Ask students to work alone to add the correct suffix to each of the words to create a new word. In pairs, ask students to underline the stressed syllable in the original word and the new one (only *local* / *location* changes).

ANSWERS

- 1 rapidly
- 2 destructive
- 3 nature
- 4 local
- 5 equipment
- 6 risky
- 7 properly

E Critical thinking

Give students a few minutes to read and think about the questions, and then put them into small groups with a group leader. Ask volunteers from each group to share their ideas with the class.

Extension activity

Ask students to research the cause of a recent or particularly devastating wildfire, and the effect it had on the local area.

STUDY SKILLS

Smart reading

Warm-up

Ask students what they do when they read an article that interests them—it could be in their native language. How do they ensure they remember what they have read? How does this change when they read something academic? Discuss as a whole class.

- 1 Ensure students understand the terms *triggered* and *validity*. Note that in *validity*, *valid* is the root and *-ity* is the noun suffix. Refer students to the *Smart reading* box to learn about some smart reading strategies. They check the strategies that they use when reading an academic text. In pairs, they explain what they do for each. Ask if they can give a concrete example.
- 2 Students discuss the questions with a partner. Explain that asking these kinds of questions helps them not only become better readers, but better critical thinkers. Just because something is written, it doesn't mean it is true, logical, or draws logical conclusions.
- 3 Students work alone to read the questions and decide whether an interactive reader would have asked them. Ask students if there are any other questions they would have asked.
- 4 Students compare their answers with a partner and discuss why they checked certain questions.

Extension activity

For homework, ask students to create a list of interactive reading questions for one of the readings they have done in Units 1–3. In class, they share their questions with a partner.

READING 2

Controlling the uncontrollable

A Vocabulary preview

- 1 Ask students to do the *Vocabulary preview* section for homework and to record the word forms for each word. In class, ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. Tricky words include *extinguish* /ɪk'stɪŋɡwɪʃ/ and *threaten* /'θret(ə)n/. Ask them to add them to their vocabulary notebooks. Draw students' attention to the difference in pronunciation between *later* and *latter*—*later* has the longer /eɪ/ sound while *latter* has the short /æ/ sound. Point out that doubling the consonant changes the pronunciation of the vowel. Other examples include *diner* /dɪnər/; *dinner* /dɪnər/; *filling* /fɪlɪŋ/; *biter* /bɪtər/; *bitter* /bɪtər/. Host a class competition. Put students into teams of three. You say a word form and ask students to write another. For example, say: *Employee. What's the verb?* Students write: *employ*. In feedback, check correct pronunciation.

ANSWERS

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

Extension activity

If students are having a hard time remembering spelling, show them some of the following strategies:

- 1 Look, say, cover, write. This is a tried and tested multi-modal way to revise spelling. Students should do this several times over the course of a few days rather than all at once. Ask them to keep a list of words they find tricky to spell in a four-columned table. Column 1 is for the correctly spelled word.
- 2 Keep a list of words in word forms charts. This helps keep words in categories. Because each word is in the same family, this helps with memorization.
- 3 Create mnemonics for tricky words. For example, for remembering *necessary*, Spellzone at https://www.spellzone.com/blog/10_Mnemonics_to_Help_with_Spelling_Tricky_Words.htm suggests: "The word ne[c]e[ss]ary is spelled using one [c]up and two [s]ugars." Another mnemonic trick would be to create a sentence with all the letters. For *latter*, you might have "[L]aura [a]te [t]wo [t]ruffles [e]very [r]ecess."

- 2 Ask students to complete the sentences with words from Exercise 1. After checking answers, ask pairs to write their own sentences with blanks. They swap with another pair to complete. Encourage higher-level students to use different word forms in their sentences.

ANSWERS

- 1 threaten
- 2 Historically
- 3 employ
- 4 renew
- 5 to extinguish
- 6 vegetation
- 7 latter
- 8 conduct

B Before you read

Activating prior knowledge

Students discuss in pairs. Ask volunteers to share their ideas with the class, writing them on the board. After reading the text, see how many of the students' ideas were in the text.

C Global reading

Skimming

Exam skills

Students will save time in exams if, instead of reading every text carefully, they recognize when they just need to skim to find the answers. Skimming-type questions include identifying the main idea and matching headings with paragraphs. Strategies include looking at the title, diagrams, sub-headings, key words, the thesis, and topic sentences (usually the first sentence in a paragraph). Skimming is a quick activity. To practice this in class, set a short time limit for students to skim a text to find the answers to skim-reading questions.

Students read the questions. Ask them what they need to find in the text to answer question 1 (**Answer:** the term *controlled burns*), and questions 2 and 3 (**Answers:** the definition, then a quick skim of the paragraphs before and after). To support lower-level students, have them skim just for the answer to question 1, check, then skim for 2 and 3. Ask students to highlight the place in the text where they found the answer.

ANSWERS

- 1 Paragraph 5
- 2 They give background about forests and fires.
- 3 They describe consequences of controlled burns.

D Close reading

Identifying point of view

Warm-up

On the board, write: *What is the author's point of view?*
Ensure students understand that *point of view* means the author's personal judgement or opinion about something. See if students can identify some ways that authors might express their point of view. Point out that even if a writer expresses different points of view in a text, she or he will still have their own opinion—they use the other points of view to give depth to their argument. Ask students to read the *Identifying point of view* box to find another way authors show their opinion.

- 1 Ask students to read the text again to match the points of view with sentences in the text. Ask them to highlight the adverbs used.

ANSWERS

- 1 Par. 2: *Understandably*, homeowners and farmers didn't want to risk their property or their lives.
- 2 Par. 5: ... the Park Service *mistakenly* decided to employ a technique called a "controlled burn."
- 3 Par. 8: *Fortunately*, the town's 18,000 residents were all evacuated, and no lives were lost.
- 4 Par. 10: Today, many "controlled burns" go as planned, and *admittedly*, may save the forests from natural disasters.
- 5 Par. 10: *Obviously*, both sides share the same goal—to keep forests healthy and whole, and to protect the surrounding communities.

Extension activity

Students make a list of adverbs that show point of view. In pairs, ask them to find three more. In whole-class feedback, create a longer list on the board. Ensure students know the meaning of each—e.g., *understandably* means *I understand that*; *mistakenly* means *I think that was a mistake*. Other examples include: *clearly*, *obviously*, *personally*, *undoubtedly*, *naturally*, *luckily*, *truthfully*, *theoretically*.

E Critical thinking

Students read the questions before discussing them in small groups. Appoint a group leader for each group. If you find that some students are hesitant to speak in groups, put them into pairs with a partner they feel comfortable with, and put the more talkative ones together. If you find that talkative students tend to dominate, give them some tips for including others. For example, they could use expressions such as: *What do you think?* *Do you agree?* *Why do you think that?* *So, do you mean that ...?* Help talkative students understand that turn-taking is important in discussions.

Extension activity

Students will benefit from extensive reading—reading something that they enjoy which is at the right level to be read comfortably. Graded readers are an excellent resource for students learning English because they come in a variety of levels, and include a variety of different types of fiction and non-fiction, so there is something for everyone. If your school library has graded readers, encourage students to pick one. Give them a time limit to finish the book, and then ask them to write a short book review that the other students will read. A way to judge if a book is the right level is the five-finger rule. Read one page and count the number of words you don't know on your fingers. 0–1 fingers is too easy, so they should choose a higher level book. 2–3 fingers is the right level whereas 4–5 fingers will be more of a challenge—possibly too much of a challenge for enjoyable reading. Alternatively, students can do the reading level test on the Macmillan readers site: <http://www.macmillanreaders.com/>. The site also has a graded readers catalog and tips for how to use them in class.

Vocabulary development

Collocations with *problem*

- 1 Remind students what a collocation is. Point out that collocations are not based on grammar—they are lexical items that “sound right” based on agreed tradition. They are lexical “partners.” Common low-level collocations include *get up*, *make breakfast*, *do homework*.

Ask students to work in pairs to choose the correct definition for each collocation. Extend students’ understanding of each with a discussion: *How do you cope with problems? What academic problems are you faced with? Have you ever faced a pressing problem?* Note that in number 4, *to encounter problems* is also a collocation. Students add the collocations to their vocabulary notebooks.

ANSWERS

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

- 2 Give students a few minutes to read the questions and think about their answers. Put them into small groups to discuss. Ask volunteers from each group to share some of the ideas their group discussed.

Extension activity

In pairs, students write sentences with each of the collocations with *problem*. After students share their sentences with another pair, collect these for checking. Alternatively, give each student a set of cards—one collocation per card. In pairs, they place all the cards face down randomly on the desk. Student A turns over two cards. If they match, he / she makes a sentence using the collocation. If Student B thinks it’s a correct sentence, Student A gets to keep the cards. The student with the most sets “wins.”

Academic words

- 1 If class time is short, students can do the *Academic words* section for homework, adding the words to their vocabulary notebooks and word forms charts. In class, ask students to work alone to complete the sentences. Ask students to check in pairs and then check as a class. Check pronunciation and ask students to underline the stressed syllable. *Acknowledge* is a tricky word to spell—see if students can come up with a mnemonic to help them remember, or break the word down into chunks: ac-know-ledge. With books closed, say the definition and see if students remember the word.

ANSWERS

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

- 2 Ask students to complete the sentences with words from Exercise 1. After checking, see if students can identify any collocations in each sentence. (**Possible answers:** local, state, and federal governments; human error; tighter regulations)

ANSWERS

1 capable 2 federal 3 error 4 regulations
5 decades 6 acknowledged

Extension activity

Show students how we tend to talk about recent decades: the 50s, (from 1950–59), the 60s, the 70s, etc. Often, the decade 2000–09 is referred to as “the noughties” because it has a 0, or *nought*, in it. We don’t have a similar term for the decades from 2010–19. Extend this by asking students to name music or important events from a particular decade. For example, the Beatles started in the 60s. Students may have been children of the 90s or noughties.

- 3 Give students some time to read and think about the questions. Put them into pairs to discuss. Ask volunteers to share their ideas with the class.

CRITICAL THINKING

Questioning assumptions

Warm-up

Students close their books. Write the word *assumptions* on the board. Ask students what they think it means. Point out that the verb is *to assume* (= to believe something is true without question, or not to question the truth of what you hear). Give the students a list of facts that are assumed to be true, like the ones below. Put students into pairs or small groups to decide whether or not they are true.

- 1 We only use 10% of our brain.
 - 2 There are different sections of tongue for each taste—bitter, sour, salty, sweet, umami.
 - 3 Goldfish only have a three-second memory.
 - 4 Einstein failed math at school.
 - 5 The Great Wall of China is visible from space.
- 1 False—we use every region every day, though the proportion used varies according to task; 2 False—the entire tongue is used; 3 False—research by scientists from MacEwan University, Canada found that goldfish could remember where they found food for up to 12 days previously; 4 False—he excelled in math; 5 False—it's not visible with the naked eye; you need a strong lens or radar imagery. Cities at night are the only man-made things visible from space. (Students can check out the NASA website to corroborate this.)

Refer students to the *Questioning assumptions* box to find out how questioning assumptions is important in writing and reading.

- 1 Ask students to work alone. To help lower-level students identify the assumptions, tell them to look for and underline phrases and adverbs that identify points of view. They compare answers in pairs before checking in feedback.

ANSWERS

We all agree that the problem of forest fires is growing. Obviously, something needs to be done about it. But after the disastrous fire of 2016, surely we can see that none of these methods can work. ... it's clear that what we should do instead is keep homes away from forests.

- 2 Ask students to discuss the questions. In whole-class feedback, talk about why the assumptions are reasonable or not. Make a list of the kinds of evidence that could be used to support unreasonable assumptions. For example, in the first assumption, we could provide data as evidence of the growing problem of forest fires. For the last two assumptions, discuss ways to use hedging to soften the statement. For example, ... *one possible solution would be to keep homes away from forests.*
- 3 Students discuss the questions in groups. After a few minutes, open the discussion to include the whole class. Ask volunteers from each group to share their answers.

Extension activity

Ask students to find an article online and identify any assumptions the writer makes. Bring these to class to discuss in small groups.

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Ask them to identify what they will learn about (**Answer:** using gerunds as the subject of a sentence and supporting your arguments) and what they will do (**Answer:** write an essay about fire prevention). At the end of the unit, they can use this as a checklist for what they have learned.

Exam skills

This is a problem / solution type essay that is common in many exams. The standard structure for this type of essay is to first outline the problem—in this case, the increase in the number of wildfires—and the solution—what can be done to combat the problem. Note that it's important to give reasons for the problem as well. In the model, the writer identifies two reasons—natural and human. In an exam situation, students will not have a reading to refer to, and will have to think of the problem / solution on their own. The best way to prepare for this is to read extensively on a wide variety of subjects.

A Analyze

Students read the prompt and underline the key points they would need to include in an essay, and then brainstorm their ideas using the table. They compare brainstorms in pairs before reading to find out if the writer chose the reasons they suggested.

B Model

Students read the model and answer the questions. Ask them to highlight the information in the text using different colored highlighters: one color for the problems, another for the solutions. Ask students to identify the thesis, and highlight it in another color.

POSSIBLE ANSWERS

- 1 **Problems:** natural causes (lightning) and human causes (campfires and fireworks); **Solutions:** developing healthier forests, increasing educational programs, making it a crime to engage in dangerous behavior in or near a forest, hiring more staff at national parks
- 2 The writer doesn't recommend them because they can be dangerous.
- 3 quote / expert testimony
- 4 The conclusion gives a final argument for the proposed solution.

Gerunds and reduced clauses

Warm-up

Students close books. On the board, write *gerund* and see if students can say what a gerund is. If needed, give some examples of when a word is a gerund, and when it is not:

Smoking is not allowed. (*Smoking* is a gerund.)

She is smoking too much. (*Smoking* is part of the verb.)

Put up this sentence and ask if it contains a gerund:

Smoking cigarettes is bad for you.

In this case, *smoking* forms part of a gerund phrase (or noun clause). *Smoking* is the gerund, *cigarettes* is the direct object of the action expressed by the gerund.

Refer students to the *Gerunds and reduced clauses* box to find out when a gerund is a noun and when it is part of a reduced clause. In feedback, ask concept check questions to ensure students have understood:

What is the subject and the verb in the sentence: **Setting fires in windy weather is dangerous?** (**Answer:** Setting fires in windy weather / is)

Why is the verb singular if *fires* is plural? (**Answer:** When you use a gerund as a subject, it takes a singular verb.)

What is the subject and the verb in the sentence: **Burning all night, the fire destroyed 50 acres of land?** (**Answer:** the fire / destroyed)

How can you tell the difference? (**Answer:** identify the subject and verb; look for a comma)

- 1 Ask students to work alone to check the sentences that have gerunds as subjects. Ask them to underline the subject in each sentence and circle the verb. (**Answers:** 1 Supervising children around campfires is very important. 2 Having carefully extinguished the fire, the campers went to bed. 3 Knowing when the conditions are safe for a prescribed burn is not easy. 4 Understanding how wildfires are necessary for forest health can be taught in schools. 5 Studying the wind conditions, the Forest Service concluded that the prescribed burn should be delayed. 6 Allowing fires to start naturally is not practical in sectors where a lot of people now live.

ANSWERS

1, 3, 4, 6

- 2 Explain the example sentence to the class. On the board, show students how the beginning of the sentence—*It is important to teach*—can be substituted for the gerund, *Teaching*. To support students struggling with this exercise, ask them to first identify the part of the sentence that can be deleted and the word that then becomes the gerund. (Answers: 2—to ban; 3—to read; 4—to lose; 5—to study; 6—to train)

ANSWERS

- 1 Teaching fire safety to everyone is important.
- 2 Banning smoking in forests is necessary.
- 3 Reading this article will help people understand fire.
- 4 Losing so many acres of land to wildfires was unfortunate.
- 5 Studying how erosion happens in the wilderness is important.
- 6 Training new park service employees will be expensive.

WRITING

Writing skill

Supporting your arguments

- 1 Write the word *argument* on the board, and ask students to look in their dictionaries to find the most likely meaning of the word in terms of essay writing. The Macmillan online dictionary defines *argument* as: *a reason or set of reasons that you use for persuading other people to support your views, opinions, etc.* Refer students to the *Supporting your arguments* box to read about how to support arguments in an essay. Then ask students to work alone to read the model essay and answer the questions. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 lightning strikes; campfires and fireworks
- 2 with a reason—consequences of prescribed burns are severe
- 3 examples (of how forests are unhealthy; of steps Forest Service personnel could take to improve them) and reasons (a fire in a healthy forest is less serious than in an unhealthy one)

- 2 Ask students to work alone to match the arguments with supporting information. To support lower-level students, ask them to underline or highlight the key terms in each argument and supporting information. In feedback, ask students to identify the type of supporting information. Ask students which of the supporting pieces of information would require some research (Answer: a, c, and d).

ANSWERS

- 1 c (reason)
- 2 a (expert testimony)
- 3 d (expert testimony)
- 4 b (example)

- 3 Students work in pairs to write sentences to support the arguments. If possible, allow them to do some Internet research to find evidence. Alternatively, set the task for homework. Ask pairs to share in whole-class discussion.

WRITING

Writing task

Brainstorm

Review the writing task as a class. Ask students to look at the essay question and underline the key points to cover in the essay. Students make a two-column chart and work alone to brainstorm their ideas. Ask them to compare charts in pairs and add ideas as needed.

Plan

Students look at their brainstorm and choose the arguments they want to pursue. They write one to two pieces of support for each. Encourage them to refer to the reading *The top five causes of wildfires* on page 65, *Supporting your arguments* on page 77, other exercises in the unit, and their own knowledge. They then write their outline and thesis statement. Refer students back to the model essay to remind them of the structure of a problem / solution essay.

Write

Give students 30 minutes to write their essays. Highlight the elements that should be included, as listed in the task instructions. Observe who finishes in 30 minutes and who needs extra time—those students may need some additional support in writing under time restrictions. If you have students who finish more quickly, ask them to look at the checklist in the *Rewrite and edit* section to evaluate their work.

Share

In pairs, students provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Students should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section and consider their partner's comments before rewriting and revising their text, checking for errors. Remind them to pay particular attention to correct use of gerunds and reduced clauses. This stage could be done for homework if class time is short, but tell students to turn in their brainstorm, plan, and first draft with peer comments along with their final essay so you can assess their essay development.

Extension activity

Ask students to research images of advertisements aimed at instructing the public on the dangers of wildfires or how they can prevent wildfires (search: *advertisements about preventing wildfires*). Tell them to bring in the advertisement (printed out). In class, they discuss the effectiveness of the ads. Put them into groups to create an advertisement that they think would be most effective.

REVIEW

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

1 solely 2 depressed 3 capable 4 error 5 federal

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

5 MOVEMENT

READING 1	Annotating a text
READING 2	Recognizing text structure
STUDY SKILL	Setting priorities
VOCABULARY	Vocabulary for describing change
GRAMMAR	Future passive
WRITING	Comparing maps

Warm-up

Tell students to look at the infographic and picture on pages 80–81, and tell them they are going to do an exam-style discussion. Write these prompts on the board:

Describe the infographic.

Compare the information in the infographic.

Describe the picture: What do you see in it? What's in the foreground / background, etc.?

Speculate about the picture. Use words like: I think it's likely that ...; It could be ...; ... probably ...; I would think that ...

Put students into pairs to discuss the *International Shipping* infographic and picture.

Exam skills

Describing a picture or infographic is an exam-type task. Students are sometimes in pairs and have to show that they can discuss the images with another person, so turn-taking strategies are important. In an exam, students are often expected to describe, speculate, and then give their opinion.

Discussion point

Use questions to check that students understand the technical words in the infographic, and also the numerical data. Students discuss the questions in pairs or small groups. After a few minutes, open the discussion to include the whole class.

VIDEO

Warm-up

Refer students to the video still on page 80 and ask them what it shows, where they think it was taken, and whether they would like to travel like this. (**Answer:** The video still shows Mongolian nomads.) Ask students what a nomad is and where in the world nomads live.

Before you watch

Introduce the topic of the video. Students work alone to complete the exercise. Ask students to check in pairs and then check as a class. Ensure students know the pronunciation of the words. Ask them to identify the root word and suffixes in the word *desertification*, and underline the stressed syllables: desertification. Ask students what they think the video will be about based on the vocabulary and the video still.

ANSWERS

1 b 2 c 3 d 4 e 5 a

While you watch

Give students time to read through the questions and options to make sure they understand what information they will be looking for. Play the video once. Ask students to check in pairs and then check as a class. If necessary, play the video a second time so students can check any answers or information they missed. Go through the answers with the class.

See pages 106–107 for the video script.

ANSWERS

- 1 the impact of desertification
- 2 they couldn't live in their traditional way
- 3 drought and overgrazing
- 4 an international problem

After you watch

Put students into pairs to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Students can share their answers and ideas on the class blog.

Extension activity

Post the video on the class blog so that students can view it again in their own time.

READING 1

The Panama Canal: A brief history

Warm-up

Ask students if they know what a canal is and what it is used for. Explain that the water in a canal is very slow moving—how does it stay like that if the canal passes through valleys and mountains? Refer them to the picture of the canal on page 83 and pre-teach the word *lock*. Locks are used to transport ships up or down. The Peterborough lift lock in Ontario, Canada, is the world's highest lock and lifts and lowers boats 65 feet (20 meters). You can see this lock in action on YouTube.

Extension activity

Ask students to search online for videos of boats navigating locks. Interesting locks to see in action include the Peterborough lift lock, the Falkirk Wheel (Scotland), and the Panama Canal locks. Tell students to write a description of how canal locks work. Students can post their descriptions on the class blog.

A Vocabulary preview

If class time is short, students can do the *Vocabulary preview* section for homework, adding the words to their vocabulary notebooks and word forms charts. In class, students work alone to complete the sentences. Ask students to check in pairs and then check as a class.

Extension activity

Check and drill pronunciation, and ask students to underline the stressed syllable in each word. Ask students to identify the root and prefix in the word *circumnavigate*. Extend the learning of the words with questions, for example: *What kinds of cargo do ships carry? By what methods is it possible to circumnavigate the world? Can you name a well-known feat of engineering? When do people fumigate their homes or buildings? What kinds of animals live in a swamp? Do you have any toll roads in your city? What kinds of treaties do countries sign with each other? What kind of protective clothing do people wear in a construction zone?*

ANSWERS

- 1 swamp 2 treaty 3 zone 4 feat 5 cargo
6 toll 7 circumnavigate 8 fumigate

B Before you read

Predicting

Predicting the answers to questions helps give a reason for, and structure to, reading. Students work in pairs to predict the answers to the questions. After reading the text, ask students to check how accurate their predictions were.

C Global reading

Annotating a text

- 1 Write the word *annotate* on the board and ask students what they think it means. They may see the root word *note* in the word. Refer them to the *Annotating a text* box to find a definition and three methods of annotating. Ask who does these types of annotations already. Tell students to read the text and highlight important information, including answers to the questions in the *Before you read* section.

ANSWERS

Highlight in text:

- 1 Par. 1: ... other countries could be reached by ship, traders and travelers ...; Par. 2: Attention then turned to Central America, the narrowest land barrier between the Atlantic and the Pacific Oceans.
 - 2 Par. 4: The first country to attempt a canal was France, ...; Par. 5: The United States was the next country to be interested.; Par. 10: In 1977, the United States signed a treaty to eventually return control of the land to Panama.
 - 3 Par. 4: ... and malaria and yellow fever from the region's many mosquitos.; Par. 12: ... 22,000 workers died, mostly from malaria or yellow fever.
- 2 Summarizing the main idea of a paragraph could be challenging for some students, so do the first one or two paragraphs together before allowing students to do the rest on their own or in pairs. For lower-level students, you might ask them just to annotate six paragraphs, while higher-level students can do more. Alternatively, put students into pairs—each student annotates six or seven different paragraphs so that they end up with all 13 paragraphs annotated. Underlining key terms and phrases will also facilitate the summarizing.

D Close reading

Reading for detailed information

- 1 Ask students to read the text again to find the paragraph that contains each idea. Set a three-minute time limit for this scanning activity. Remind students what scanning is—searching through the text to find specific information such as numbers or words.

ANSWERS

a 4 / 12 b 2 c 9 d 1 e 6 f 9 g 4 h 13

- 2 Ensure students can say the dates and numbers. Note that in some cultures, instead of writing large numbers with a comma (1,000) a period is used instead (1.000). Do some drilling with the difference in stress pattern between the teens—13, 14, 15, etc. and the tens—30, 40, 50, etc. Students work alone to complete the exercise before comparing in pairs.

ANSWERS

1 1869 2 1880 3 1907 4 6,000 5 1914

6 8.6 7 1,000 8 1999 9 77 10 90

Distractor—1977

Extension activity

Pairs create a five-question true / false quiz based on the reading. They share their quiz with another pair who answer the questions without looking back at the text.

E Critical thinking

Give students a few minutes to read and think about the questions, then put them into small groups with a group leader. Open the discussion to include the whole class. Ask volunteers to share their ideas with the class.

Extension activity

Ask students to find out more about the Suez or Panama Canal. Ideas include—the history of the building of the Suez Canal, cruises on the canals, expansion projects, or the politics surrounding their use. Students can share their research on the class blog.

STUDY SKILLS

Set your priorities

Warm-up

Give students a scenario like the one below. Ask them to discuss which they think is the most important thing to do first.

You have an exam tomorrow that you need to study for, but a friend calls you and needs help with something urgent. She is very upset. You also have an exercise class this evening at 6:00, and you have to respond to an email from your parents before they become worried about you.

In feedback, ask students which they *prioritized*—studying, helping a friend, going to the exercise class, or responding to the email, and why. Write the verb *prioritize* on the board, and ask students what they think the noun form is. Ask them to read the *Set your priorities* box to learn more about setting priorities. After reading, ask students which they already do and which things they think are a good idea to start doing.

- 1 Ensure students understand the word *skipped*. Students work alone to complete the exercise. Ask students to discuss their choices in pairs and then discuss as a class. Ask students what tools they use to keep track of what they have to do. Examples include reminders on their cell phone, using a diary—paper-based or digital, making lists on sticky notes, etc.
- 2 Students write their “To do” lists, and then share with a partner. Ask students to explain how they made their choices—how they *prioritized*.

READING 2

Dangers and opportunities in the Arctic Circle

A Vocabulary preview

Ask students to do the *Vocabulary preview* section for homework, recording the word forms for each word and finding out their definitions. They can write these in their vocabulary notebooks and word forms charts. In class, put students into pairs to test each other. Student A's notebook is closed. Student B gives the definition for Student A to guess the word. Swap roles and repeat. For spelling practice, write the words on the board, but with the vowels missing. Students work together to write out the whole word without looking at their notebooks. Ensure they can pronounce the words. *Indigenous* is tricky: /ɪnˈdɪdʒənəs/. Ask students to compare answers with their partner. After checking answers, ask pairs to

find collocations for the words, using a dictionary, and changing the word forms if needed. Collocations include: *if the need arises*; *coastal area* / *coastal path* / *on the coast*; *a dispute between* (two people or organizations); *to halt construction*; *indigenous species* / *indigenous to ...*; *marine animals* / *marine wildlife*; *coral reef* / *reef bleaching*; *a sparse amount of something* / *sparsely populated*.

ANSWERS

- 1 marine
- 2 halted
- 3 arises
- 4 sparse
- 5 indigenous
- 6 reef
- 7 dispute
- 8 coastal

B Before you read

Preparing to read

Students look at the map and picture on pages 87 and 88, and brainstorm three problems connected with movement across extreme environments with a partner. Ask volunteers to give one of the problems they listed. Ask students if they know of any incidents involving ships or people crossing frozen seas or waters filled with ice. Ask them to explain what happened.

C Global reading

Recognizing text structure

Refer students to the *Recognizing text structure* box for a tip that will help them review for an exam. Ask students how annotating a text in this way would help them for things other than exams. (**Possible answers:** when doing research for a paper, if you have to write a summary of an article, if you want to remember specific information for a debate or discussion, etc.)

Ask students to read the text and annotate it with the labels provided. After checking, ask students if the structure of the article is logical. Could they have organized it a different way? Why is it important to give the background in paragraph 2? Why do future challenges come near the end?

ANSWERS

- a background to the issue—Par. 2
- b conclusion—Par. 12
- c examples of benefits to less ice on the land—Par. 4
- d changes to shipping routes (x2)—Par. 7 and Par. 8
- e how climate change affects the land—Par. 3
- f how climate change affects the water—Par. 5
- g the Arctic Council—Par. 10
- h future challenges—Par. 11
- i introduction—Par. 1
- j land problems resulting from climate change—Par. 3
- k water problems resulting from climate change—Par. 6
- l which countries own the area—Par. 9

D Close reading

Reading for specific information

One way to do this exercise is with a class competition. Students work in pairs. You call out the questions in the section, giving a short time period for pairs to find and write down the answers before moving to the next question. This encourages students to work quickly and to rely on their annotations. Pairs swap papers for checking. Monitor the activity and help with pronunciation where needed, particularly the numbers and percentages.

ANSWERS

- 1 81% 2 600 million 3 25%
- 4 the Northern Sea route 5 eight 6 1996

E Critical thinking

Give students some time to read and think about the questions. Put them into small groups to discuss. Ask volunteers from each group to share their ideas with the class.

Extension activity

Ask students to research the topic of climate change. Possible areas to research include: the Paris Agreement, predictions related to climate change, causes of climate change, what people are doing to combat climate change, who disagrees with climate change, etc. In class, put students into two groups—one group thinks climate change is nothing to worry about, the other believes it is an urgent issue. Ask them to use the information from their research to build an argument for their side. Hold a class debate on the issue of climate change.

VOCABULARY

Vocabulary development

Verbs for talking about change

Warm-up

As a class, brainstorm some synonyms for the word *change*. Possible synonyms include: *replace, become, transform, transition, turn into, alter, convert*, etc. Refer students to the words in the *Verbs for talking about change* box to find more verbs for talking about change.

- 1 Ask students to categorize the verbs in the box using the table. Allow dictionary use if needed. Go through the answers with the class. Monitor the activity and help with pronunciation where needed.

ANSWERS

To add or add to	To change the shape of	To take away or diminish
develop extend	make into remodel replace transform	demolish tear down

- 2 Students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Note common collocations: *to tear down / demolish a building*; *to transform the countryside*; *to extend the sidewalk / road*; *to remodel a room or house*; *to develop the downtown area*; *to construct a building / train station*.

ANSWERS

1 torn down 2 transformed 3 extend 4 make
5 demolish 6 develop 7 replaced 8 remodel

Extension activity

Ask students to work in pairs to write a short news article about planned changes to the downtown area in the city they live in—this could be fictional or about changes that are actually being planned. They should use words from the *Vocabulary development* section and any others from the unit. To differentiate this activity, ask lower-level students to use five to six of the words, and higher-level students to use all of them. They should write the article in news style—with a headline, byline (who wrote the article), an introduction, body, quotes, and, if possible, a picture with a caption. Students can publish their articles on the class blog, or print them out to share in class.

VOCABULARY

Academic words

- 1 Students work alone, using a dictionary if needed, to match the words with the definitions. Monitor the activity and help with pronunciation where needed, especially of *alternative* /ə'l'tɜːnətɪv/, *nevertheless* /,nevə'rðə'sles/, *purchase* /'pɜːtʃəs/ (stress on the first syllable), and *straightforward* /,streɪt'fɔːwəd/. Note that *abandon* has another meaning—to leave someone, or to leave a place. The academic meaning relates to *stopping doing something*, especially a project. Concept check that students understand *nevertheless* is a conjunction that expresses a contrast. At the beginning of a sentence, it is followed by a comma; in the middle of a sentence, there is a semicolon before the word and a comma after it; at the end of the sentence, it is preceded by a comma.

ANSWERS

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

- 2 Students work alone to complete the paragraph. Ask students to check in pairs and then check as a class. After checking, tell students to find the sentence containing *nevertheless* in the paragraph, and ask them to rewrite it, changing the position of *nevertheless*: *The original project had to be abandoned; nevertheless, the state was able to make ...* or *Even though the original project had to be abandoned, the state was able to make ..., nevertheless.*

ANSWERS

- 1 purchased 2 primary 3 straightforward
4 alternative 5 Nevertheless 6 abandoned

Extension activity

To facilitate the discussion in Exercise 3, check that students have understood the text by asking questions. Ask: *Why did the state government purchase the land? Why was the railroad construction not straightforward? What did the government do with the land after the railroad project had been abandoned?*

- 3 Give students some time to read and think about the questions. Put them into small groups to discuss. Ask volunteers from each group to share their ideas with the class.

Extension activity

If you are planning a mid-term exam, this is a good time to do a vocabulary review. Ask students to look back at the wordlists at the end of each unit. They should put a double check (✓✓) next to the words they feel they know and can use, a single check (✓) next to the words they recognize, but don't feel they can use yet, and an asterisk (*) next to any words they don't remember or feel they need to learn. For homework, they should revise these words. In the next lesson, ask each student to look through Units 1–5 and write down ten words on ten different slips of paper. Collect these up and put them into a “hat.” Students work in pairs. They pick a word and say the definition and part of speech, or give an example sentence. Pairs write down the word. Do this for 10–15 different words. At the end, students exchange papers with another pair to check how many words they got right—one point for the correct word, another point if it is spelled correctly. Encourage students to form study groups to study the vocabulary in the same way.

CRITICAL THINKING

Claims of fact, value, and policy

Warm-up

On the board, write a statement from a topical news story. For example, *Video games cause students to pay less attention in class*. Ask students if they think this claim is true. There should be some discussion, and possibly disagreement. Explain that a claim such as the example contains a degree of argument—some people agree, others disagree—and in a report, article, or essay, a claim like this would need to be backed up with evidence. Refer students to the *Claims of fact, value, and policy* box to learn more about claims. Check that students have understood: *What is the difference between a claim of fact and a claim of value?* (**Answer:** A claim of value has an opinion in it. In the example, the writer says one thing is *more important* than another.) *What is the difference between a claim of fact and a claim of policy?* (**Answer:** A claim of policy contains words like: *should, must, need to*, etc. Like a *claim of value*, there is an opinion, but the *claim of policy* offers one or more solutions.) *What must there always be in these types of claim?* (**Answer:** some degree of argument)

- 1 Students work alone to complete the exercise. Ask students to check in pairs and then check as a class. To support lower-level students, ask them to underline the words that make the sentence a claim of value or policy.

ANSWERS

- 1 V 2 P 3 F

- 2 Students work alone to match the statements from Exercise 1 with the sentences. Ask students to check in pairs and then check as a class. Support lower-level students by drawing their attention to words in the first and second sentence that make them fit together:
1—Park, **b** magnificent mountains and forests / create an impressive picture; **2**—conservation, **c** lost forever;
3—Canal / cargo ships, **a** military use.

ANSWERS

- 1 b 2 c 3 a

- 3 Refer students to the instructions for the activity. Ask them to look back at the sentence pairings in Exercise 2 to help them match the type of claim with the type of following statement.

ANSWERS

1 c 2 b 3 a

Extension activity

Put students into pairs to practice writing a claim of fact, claim of value, and claim of policy with an appropriate following statement. Students share their sentences with another pair. Collect these up to see which students need more support with this.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Highlight that all the work done in this section will build towards the final task, supporting the students and helping them to produce a quality piece of writing. At the end of the unit, they can use this as a checklist for what they have learned.

A Model

Ask students to work alone. They read the essay prompt and then study the maps. Ask students to make a list of all the changes they can see in the maps. Ask students to check in pairs and then share as a class.

Exam skills

Exams often ask students to retrieve information from infographics or pictures. The skill needed here is to notice and state what the pictures show, the differences and, possibly, similarities. Note that in the essay prompt, the second map shows a proposal—students need to recognize that this is something that will happen in the future, so when making their comparison, they need to use future verbs. Note that this type of question is different in that there is no thesis statement, introduction, or conclusion. The essay prompt asks for a summary and a comparison.

B Analyze

- 1 Students read the model. As they read, they should refer to the maps, noticing the language used to describe them. Ask them to then identify the paragraphs.

ANSWERS

- 1 restate the writing prompt
- 2 summarize the changes
- 3 discuss removal of natural features
- 4 discuss new construction

- 2 Students answer the questions.

ANSWER

No

GRAMMAR

Future passive

Warm-up

Review passives with examples such as the ones below. Use the board to show students how the direct object becomes the subject, and the subject (sometimes) becomes the *by* phrase. In the examples, ask students if it's important to know who did the action. In the cases below, the agent is obvious and unimportant, so it can be omitted. Note, too, that the past participle (sometimes called the third form of the verb) is used to make the passive verb. If needed, review the past participle forms of irregular verbs.

Present: *Lumberjacks cut down trees.* → *Trees are cut down (by lumberjacks).*

Present progressive: *Lumberjacks are cutting down more trees than ever before.* → *More trees are being cut down than ever before (by lumberjacks).*

Past: *Construction companies built new houses.* → *New houses were built (by construction companies).*

Past progressive: *Construction companies were building new houses at a rapid rate.* → *New houses were being built (by construction companies) at a rapid rate.*

Ask students to read the *Future passive* box to find out how to make the future passive, and why and when it is used.

- 1 Students work alone to complete the sentences. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 will be reduced
 - 2 will be killed
 - 3 will be built
 - 4 will not / won't be planned
 - 5 will be demolished
 - 6 will not / won't be replaced
- 2 Do the first sentence on the board to support lower-level students. Ask them to underline the part of the sentence that will need to come first in the new passive sentence. Sometimes it's more than just the direct object and might include an adjective or pronoun—as in sentence 1. Ask them to double underline the verb that will be made passive. Students work alone to complete the sentences. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 Our kitchen will be remodeled next year.
- 2 A new lock for the canal will be constructed this month.
- 3 The contract will not / won't be signed before the meeting.
- 4 Additional funding will be found.
- 5 The land will be cleared.
- 6 Ships will not / won't be charged more than \$10,000 to use the canal.
- 7 Two hundred more workers will be hired.

Extension activity

Refer students back to *The Panama Canal: A brief history*, *Dangers and opportunities in the Arctic Circle*, and the *Writing model* to find more examples of future passive.

WRITING

Writing skill

Describing plans and predictions in the future

Warm-up

Refer students to paragraphs 3 and 4 in the *B Analyze* model on page 93. Ask them to count how many times *will* is used (11 times). Ask them if they think this use of *will* is a bit repetitious. Tell them they are going to find another way to talk about future plans and predictions. Refer them to the *Describing plans and predictions in the future* box to learn different phrases. Point out the difference between *plan on* and *plan to*—*plan on* requires an *-ing* form while *plan to* is followed by a bare infinitive.

- 1 Do the first sentence together so that students can see what they need to replace with the new phrase (*will be*). Students work alone to rewrite the sentences. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 The village is set to be replaced by a large factory complex.
- 2 This change is projected to have happened by the end of 2050.
- 3 The population is likely to increase dramatically over the next decade.
- 4 The industrial areas are due to be demolished in the coming months.
- 5 Most of the trees are expected to be removed to allow the construction of new housing.
- 6 The number of malaria cases is forecast to decrease in the next few years.

- 2 Students work alone to rewrite the sentences. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 The government plans on reducing the amount of parkland in the area.
- 2 The city plans to dramatically increase the amount of public transportation in the area by the end of this decade.
- 3 We plan to have doubled our profits by the end of this financial quarter.
- 4 The city plans on increasing the size of its park area within the next few years.
- 5 The department plans on making most of its staff take a pay cut.

Extension activity

Use the sentences in Exercises 1 and 2 for an oral substitution drill—Teacher: *The village will be replaced. Set.* Students: *The village is set to be replaced.*

- 3 Students work in pairs to write their predictions. Lower-level students should aim for three or four sentences, while higher-level students can aim for more. Ask students to share their predictions with the class.

WRITING

Writing task

Brainstorm

Review the writing task as a class. Ask students to look at the writing task and compare the two maps orally. Then ask them to make a list of the changes they see in the two maps, and report the main points and comparisons they should cover in the essay. They then brainstorm any changes they would like to include.

Plan

Refer students back to the essay question and first paragraph of the model on page 93. Ask them to notice how the writer paraphrased the essay prompt in the first paragraph. Tell them to read the instructions for writing their plan, and then plan the structure of their essay using an outline format.

Write

Give students 30 minutes to write their essays in class. Highlight the elements that should be included, as listed in the task instructions. Fast finishers should use the checklist and ideas in the *Rewrite and edit* section to start editing their work.

Share

In pairs, students provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Each student should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in this section and then consider their partner's comments before rewriting and revising their text, checking for errors. Remind them to pay particular attention to the use of the future passive. This stage could be done for homework if class time is short, but tell students to turn in their brainstorm, plan, and first draft with peer comments along with their final essay so you can assess their essay development.

Extension activity

Urban planners are increasingly incorporating more green spaces into their designs. In fact, many urban initiatives are using plants such as moss to help soak up pollution from cars. Other developments include plants growing on buildings and rooftops, waterways, and more parks for people to relax in. Ask students to research urban spaces that have been transformed into more hospitable places for residents and visitors. They then use ideas they got from these designs to write a development plan for their city.

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

1 straightforward **2** decade **3** reluctant
4 alternative **5** primary

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

6 DISEASE

READING 1	Recognizing paragraph structure
READING 2	Identifying sentence functions
STUDY SKILL	Using feedback from your tutors
VOCABULARY	Cause and effect
GRAMMAR	<i>Unless</i> and <i>provided</i>
WRITING	Cause-and-effect essays

Warm-up

Refer students to the picture on page 99. Brainstorm what the students think the picture shows. (**Answer:** disinfection workers wearing protective clothes and masks, spraying antiseptic solution in the subway to prevent the spread of virus disease) Write the following words on the board and ask students to define the difference: *disease, illness, sickness, injury*. (**Answers:** *Illness* and *sickness* are the same and are generally used for short-term infections such as a cold or the flu; *disease* is an illness that is more long-term such as cancer or heart disease; *injury* is damage to a part of the body such as a broken bone.) Brainstorm some collocations with the word *disease*—e.g., *suffer from, cause, combat, cure, detect, develop, fight, prevent, treat*. Refer students to the *Preventing disease* infographic to read about ways to prevent disease.

Discussion point

Ask students to read the *Preventing disease* infographic. Ensure they understand the meaning of *prevent* /prɪ'vent/, *immunization* /ɪmjuːnɪ'zeɪʃ(ə)n/, and *antibiotic* /æntɪbaɪ'ɒtɪk/. Ask them if they agree with the advice in the infographic, and whether they have seen any of the symbols anywhere and, if so, where. Ask students to discuss the questions in pairs or small groups. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class.

Extension activity

Ask students to add two or three more ways to prevent disease.

VIDEO

Warm-up

Refer students to the video still on page 98. Ask them what it shows and how it relates to the unit title—*Disease*. Check they know the pronunciation of the word *mosquito* /mə'skitou/. Ask them to predict what the video will be about, using the video still and the unit title as clues.

Before you watch

Students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. To extend the vocabulary, ask pairs to write a sentence using all four words.

ANSWERS

1 d 2 c 3 b 4 a

While you watch

Introduce the topic of the video and ask students to read the sentences before watching the video. Ensure they know the pronunciation of the words *dengue* /ˌdɛŋgi/ and *Zika* /'zɪkə/. Students work alone to complete the exercise. Ask students to check in pairs and then check as a class. Play the video again if needed.

ANSWERS

1 T 2 F (They make the female mosquitos sterile.)
3 T 4 T

See pages 106–107 for the video script.

After you watch

Give students a few minutes to think about their answers and take notes. Put students into pairs to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class.

Extension activity

Because malaria is such a widespread problem, there are many initiatives which aim to stop people from contracting it. Ask students to find out some other ways people are trying to combat malaria. They can share their findings in class or on the class blog, and take a vote on the best ideas.

Fighting cholera

Warm-up

Ask students if they have ever heard of cholera—pronounced /kəˈləɹə/. Refer students to the pictures on page 101. Ask students what the connection is between cholera and the pictures. From these images, what are their predictions about what causes cholera?

A Vocabulary preview

- If class time is short, students can do the *Vocabulary preview* section for homework, adding the words to their vocabulary notebooks and word forms charts. In class, students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed, and ask students to underline the stressed syllable(s). For each of the sentences, tell students to provide a synonym that works. They may have to change the sentence slightly to use a synonym. (**Possible answers:** 1—evidence; 2—source; 3—link; 4—dirty; 5—useful; 6—contracted (change the sentence from passive to active); 7—biggest; 8—collect)

ANSWERS

- 1 proof 2 supply 3 associate 4 Polluted
5 effective 6 infected 7 major 8 gather

B Before you read

Preparing to read

Ask students to answer the questions. If possible, allow them to use their dictionaries or search online for the diseases they don't know. An alternative activity would be to put students into groups. Give each group one disease. They make an infographic with what they know. It should include an explanation of the disease and what is being done to fight the spread. Post these around the room. Students read the infographics to learn more about the other diseases.

C Global reading

Predicting

- Some of the terms in the exercise will be unknown. Encourage students to make their “best guess” without looking them up. Put students into pairs to compare their predictions. After reading the text, ask students how close their predictions were.

Extension activity

Students work in pairs to find the definitions to difficult words from Exercise 1. Give pairs one word to look up. Possible words include: *diarrhea*, *dehydration*, *outbreaks*, *infected*, *sewer*. Check pronunciation, especially with the minimal pair: *infected* / *affected*. Draw students' attention to the construction of the word *dehydration*: the root has the word for water (*hydr*); to *hydrate* means “to make something absorb water”; *hydration*, then, is the process of absorbing water; *de-* means “opposite,” so the opposite of absorbing water is to lose water. See if students can find other words with *hydr* in them. Some possible examples include *fire hydrant*, *hydraulic pressure*, *hydroelectricity*, and *hydroponics* (= growing plants in water). Note that *outbreak* is the noun, but the verb is to *break out*.

- Students read the text and check their predictions. Ask students to annotate the text with the topic of the paragraph. They compare in pairs.

ANSWERS

- the effects of cholera and its treatment
- cholera during the first industrial revolution; the spread of cholera
- early theories about how cholera is spread
- John Snow's theory about how cholera is spread
- Snow's research about his theory and proposed solutions
- the acceptance of Snow's theory

D Close reading

Recognizing paragraph structure

Warm-up

Ask students if they can identify the type of text—is it problem / solution, argumentative, historical, or cause / effect? What makes this text cause / effect? Refer students to the *Recognizing paragraph structure* box to find out about structuring paragraphs. In feedback, ensure students understand that, even in a cause / effect text, paragraphs may do different things such as describe, define, or explain.

- 1 Now ask students to read the first paragraph again and match each sentence with its function. They compare in pairs. Ask students to underline the part of the sentence which fulfils the function and gave them the clue.

ANSWERS

A 2 B 5 C 4 D 1 E 6 F 3

Exam skills

Understanding the structure of a text and the function of sentences in a text will help students' reading of the text in an exam. For example, recognizing that a text is cause / effect will alert students to be on the lookout for the causes and effects in the paragraphs. Exam questions will likely ask students to list or identify these.

- 2 Ask students to read the text again before finding the sentences in the text with the functions in Exercise 2. Ask students to check in pairs and then check as a class. Ask students what clues they used to find the answers. Check that students understand that a *pandemic* is an outbreak of any rapidly spreading disease—can they name other pandemics? (**Possible answers:** the bubonic plague, the Ebola outbreak, etc.) Note that the origin of the word *pandemic* is from Greek: *pan* means “all,” and *demic* means “people.” So, a pandemic is something affecting all people.

ANSWERS

- A A pandemic is an outbreak of a disease that rapidly leads to large numbers of people being affected.
- B The actual cause of the spread of infectious diseases—germ theory—was not yet known.
- C Instead, it attacked people's bowels and caused very bad diarrhea.
- D With this and other evidence, he was able to persuade the local government to close the Broad Street pump and arguably stop the pandemic.
- E As a result, a huge sewer system was built beneath London to give people access to clean water.

E Critical thinking

Give students some time to read and think about the questions. Put them into small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Ensure they are using the sentence frames to respond.

Extension activity

Not everything we read on the Internet is credible, so we need to develop strategies for deciding whether something is true or not. To illustrate this, ask students to research the Pacific Northwest Tree Octopus: <http://zapatopi.net/treeoctopus>. Ask them to make a list of the things that make the website believable and the things that indicate to them that the tree octopus is a hoax. In class, students can discuss their ideas.

STUDY SKILLS

Using feedback from your tutors

Warm-up

Put students into pairs. Ask them to make a list of the kinds of feedback from tutors that they find useful and the kinds that they don't, and why. They shouldn't mention names of teachers. Collate their ideas on the board. Ask students how they deal with feedback—do they keep a list of things to improve for their next piece of work? Suggest to students that for any feedback they don't understand, they can ask the teacher for clarification. Refer students to the *Using feedback from your tutors* box for further ideas.

- 1 Ensure students understand what *marking criteria* means, and find out what marking criteria their teachers use—is it similar to the example in Exercise 1? Concept check that they understand that Evidence and research is worth 40% of the grade while Spelling, grammar, and vocabulary is worth 10%. This may surprise them—students often worry more about the language while teachers are more interested in their ideas. For this exercise, students work alone to read the teacher comments and divide them into minor and major. Go through the answers with the class, matching the teacher comments with where the student would lose points in the marking criteria.

ANSWERS

Major

1 a, b 2 c

Minor

3 d 4 e 5 f

- 2 Ask students to bring in one of their marked essays and to look at the marking criteria for the unit assignments. This could be from another class, or an essay they have done for their English class. Ask them to divide the teacher comments into major and minor issues.

- 3 Some sensitivity is advised here, as students may be reluctant to show other students their feedback. Ask them to copy the feedback they feel comfortable sharing onto another sheet of paper for the discussion. Ask students to advise each other on strategies for how to improve their work. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas on how to improve their work based on the feedback they have been given.

Extension activity

Often, when students don't understand a teacher's feedback, they say it is because it is too brief or they can't understand the handwriting. Students rarely ask the teacher to clarify. Many students respond well to oral feedback, but teachers rarely have time to give face-to-face oral feedback to each student. A way around this is to give oral feedback via a recording. Students often find oral feedback more in line with their learning style and appreciate the chance to practice their listening skills. You could try this out for the next assignment. Here are a couple of suggestions for how to do this: **1** Use screen-casting software—this allows you to have the student's paper on your screen as you point to areas and record your feedback. You can then send the file to the student. **2** Use your phone or other recording device to record your feedback, and send the mp3 to the student along with your notes on their paper.

READING 2

The economic impact of disease

A Vocabulary preview

- 1 Students complete the *Vocabulary preview* section for homework, record the word forms for each word, and find out their definitions. They can write these in their vocabulary notebooks and word forms charts. In class, put students into pairs to test each other. Student A's notebook is closed. Student B gives the definition for Student A to guess the word. Swap roles and repeat. For spelling practice, write the words on the board but with the vowels missing. Students work together to write out the whole word without looking at their notebooks. Ensure they can correctly pronounce the words. Tricky words include *distinguish* /dɪ'stɪŋɡwɪʃ/, *doubtful* /'daʊtfəl/ (the b is silent), and *overlook* /,oʊvər'lʊk/ (stress on first and last syllables). Ask students to compare answers with their partner. Note the change of word form in: **1** alarm (n) / alarmed (adj), **2** productive (adj) / productivity (n), **3** overlook (v) / overlooked (adj).

ANSWERS

- 1 alarmed
- 2 productivity
- 3 overlooked
- 4 distinguish
- 5 related
- 6 Overall
- 7 doubtful
- 8 dependent

- 2 Put students into pairs to discuss the questions in Exercise 1. They should ask the question rather than just reading it so that they practice using the new vocabulary. Depending on time, this exercise could be done in a number of ways: Student A asks questions 1–4 and Student B asks 5–8; students choose four questions to ask and answer; give each pair one question to ask and answer, and then put them into groups to share their responses.

B Before you read

Predicting

Refer students to the pictures which accompany the text, and the text title. Give them a few minutes to think about their answer to the question before working with a partner to list three connections. Collate some of the students' ideas on the board. After reading, see how many of the connections the students came up with were discussed in the text.

C Global reading

Identifying main ideas

Exam skills

Often in exams students have to match the heading or topic with a paragraph. Typically, there is one or more heading that is not used. Headings are generally a short "summary" of the paragraph and requires that students can quickly read the paragraph to get the main idea. Students will have to look for synonyms or understand the function of the paragraph. To support this, ask students to underline the key terms in the topic and terms in the paragraph that correspond to the topic.

Students work alone to complete the exercise. Go through the answers with the class, asking students which words helped them to decide. For example, in paragraph 2, the clue is *a country can lose billions of dollars of revenue* which corresponds with *The effect of time off work* in the topic.

ANSWERS

A 3 B 6 C 2 D 5 E 7 F 4

D Close reading

Identifying sentence functions

Warm-up

Remind students of the sentence functions (Exercise 2) they matched for *Fighting cholera* on page 102. Ask them why they think it's important to understand the function of a sentence in a paragraph. Refer them to the *Identifying sentence functions* box and read it through with the class to find other reasons this might be important. Ensure they understand the five terms. Point out that it's important to recognize the writer's purpose so that they can evaluate and understand what he or she is saying. Ensure students fully understand and can pronounce the words.

Ask students to read the sentences and match them with the functions in the *Identifying sentence functions* box. In whole-class feedback, compare and discuss the answers, and ask students to say what clues they used to decide.

ANSWERS

- 1 reporting (reporting on SARS and the estimated loss of jobs in South-East Asia)
- 2 naming (the name "Stoptober")
- 3 defining (the explanation of "infectious disease")
- 4 speculating (the use of the word "perhaps")
- 5 classifying (two main groups)

E Critical thinking

Give students a few minutes to read and think about the questions, and then put them into small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Encourage them to use the sentence frames in their discussion.

Extension activity

Ask students to research what is being done to find cures for a recent pandemic such as bird or swine flu, Ebola, SARS, or Zika. Possible research questions: How much money is being spent on finding a cure? How successful are the cures that have been found? If cures have not been found, what measures are there to help prevent the disease? Students share their findings in class or on the class blog.

VOCABULARY

Vocabulary development

Cause and effect

Warm-up

Write up some causes and effects such as the ones below on the board in a random order. Ask students to work in pairs to categorize them into two columns—cause and effect, and then ask them to match them up.

Cause	Effect
too much sugar and candy	poor dental health
air pollution	lung diseases
anti-smoking campaigns	fewer people smoke
lower speed limits	fewer accidents

Refer students to the *Cause and effect* box to find expressions for talking about cause and effect. Ask them to underline the cause and circle the effect in the two example sentences in the box. Using the examples from the activity above, ask students to use the two phrases to make sentences for each. For example: *Too much sugar and candy can result in poor dental health; Poor dental health is caused by [or could be caused by] too much sugar and candy.*

- 1 Ask students to work alone to complete the exercise. Ask them to highlight the phrase that shows cause or effect. Draw students' attention to how the change in prepositions in 2 and 3 (*can result from*; *can result in*) changes whether the cause or effect comes first: ... *a lower birth rate can result from a sharp rise in ...* (effect first) versus *Lifestyle choices can result in an increase in many diseases* (cause first). Ask students what comes after *As a result*, *Therefore*, and *Consequently* in the sentences. (**Answer:** a comma)

ANSWERS

- 1 Many days can be taken off sick. As a result, companies may lose income.
- 2 In the worst cases, a lower birth rate can result from a sharp rise in an infectious disease.
- 3 Lifestyle choices can result in an increase in many diseases.
- 4 The world's population fell by 5% because of the 1918 flu.
- 5 People often fear a breakout of a new disease. Therefore, governments need to communicate their effects quickly.
- 6 A sharp increase in the levels of any disease can place pressure on the medical profession. Consequently, many governments have emergency plans to help deal with this.

- 2 Students work alone to choose the correct word or phrase. Ask them to underline the cause and circle the effect in each example. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 resulted in
- 2 Consequently,
- 3 resulted from
- 4 Therefore,
- 5 Because of
- 6 As a result,

- 3 Give students some time to think about their answers and to make notes. Ask them to choose at least two words or expressions from Exercises 1 and 2 to use in their discussion. When they are ready, put them into pairs to discuss the questions. Monitor the activity and help with vocabulary where needed. Make a note of any mistakes you hear and, without naming who said the sentence, write it on the board for the class to correct as a group.

VOCABULARY

Academic words

- 1 If class time is short, students can do the *Academic words* section for homework, adding the words to their vocabulary notebooks and word forms charts, noting any other word forms. Go through the answers with the class, and help with pronunciation where needed. See if students can predict the past form of the verb *undergo* (**Answer:** *underwent*). To extend the vocabulary, ask students to give examples for *collapse*, *exposure*, *transmission*, *undergo*, and *virtually*—e.g., *the local economy might collapse if a large factory goes out of business; you might have exposure to harmful sun rays if you don't wear sunscreen; mosquitos cause the transmission of malaria*, etc.

ANSWERS

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

- 2 Students work alone to complete the sentences. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 Virtually
- 2 Ultimately
- 3 collapse
- 4 undergo
- 5 Hence
- 6 Exposure
- 7 transmission
- 8 widespread

- 3 Ask students to check (✓) the sentences in Exercise 2 that they agree with, and then compare opinions with a partner. Encourage them to say why they agree or disagree with the sentence.

CRITICAL THINKING

Evaluating evidence

Warm-up

Ask students if they remember what *hedging* is from Unit 3, and why it's important. Refer students back to page 58 if necessary. Write a strong sentence such as the one below on the board, and ask students to hedge it.

Lung disease is caused by smoking.

Possible hedges: *Lung disease is often / could be caused by smoking.*

Refer students to the *Evaluating evidence* box to learn about evaluating evidence. Check they have understood by asking them why generalizations make a poor argument, and what they can do to strengthen it.

- 1 After reading through the *Evaluating evidence* box, ask students to read the first sentence of the example paragraph and answer the questions. This exercise might need more explanation in order to support students in completing and understanding it. Ask them to identify the main opinion first—e.g., that workplace illnesses lead to a huge loss of income. Next, ask them to underline the data used to support that claim in the following sentences—e.g., the number of lost working days. From there, students should evaluate whether or not the lost working days supports the claim of loss of income. For question 2, ask students if the survey of 200 leading companies is a big enough study to support the claim. How could they broaden it to make it sufficient?

POSSIBLE ANSWERS

- 1 The support is loose. Arguably, the lost working days could affect profitability, but we do not know how relevant it is in comparison to other factors. Also, it is likely that most companies would factor in this amount of sick leave when determining someone's rate of pay.
- 2 It is limited because it is only European and only a small sample of major companies. Smaller companies and the rest of the world have been excluded.

- 2 Put students into pairs. Ask them to read the essay question and decide which of the sentences provide sufficient and relevant evidence. Ask them to give reasons for their choice. To support lower-level students, ask questions which will help them identify the right sentence(s). For example, for sentence **1**—*What other factors might lead to lower rates of most diseases? Is the connection between high investment into disease prevention and lower rates of disease strong?* **2**—*How is spending by companies connected to the essay question?* **3**—*Is this a good example that supports the essay question?*

POSSIBLE ANSWERS

- 1 This is not significant enough. There are many other factors involved here. For example, these could in general be richer countries with longer life expectancies.
- 2 Not relevant. The question focuses on countries not companies.
- 3 Relevant. Although it is only one country, it would be a good example to support the essay question.

- 3 Ask students to discuss the questions with a partner. After a few minutes, open the discussion to include the whole class, and collate students' ideas on the board.

POSSIBLE ANSWERS

- 1 The evidence supports the whole claim, not just part of it; the evidence is available from a number of sources; there are different types of evidence that support the claim.
- 2 Ensure the information is up-to-date; the information is directly connected to the issue; the information supports the whole claim.
- 3 It may lead you to false conclusions; the data will no longer support your claim.

Extension activity

Ask students to look at the two reading texts—*Fighting cholera* and *The economic impact of disease*—in the unit to evaluate the evidence that supports the claim made in each. They should use the answers to the questions in Exercise 3 to guide their evaluations.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Ask them to identify what they will learn about (**Answer:** using *provided* and *unless*) and what they will do (**Answer:** write a cause-and-effect essay about funding research into disease). At the end of the unit, they can use this as a checklist for what they have learned.

A Analyze

Working alone, students read the essay question and underline key words or phrases. They then read the brainstorm table. Discuss as a class how the information in the brainstorm supports the essay question. For example, students might point out that handwashing and vaccination are two ways to reduce the transmission of disease. They also might say that the brainstorm mentions children.

Ask students to work alone to add the sentences from the brainstorm table into the correct place in the model. Ask students to evaluate the model both in terms of relevance to the essay question and also sufficient support of the evidence.

ANSWERS

- 1 Unless children do this before eating, they have a significantly increased chance of being infected.
- 2 Provided good hygiene is established at a young age, it can be effective in reducing the breakout of a disease.
- 3 Many diseases, unless prevented by a vaccine, can potentially lead to a loss of life.
- 4 However, as a result of vaccination, this number was reduced to just a few hundred within 20 years.

B Model

Ask students to read the questions and make notes on their responses. They should write reasons for their answers. Put them into pairs to discuss. After a few minutes, open the discussion to include the whole class.

Unless and provided

Warm-up

On the board, write the following sentence: *If you don't study, you won't pass your exams.* Ask concept check questions to ensure students understand the relationship between the first and last part of the sentence: *What happens if you don't study? What do you need to do to pass your exams?*

Ask students if they can change the sentence using the word *unless*. Write up their suggestions, even if they are wrong. Ask students which of their suggestions retains the meaning of the original sentence. Draw students' attention to the way the verb has to change: *Unless you ~~don't~~ study, you won't pass your exams.* Put a check mark (✓) by the sentence that is correct.

Ask the students to change the original sentence using *provided*. Write up all their suggestions, and discuss which one retains the meaning. Draw their attention to the way the verbs change: *Provided you ~~don't~~ study, you ~~won't~~ will pass your exams.*

Refer students to the *Unless and provided* box to find out more about how to use *unless* and *provided*.

- 1 Ask students to work alone to complete the exercise, then compare answers in pairs. Find out which sentences caused problems for students. Discuss how the logic of the sentence doesn't work if the wrong answer is chosen. It's helpful to clarify by exchanging the term with a synonym—*Diseases can spread quickly unless [except if] people are careful.*

ANSWERS

- 1 Provided 2 Unless 3 Provided 4 Unless
5 Provided 6 Provided

- 2 With books closed, and to support lower-level students, do the first sentence on the board. Ask students to work in pairs to complete the exercise. For question number 3, if students are struggling, explain that the first sentence provides extra information and doesn't form part of the new sentence with *unless*.

ANSWERS

- 1 Unless people listen carefully, they won't know what to do.
- 2 Unless governments act soon, there might be a pandemic.
- 3 Unless it's an emergency, doctors won't see people.
- 4 You're not allowed in unless you are a relative.

Extension activity

Students rewrite the sentences in Exercise 2 using *provided*.
(**Answers:** 1 Provided people listen carefully, they will know what to do. 2 Provided governments act soon, there won't be a pandemic (or a pandemic could be avoided). 3 Doctors will see people provided it is an emergency. 4 Provided you are a relative, you can come in.)

WRITING

Writing skill

Writing definitions

Warm-up

Ask students to find the definition of cholera in *Fighting cholera*. Write this sentence on the board: *Cholera is a disease that is transmitted by drinking water contaminated with bacteria.* Refer students to the *Writing definitions* box to find the three parts of the definition. After reading, see if they can identify the word being defined, the category, and the use / detail in the definition on the board.

Ask students to work alone to identify the parts of the definition. Suggest they use a different colored highlighter for each part, or they could highlight the word being defined, underline the category, and circle the use / detail. Ask students why it might be important to define words in an essay.

ANSWERS

- 1 **The flu** is a contagious illness *transmitted between individuals.*
- 2 **Quarantine** is a secure place *for putting infected people in isolation.*
- 3 **A campaign** is a series of organized events *for raising awareness of and protesting against an issue.*

- 2 Ask students to work alone to reorder the sentences. Ask students to check in pairs.

ANSWERS

- 1 Typhoid is an infectious disease transmitted by consuming contaminated water.
- 2 Bacteria are small living organisms that are made up of one tiny cell.
- 3 The immune system is a complex system within the body that protects you from contracting diseases.

- 3 Put students into pairs to write definitions. Ask lower-level students to define fewer words while higher-level students can define them all. Put pairs together to compare definitions and choose the best ones. As a class, ask volunteers for their definitions. Write these on the board and ask students to identify the three parts of each.

POSSIBLE ANSWERS

- 1 Medicine is a substance that you take to treat an illness.
- 2 Non-infectious disease is a disease that cannot spread from one person to another.
- 3 Evidence is facts or physical signs that help to prove something.
- 4 A researcher is someone who does research collecting facts and ideas, investigating issues to solve problems or discover more knowledge.

WRITING

Writing task

Brainstorm

Before class, ask students to think about the essay question and, if needed, find some evidence that will support their argument. In class, students look at the essay question and underline the key points to cover in the essay. They then complete the brainstorm with reasons to fund disease research.

Plan

For each question, students write a complete response giving reasons and evidence. They should try to use *provided* and *unless*, and also the language of cause and effect. In whole-class feedback, ask volunteers to give their answers to the questions. This will help students who are struggling for ideas.

Write

Give students 30 minutes to write their essays in class. Highlight the elements that should be included, as listed in the task instructions. Refer students to the model on page 111 if needed. Fast-finishers should use the checklist and ideas in the *Rewrite and edit* section to start editing their work.

Share

In pairs, students provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Each student should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section. They should consider their partner's comments, and rewrite and revise their text, checking for errors. Remind them to pay particular attention to the correct use of *provided* and *unless*. This stage could be done for homework if class time is short.

Extension activity

Ask students to research posters that educate children about disease prevention. They bring these to class to discuss how effective the poster would be in educating children. As an alternative, students can design their own poster that educates children about how to prevent certain types of disease or illness.

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class. Suggest ways to revise the vocabulary at home—with flashcards, by writing sentences, reviewing their notes, or with a friend. Another way to revise would be to re-do the exercises in the book.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

1 collapse **2** Nevertheless **3** hence **4** widespread
5 undergo

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

READING 1	Identifying support for opinions
READING 2	Using research questions
STUDY SKILL	Avoiding self-sabotage
VOCABULARY	Describing graphs
GRAMMAR	Present perfect progressive
WRITING	Inferring the meaning of data in graphs

Warm-up

Before class, find out who the oldest surviving person in the world is and, if possible, bring in a picture of him or her. Show the class the picture and ask them to guess how old he or she is. Find out if they have any ideas how or why people sometimes survive into their hundreds. Would they want to survive to be over 100 years old? Why / why not?

Refer students to the *The longest surviving things in the world* infographic and give them a few minutes to read it. Find out if there is any information in the infographic that they found surprising.

Discussion point

Students discuss the questions in pairs or small groups. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Encourage them to use the prompts to frame their responses.

Extension activity

Ask students to find out in which country people have the longest life span. To what is it attributed?

VIDEO

Before you watch

Refer students to the video still of Lake Titicaca in Bolivia on page 116. Ask them what they think the connection is between the unit title, *Survival*, and Lake Titicaca.

(Answer: The people who live near the lake depend on it for their survival, as do many wildlife species.)

Students work alone to match the words with their synonyms, using a monolingual dictionary if needed. Monitor the activity and help with pronunciation where needed. To extend the learning of the vocabulary, ask students to give an example of *a settlement*, *a species*, something that is able to *absorb* a large amount of water or energy, and a time when they have *reversed* something. For *factor*, you may need to give an example: *There are several factors involved in my decision to help endangered species.*

ANSWERS

1 e 2 c 3 b 4 d 5 a

While you watch

Introduce the topic of the video and give students a minute to read the summary of the video. Play the video so they can complete the summary. Ask students to check in pairs and then check as a class. You may need to teach the word *migrate* /'maɪ,greɪ/. Check that students have capitalized the word *South* in number 1 as it forms part of the name of the continent. Play the video again if needed.

ANSWERS

1 South 2 city 3 migrate 4 fishing 5 reverse

See pages 106–107 for the video script.

After you watch

Give students a few minutes to think about their answers and make notes. Put them into pairs for the discussion. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas.

READING 1

The death of languages

Warm-up

Add some variety to the lesson by starting with a quiz. The questions below include the *Before you read* questions. Answers 1–6 can be found in the text.

- 1 Which are the five most spoken languages? (**Answers:** Mandarin, Spanish, Hindi, English, and Arabic)
- 2 How many languages are spoken in the world today? (**Answer:** approximately 7,000)
- 3 What is the most linguistically diverse country in the world? (**Answer:** Papua New Guinea)
- 4 How many different languages are spoken in Europe? (**Answer:** just over 200)
- 5 How many different languages are spoken in Asia? (**Answer:** around 2,000)
- 6 What percentage of the population of Wales speaks Welsh? (**Answer:** nearly 80%)
- 7 How many different languages can your teacher (or classmates) speak? (To find this out, you'll have to do a poll.)

A Vocabulary preview

- 1 If class time is short, students can do the *Vocabulary preview* section for homework, adding the words to their vocabulary notebooks and word forms charts. In class, ask students to work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed, and ask students to underline the stressed syllable(s). Practice spelling by writing the words on the board without the vowels: *c-mm-rc-*, *m-n-r-ty*, etc. See if they can come up with a mnemonic to remember the spelling of words they find difficult.

ANSWERS

- 1 widely
- 2 superior
- 3 Urbanization
- 4 Minority
- 5 Ruling
- 6 official
- 7 Commerce
- 8 nation

- 2 Ask students to check (✓) the sentences they agree with, and discuss why they agree or disagree with their partner.

Extension activity

Tell students to find the vocabulary words in the text and make a note of any collocations they find.

B Before you read

Predicting

If you did the quiz as a warm-up, see if students can remember the answers without looking back. If not, ask students to work in pairs and discuss the questions.

C Global reading

Reading for main ideas

Students read the questions first, before finding the paragraphs that contain the answers. Ask students to highlight the part of the text where they found the answers.

ANSWERS

A 3, 4 **B** 2 **C** 5 **D** 1 **E** 6

Extension activity

Students should continue to practice annotation skills and smart reading skills learned in previous units. Ask them to annotate the text with questions and summaries of each paragraph.

D Close reading

Identifying support for opinions

Warm-up

Ask the class what their opinion is on the latest movie, song, TV show, or TV advertisement. Find out why they think it's great or terrible. Point out that they are giving their opinion, and then supporting their opinion with information. Would they normally expect someone to say why they like or don't like something? The answer in most cases is probably yes because in order to judge whether we should see the movie or show, or listen to the song, we want more information. Point out that this is similar in academic subjects, too. Refer students to the *Identifying support for opinions* box to find out why supporting your opinion is important in academic writing.

- 1 Ask students to look back at *The death of languages* to find the sentence(s) that support the main arguments in the student essay. They should highlight or underline the sentences in the text. In pairs, they compare answers, giving reasons for why they chose their answer.

ANSWERS

- 1 In North America, for example, there are over 150 languages. However, around half of these are spoken by only a small number of people. In fact, around 25% of the world's languages are in a similar situation.
 - 2 ... it is either enforced through law, or has a special status in education, it makes it hard for other languages to survive.
 - 3 More recently, the economic power of the U.S.A. has continued to push the status of the English language.
 - 4 Education, from nursery to college, is available in Welsh. Dedicated Welsh TV channels are also broadcast.
-
- 2 Ask students to read the statement about what Student A believes. They then find the sentence that best supports her opinion. As a class, discuss why the other options are not relevant or sufficient. (**Answers:** Sentence 1 doesn't work because there is no evidence stated that the languages are in any danger—it's not sufficient. Sentence 2 appears to contradict her opinion. Sentence 3 is both relevant and sufficient.)

ANSWER

3

E Critical thinking

Give students a few minutes to read and think about the questions. Put them into small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Ensure they are using the sentence frames to respond.

Extension activity

Several organizations are taking steps to preserve endangered languages through audio recordings. Ask students to read about and listen to some of these recordings (search: *audio recording of endangered languages*). In class, they report on the language they heard and what they thought about it. Students can share their findings on the class blog.

STUDY SKILLS

Avoiding self-sabotage

Warm-up

Write the word *sabotage* on the board and ask students to define or give an example of it (= things that are done to stop someone from achieving something or to prevent a plan or process from being successful). Ask them what they think *self-sabotage* might be. Ask them to read the *Avoiding self-sabotage* box to find out about the topic. Ask if anyone in the class does any of the self-sabotaging behaviors shown in the examples.

- 1 Working alone, students read the student's experience, annotating the text. In pairs, they discuss the questions. After a few minutes, open the discussion to include the whole class. Discuss what this student could have done differently. For example, he could have found out more about the course beforehand, discussed his lack of technical skills with the teacher, or asked for support or advice from other students.

ANSWERS

- 1 He assumed the class wouldn't be technical.
- 2 He stopped attending seminars and didn't meet other students to prepare for the final assessment.

- 2 Ask students to work with a partner. Some sensitivity is needed here as some students might not be comfortable talking with others about self-sabotage. After a few minutes, open the discussion to include the whole class. Focus on ways to get help for self-sabotage from friends, family, and teachers. Some universities have a department which helps students with their study skills—if applicable, inform students about this service.
- 3 Ask students to work with a partner to discuss the question. Encourage them to give reasons for their answers. After a few minutes, open the discussion to include the whole class.

READING 2

More than just survival

Warm-up

There are many TV shows in which people put themselves in situations where they have to learn to survive. Examples include wilderness survival where the presenter has to make his own shelter, find food, and keep warm, or reality shows where people live for a short time as their ancestors did. Find out if students watch any of these shows. What makes them attractive to watch? What makes people put themselves into these extreme situations?

A Vocabulary preview

- 1 Students complete the *Vocabulary preview* section for homework, record the word forms for each word, and find out their definitions. In class, ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. To practice the /θ/ sound, ask students to put their finger to their lips when they say *threat* and *thrive*. Their tongue should come out far enough to touch their finger. Explain that *die out* is an inseparable phrasal verb. Note that *shortage* has an adjective form—*short on*. (I'm short on money at the moment.)

ANSWERS

- 1 disrupt
- 2 shortages
- 3 thrive
- 4 die out
- 5 food chain
- 6 habitat
- 7 breed
- 8 threat

Extension activity

Extend the vocabulary with a word forms quiz:

Who is someone who breeds animals? (Answer: breeder); If you disrupt something, you cause a what? (Answer: disruption); When you put someone in danger, you ____ them. (Answer: threaten); If a language has a lot of speakers, you could say it is what? (Answer: thriving); If you don't have much milk in the fridge, you could say you were ____ it. (Answer: short on)

- 2 Ask students to work with a partner to discuss the questions in Exercise 1. Encourage students to give reasons for their opinions.

B Before you read

Predicting

Refer students to the pictures which accompany the text on pages 123–124. In pairs, they describe what they see in the pictures and say how they are related. Pre-teach the word *phytoplankton* (= plankton consisting of microscopic plants). Put sentence frames on the board to support lower-level students: *This picture shows ... I think the connection between them is ... What do you think the connection is?* They use the pictures and the title to predict what the text will be about. After reading, students check their predictions.

C Global reading

Using research questions

With so much information available, it can be hard to decide which article to read to get the information you need. Ask students how they decide whether or not an article will give them the information they need when doing research. Refer them to the *Using research questions* box to learn more about the topic. With books closed, ask pairs to write one question they have about the topic. Students share their questions with the class after the exercise has been completed. Students work alone to complete the exercise. Ask students to check in pairs and then check as a class.

ANSWERS

A 6 B 7 C 1 D 2 E 5 F 3 G 4

D Close reading

Identifying synonyms

- 1 Each sentence includes a synonym of the underlined word or phrase. Students circle it. Ask the students why writers use synonyms in this way.

ANSWERS

- 1 the edge of extinction
- 2 One reason
- 3 the population

- 2 Ask students to look for synonyms of the three words in paragraph 3. They should look for synonyms in the sentence(s), following the words as they appear in the paragraph. Ask students to check in pairs and then check as a class. Ask concept check questions: *How is a challenge a risk?* (**Answer:** In this context, the writer is talking about challenges—risks—to survival. He also talks about dangers leading to inability to survive.); *Are low numbers of animals the same as a tiny group of animals?* *Is not enough variety the same as not enough diversity?* *Why has the writer changed the word form to diverse?* (**Answer:** Sometimes the word form has to be changed to fit the sentence grammatically.)

ANSWERS

- 1 One big risk; dangers
- 2 tiny group
- 3 diverse

- 3 Ask students to read *More than just survival* again and complete the sentences with no more than two words. To support lower-level students, allow them to work in pairs for this activity.

ANSWERS

- 1 food chain
- 2 protection
- 3 critically endangered
- 4 food, water
- 5 20th century
- 6 carbon levels

E Critical thinking

Give students a few minutes to read and think about the questions. Put them into small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Encourage them to use the sentence frames in their discussion.

Extension activity

The article mentions ecotourism as a way to protect the local environment. In fact, ecotourism can also have a negative effect. Ask students to find examples where this is true and untrue. In class, they compare their findings in groups. Organize a debate—one team is for ecotourism and the other is against. If relevant, connect it to the local area—would ecotourism be beneficial to the local area?

VOCABULARY

Vocabulary development

Describing graphs

Exam skills

Exams often ask students to interpret information from graphs and charts. Students need the language for describing the data. These activities help build that skill.

Warm-up

Ask students to draw a line graph in their notebooks that represents your description. Start them off by drawing the x and y axes on the board. Label the y-axis with numbers 0 to 250 in increments of 50 and the x-axis with dates from 2000 to 2016. Read the following description: *The number of bald eagle nests in the U.S. was dangerously low—in the region of 50 nests. However, due to conservation efforts, that number steadily increased to reach a peak in 2009 of well over 200 nests. There was a slight drop in 2010 to around 170 nests, then a gradual increase to just under 200 nests by 2012. In 2013, the number dropped again to 180 nests. After 2013, the number of nests steadily increased, though numbers did not reach the peak of 2009, resting at just under 200 nests.* Students compare their graphs in pairs. After completing the *Vocabulary development* section, ask them to use the words to describe their graph to a partner. Ensure that they understand and can pronounce all the words correctly. Explain any words / phrases they do not know.

- 1 Students work alone to complete the activity. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed.

ANSWERS

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

- 2 Students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Ask students why they might say *well over a million people* in sentence 1 rather than an exact figure.

ANSWERS

- 1 Well over
- 2 peaked
- 3 growing
- 4 steadily
- 5 substantial
- 6 slight
- 7 in the region of
- 8 comparison

- 3 Put students into pairs to brainstorm some changes in their country, inventing figures if they are not known and using the vocabulary in Exercises 1 and 2. They should write five to eight sentences to describe the changes. Ask volunteers to share their ideas with the class. Collect the sentences for checking.

Extension activity

Thinking about their own area of interest, students find a graph online which shows changes over time. They can share their graph in class or on the class blog. This could be done as a homework activity.

VOCABULARY

Academic words

- 1 If class time is short, students can do the *Academic words* section for homework. Drill pronunciation, and ask students to add the words to their vocabulary notebooks and word forms charts, noting any other word forms. To extend the learning of the words, ask pairs to choose five to eight words, and write questions using them. They then re-pair and ask their new partner the questions.

ANSWERS

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

- 2 Students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with vocabulary where needed.

ANSWERS

- 1 minority
- 2 reverse
- 3 inevitable
- 4 Diversity
- 5 assist
- 6 grant
- 7 Discrimination
- 8 distribution

- 3 Students check (✓) the sentences they agree with and compare ideas with a partner, giving reasons for their opinion.

CRITICAL THINKING

Significant similarities and differences

Warm-up

If possible, bring in two pictures of animals that are similar—two different breeds of horse, for example. Put them on the board and ask students how they are similar and different. Remind them of the *Language for comparing and contrasting* section from Unit 3, page 54. Write up some of the words and phrases to support lower-level students in the following activities. Refer them to the *Significant similarities and differences* box to learn more about comparing and contrasting.

- 1 Ask students to study the two graphs. In pairs, Student A describes the first graph and Student B describes the second graph. They should begin with “This graph shows ...,” and they should use the language learned in the *Vocabulary development* section on page 126. Still in pairs, they read the two situations, and discuss the comparisons they might make. Point out that, when asked to make a comparison, they should talk about both similarities and differences.
- 2 In whole-class discussion, ask students to say how many of the comparisons focused on similarities and how many on differences. Ask students to speculate as to why numbers of speakers of both languages have fallen in the last 50 years.

- Students discuss the possible reasons for the differences. If needed, give question prompts. For example: *What different reasons for language decline might there be in Europe and a region in Africa? What is happening in those two parts of the world that might cause language decline?* Have students share their ideas in whole-class feedback.
- Students read the example question in pairs and brainstorm other questions they could ask to focus on other differences. Collate student questions on the board.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Highlight that all the work done in this section will build towards the final task, supporting the students and helping them to produce a quality piece of writing. At the end of the unit, they can use this as a checklist for what they have learned.

A Model

Find out if students know the type of graph shown (**Answer:** stacked bar chart) and what the name of the information with small boxes on the right is (**Answer:** key).

- Students work in pairs to answer the questions.

ANSWERS

- Animal populations in an African region between 1960 and today
- The change to vultures is substantial, and the change to foxes and dragonflies is slight.

- Ask students to read the model and underline or highlight language describing changes. Ask students if the writer is sure why the numbers of some animals have been declining. Ask them to circle the words used to show that the writer is unsure why. (**Answers:** *Why they have dramatically decreased is uncertain; perhaps; possibly as a result of; This could be*)

ANSWERS

substantial fall, remained stable, declining rapidly, dramatically decreased, fall, declining, falling steadily, declining slowly, decrease in diversity, growing in number

B Analyze

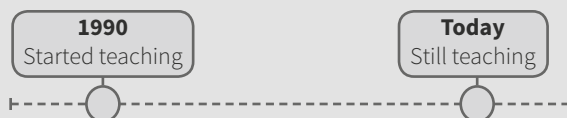
- Students work alone to read the reasons in the box and decide which reasons might be the main cause for the growth or decline of the animals listed.
- Students compare answers with a partner, giving reasons for their opinions. Encourage them to use the speculative language they circled in the model.

GRAMMAR

Present perfect progressive

Warm-up

Draw a timeline on the board such as the one below.



Ask students to make a sentence with *since* and *for* to describe the timeline. Write the two sentences on the board. Elicit the rule for when we use *since* and *for*, and for the construction of the present perfect progressive. Ask students when we use the present perfect progressive. Refer students to the *Present perfect progressive* box to see more examples.

- Students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Draw students' attention to the spelling change in *decline*, *thrive*, and *use*—they have to drop the -e before adding -ing.

ANSWERS

- have been filming
- has been declining
- have been studying
- has been trying
- has been thriving
- has been using

- Students work alone to complete the exercise. Ask students to check in pairs. Fast-finisheers can write one more question for their partner to complete.

ANSWERS

- The crew has been filming for two days.
- Bee numbers have been falling recently.
- The organization has been traveling for six months.

- 3 Students work in pairs to write the sentences. Encourage higher-level students to use adverbs to describe the changes—*rapidly, quickly, gradually*, etc.

POSSIBLE ANSWERS

- 1 The world's population has been growing since 2000.
- 2 Sea levels have been rising for the last 50 years.
- 3 Renewable energy use has been increasing since 2010.

WRITING

Writing skill

Inferring reasons for change

Warm-up

Pre-teach the word *infer*. Give some examples of when we infer every day—I'm smiling, so you might infer that I'm happy. I have my hands over my ears, so you might infer that there is a loud noise or that I have a headache. As an alternative, mime these actions. Ask students what they think the noun form of *infer* is (**Answer:** *inference*). Ask students to read the *Inferring reasons for change* box.

- 1 Ask students to underline the phrases, including the result or cause phrase. Do the first sentence as a class to provide a model of what is expected. Draw students' attention to the placement of the phrases by asking them to number the cause (1) and result (2). (Note that in each sentence, the result comes first.)

ANSWERS

- 1 The rise in elephant numbers may have been as a result of the ban on hunting, although there is no evidence for this in the data.
- 2 The fall in gazelle numbers is perhaps due to competing for land with farmers.
- 3 The growth in a number of animal populations could be the product of government policy.
- 4 The decline in gorilla numbers may have been due to the increased levels of deforestation.
- 5 The growing number of cod in certain regions could be attributed to the limits placed on the number of fish that can be caught.
- 6 The change in bird numbers could be a consequence of a loss of habitat.

- 2 Students work alone to identify the reason for the change in each sentence. Ask students to check in pairs and then check as a class. Ask students to highlight the phrases used to show cause / effect (**Answers:** **1**—due to; **2**—because of; **3**—as a result of; **4**—because; **5**—because of; **6**—as a consequence of). Note the different uses of *because* in sentences 2, 4, and 5. See if students can identify why 2 and 5 have *because of* and sentence 4 just uses *because*. A clue is in the number of subjects and verbs in sentence 4 where *because* is used to connect two independent clauses.

ANSWERS

- 1 hunting
- 2 overfishing
- 3 a hunting ban
- 4 a national park was created
- 5 changes in government rules
- 6 being given protected status

- 3 Put students into pairs to complete Exercise 3. As there are multiple possible answers for each, collect these up for checking.

POSSIBLE ANSWERS

Any of the phrases are possible, but each should occur in these locations.

- 1 The tiger population perhaps fell due to hunting.
- 2 The fall in tuna numbers may be the result of overfishing.
- 3 The growth in bison numbers could be the product of a hunting ban.
- 4 The recent growth in wolf numbers may have been due to the creation of a national park two years ago.
- 5 The leveling off in otter numbers could be attributed to changes in government rules.
- 6 Hippo numbers could be rising as a consequence of being given protected status.

WRITING

Writing task

Brainstorm

Ask students to read the writing task. Ask concept check questions: *What tense do you use in your essay?* (**Answer:** present progressive); *What are you going to be comparing?* (**Answer:** trends in animal populations); *Where will you get your information?* (**Answer:** in the graph)

You may want to do the first stages of this writing task as if students were in an exam. Tell them they will have 45 minutes to complete the tasks. Ask them how they will allocate their time: *How long should you brainstorm to note the key differences in the graph? How long to plan? How long to write?* Before setting the timer, ensure students understand what they need to do in each section. Set the timer and allow students to manage their time.

Plan

Before setting the timer, ensure students understand that they should answer the questions as part of their planning. They should also use one of the planning strategies they have learned in previous units.

Write

Before setting the timer, remind students of the *Writing model* on page 129 which they can refer to if needed. They can highlight the elements that should be included as listed in the task instructions.

Share

When time is up, ask students how they found the experience of writing in exam conditions. Did they plan their time wisely? In pairs, students provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Each student should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section. They should consider their partner's comments, and rewrite and revise their text, checking for errors. Remind them to pay particular attention to use of present perfect progressive. This stage could be done for homework if class time is short. Tell students to turn in their brainstorm, plan, and first draft (with peer comments), along with their final essay so you can assess their essay development.

Extension activity

Ask students to research an animal which is in decline or growing in number. They can present their findings in a PowerPoint presentation. They should include a graph and give a short presentation describing the graph. Give feedback on their use of expressions to describe change, use of present perfect progressive and hedging expressions, extent of research, and the quality of the graph.

REVIEW

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class. Suggest ways to revise the vocabulary at home—with flashcards, by writing sentences, reviewing their notes, or with a friend. Another way to revise would be to re-do the exercises in the book.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 inevitable 2 grant 3 minority 4 Virtually
5 assist

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

READING 1	Activating prior knowledge
READING 2	Summarizing a text
STUDY SKILL	Argumentative writing
VOCABULARY	Legal vocabulary
GRAMMAR	Unreal conditionals in the past
WRITING	Opposing views

Warm-up

Books are closed. Write the word *law* on the board and ask students what they think of when they see the word. Does it have positive or negative connotations for them? Brainstorm some other words and collocations connected with *law*—*lawyer*, *to uphold the law*, *to obey the law*, *the law of the land*, *legal*, *lawful*, *lawfully*, etc. Ensure students can distinguish between the minimal pairs *law* /lɔ/ and *low* /lou/. Ask students what they think the purpose of law is. Do they know of any laws that are silly or that they don't agree with? Ask them to read the *Right or wrong?* infographic on page 134, and rank the behaviors from most to least concerning.

Discussion point

Ask students to discuss the questions in pairs or small groups. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their opinions using the sentence frames. See if the class can agree on a ranking for the behaviors.

Extension activity

Some of the behaviors in the infographic have names—*plagiarism*, *bribery*, *nepotism*, *sexual discrimination*. Ensure students understand these words, their definitions, and how to pronounce them. Students could use the online Macmillan Dictionary to find the meanings and listen to the pronunciation. See if students can match the name with the behavior.

VIDEO

Warm-up

Students work in pairs and discuss the video still and title. What do they think the man is doing and why? Ask students how they think lifestyle and connectivity are related to each other these days. Ask them to discuss how this has changed in recent years and whether they believe this to be a positive or negative development. After a few minutes, open the discussion to include the whole class.

Before you watch

Students work alone to match the words with the definitions. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. Draw their attention to the hyphen in three of the words. Extend the learning of the words through questions: *Do you ever suffer from burn-out?* *Are you hyper-connected?* *Do you feel you have a good work-life balance?*

ANSWERS

1 a 2 e 3 c 4 b 5 d

While you watch

Introduce the topic of the video and allow students a minute to read the sentences. Play the video. Ask students to check in pairs and then check as a class. Play the video again if needed.

ANSWERS

- 1 T
- 2 F (The law will protect them from the pressure to remain connected even when out of the office.)
- 3 T
- 4 F (The off-hours are 8:00 p.m. until 7:30 a.m. from Monday to Friday, and all weekend.)

See pages 106–107 for the video script.

After you watch

Ask students to discuss the questions in pairs. After a few minutes, open the discussion to include the whole class. Do a hands-up poll to find out how many students think such a law would work in their country. Why / why not? Ask volunteers to discuss their opinions.

READING 1

It's legal, but is it ethical?

A Vocabulary preview

- 1 Write the word *ethical* on the board and check that students know what it means. If class time is short, students can do the *Vocabulary preview* section for homework, adding the words to their vocabulary notebooks and word forms charts. In class, students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. Ask students to underline the stressed syllable(s). Note that we can say *a fine line*, or *a thin line*; both are followed by *between*. We often talk about *crossing the line*—to behave in a way that is unacceptable. If the line is fine, it's easy to cross over to the wrong side.

ANSWERS

- 1 basis
- 2 ethics
- 3 breaks the law, punishment
- 4 ideal, illegal
- 5 scandal
- 6 a fine line

- 2 Ask students to check (✓) the sentences they agree with in Exercise 1, then discuss them in pairs. They should give reasons for their opinions.

Extension activity

Ask students to think of a real-world example from their experience of a fine line between something that is ethical / unethical or legal / illegal. An example might be media coverage of events: reporters have the job of reporting, but when reporting crosses the line into influencing, does the reporting become unethical?

B Before you read

Predicting

Ask students what they think *It's legal, but is it ethical?* is going to be about, and write some of their ideas on the board. See if students can think of something that is legal but unethical.

C Global reading

Activating prior knowledge

Warm-up

Ask students why they think it's a good idea to think about a topic before they read about it. Which text would be easier for students to read: one they know a little about or one they know nothing about? Why is it easier to read a text if you know something about it already? Refer them to the *Activating prior knowledge* box to check their ideas. Point out that reading is an active process—when we read, we are connecting new ideas to those we already know.

Exam skills

The reading texts on exams cover a range of topics, so one way to prepare for a reading exam is to read widely on a range of subjects. Thinking about what you know about the topic before you read will help comprehension during the exam.

- 1 Ask students to discuss the questions in pairs or small groups. After a few minutes, open the discussion to include the whole class. Ask students how the questions helped them think about the topic.
- 2 Ask students to read *It's legal, but is it ethical?* again to find out if the text covers the points discussed in Exercise 1.

D Close reading

Scanning

- 1 Students work alone to complete the exercise before comparing answers in pairs. Encourage them to annotate the text, and highlight where in the text they have found the answers. Check that students understand the difference between *tax avoidance* and *tax evasion* from paragraph 5. Find out if this is an issue in their country. The text states that laws are written rules and regulations. Develop further understanding with concept check questions: *How do people find out about what is and isn't legal in their country? If you break a law that you didn't know about, should you be punished?*

ANSWERS

- 1 F (Paragraph 1: However, clearly not all unethical behavior is illegal ...)
- 2 F (Paragraph 2: The law is a set of written rules and regulations, ...)
- 3 F (Paragraph 1: Ethics and law are closely connected and there is a fine line between the two. Paragraph 2: However, ethics differs significantly from law.)
- 4 T
- 5 NG
- 6 NG

- 2 Ask students to complete the sentences in pairs. Go through the answers with the class. Discuss number 6—is this true in their experience?

ANSWERS

- 1 Lying 2 punishment 3 schools and hospitals / services 4 Tax avoidance 5 Tax evasion 6 harder

E Critical thinking

Give students a few minutes to read and think about the questions before putting them into groups to discuss. You may find that some students have strong views on what should and shouldn't be lawful, or views on what is or what isn't ethical. Steer the discussion away from specifics, and focus on the questions as they are written. Encourage students to use the sentence frames.

Extension activity

Refer students to the last paragraph. Ask them to find examples or instances where unethical behavior is affecting the lives of many people. What laws could be written to alleviate the problem? Students can share their answers and ideas in the next class or on the class blog.

STUDY SKILLS

Argumentative writing

Warm-up

Remind students of *It's legal, but is it ethical?* Ask them to look at the organization of the text—what does each paragraph do? They should notice that most of the text is focused on defining terms or giving examples. The last paragraph states the writer's opinion. Ask them what the purpose of the article is. (**Answer:** It's argumentative—the writer creates an argument to support the opinion that ethics alone is not enough to control society.) Remind students that an *argument* in this context is not a disagreement between people, but a set of reasons you use to persuade other people to support your views or opinions. Ask them to read the *Argumentative writing* box to find out more. Ask students what they think *to sit on the fence* means. (**Answer:** to refuse to support either side in an argument)

- 1 Ask students to read the question and discuss with a partner, giving reasons for their responses.
- 2 Ask students to read the sentences and decide which one follows the advice given for argumentative writing in the *Argumentative writing* box. After students have answered the question, discuss why sentences 1 and 2 do not follow the advice.

ANSWERS

- 3 Both sides are considered, and the opinion is hedged.

- 3 Students work alone to think about why the two thesis statements are weak. Ask students to discuss in pairs and then discuss as a class.

ANSWERS

- 1 This is just a statement and contains no convincing opinion.
 - 2 This contains a limited opinion, but does not consider two sides of an argument.
- 4 Ask students to work alone to write a thesis statement for the essay question in Exercise 3. Monitor to ensure students are stating their opinions clearly and offering other arguments. Put lower-level students in pairs if they are struggling with this exercise.
 - 5 Students compare their thesis statements with a partner and discuss the viewpoints to include in their essay. After a few minutes, open the discussion to include the whole class. Ask volunteers to write their thesis statements on the board. Discuss the strengths and weaknesses of each as a class.

READING 2

Right or wrong at work

A Vocabulary preview

- 1 Students complete the *Vocabulary preview* section for homework, record the word forms for each word, and find out their definitions. Ask students to compare answers with their partner. Note that the stress is on the first syllable when *conduct* is a noun but on the second when it's a verb. Give an example: *His **conduct** was inappropriate; He didn't **conduct** himself well.*

ANSWERS

- 1 recruit 2 conduct 3 extent 4 intentions
5 tactic 6 states 7 occur 8 declare

- 2 To extend the vocabulary, students discuss the questions from Exercise 1 in pairs.

B Before you read

Preparing to read

Ask students to work in pairs or small groups. They make a list of unethical behaviors at work. Note that there may be disagreements about what constitutes unethical behavior. Students think of ways to improve employees' ethical behavior. After a few minutes, open the discussion to include the whole class. List students' ideas on the board.

C Global reading

Reading for main ideas

Exam skills

This exam-type task requires students to match the main idea with the paragraph. To complete the task, they don't need a careful reading of the text, so should not spend a lot of time trying to understand it. To practice this skill, limit the amount of time students have to do the matching.

Before setting the exercise, ask students to look at the text and identify the text type. Ask: *Where would you find a text that has instructions for group work and case studies?* (**Answer:** a textbook) Explain that the main ideas in the exercise all correspond to one of the paragraphs in the text. Students first read the main ideas from the exercise, then skim read the text quickly. Set a timer for four minutes.

ANSWERS

- A 3 B 6 C 1 D 7 E 8 F 2 G 5 H 4

D Close reading

Summarizing sections

Exam skills

This exam-type task asks students to complete a summary of part of the text. Students need to understand the text, recognize collocations, and search for key nouns or noun phrases from the text that they can use in the summary.

- 1 Ask students to read the *Summarizing sections* box to find out about completing a summary of a text. Ensure they understand that they will be looking for key nouns and noun phrases to fill in the blanks. Tell students to read the summary first. Working in pairs, ask them to predict the words that might go into the blanks without looking back at the text. Ask them to re-read the text to find the words to complete the summary. They should highlight these nouns or noun phrases. Go through the answers with the class, and ask them what clues they used to find the answers.

ANSWERS

- 1 proportion 2 measures 3 interpretation
4 résumé 5 code of conduct 6 values
7 praising people

- 2 Ask students to re-read the case study. In groups, they discuss the questions at the end. If you have a multicultural class, group students so that they are in a group with different nationalities. Open the discussion to include the whole class, and find out what students think about each situation and how they would improve the behavior.

E Critical thinking

Give students a few minutes to think about the questions. Put them into small groups to discuss the questions. Encourage students to use the sentence prompts when responding. Extend question 2 by asking students what alternatives companies have for ensuring ethical behaviors.

VOCABULARY

Vocabulary development

Legal terms

- 1 Write the phrase *legal terms* on the board. Brainstorm connected words or expressions. If class time is short, ask students to complete this section for homework, adding the words to their vocabulary notebooks and looking for word forms. Ensure students can pronounce the words. Note the difference between a *trial* /'traɪəl/ and a *trail* /treɪl/. (They look very similar, but have different meanings.) See if they can put the words into a logical order—e.g., *crime, arrest, witness, lawyer, trial, defend, judge, justice*. To extend the learning of the vocabulary, ask students to write a paragraph using all of the words. The picture on page 135 is a common image for justice; a blindfolded Lady Justice (Justitia) often holds scales and a sword. Ask students why they think a scale is used to symbolize justice. (**Answer:** The scales represent the facts of the case—the evidence for and against.) Go through the answers with the class.

ANSWERS

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

- 2 Students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with vocabulary where needed.

ANSWERS

- 1 lawyer, defend 2 judge 3 witness 4 arrest
5 crime 6 justice 7 trial

- 3 To vary this activity, form small groups and give each group a different question to discuss. They then re-group to share their responses with students who had a different question.

Extension activity

Ask students to find out more about Lady Justice. Possible research questions: *Why is she blindfolded? Why does she carry a sword? Where are these statues usually found? What is the origin?* Students can share their research on the class blog.

VOCABULARY

Academic words

- 1 If class time is short, students can do *Academic words* Exercise 1 for homework. Students add the words to their vocabulary notebooks and word forms charts, noting any other word forms. In class, students test each other in pairs.

ANSWERS

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

- 2 Students work alone to complete the sentences with words from Exercise 1. Ask students to check in pairs and then check as a class. Note collocations: *to introduce an initiative*; *ethics code* (or *code of ethics*); *government ministry*; *a clause in a contract*; *The Institute of—*.

ANSWERS

1 initiative 2 code 3 controversy 4 ministry
5 Corporate 6 clause 7 Institute 8 inspection

- 3 Ask students to work with a partner to discuss the question. As a follow-up, ask them to answer the question in writing.

Extension activity

Conduct a review of all academic words learned so far with a game. Divide the class into two teams—a red team and a green team. Prepare a set of 25 vocabulary words numbered 1–25. On the board, draw a 5x5 grid with each square numbered. Team A starts by choosing a number. Say the definition of the word or give an example. The team has ten seconds to discuss, then one member of the team says their guess. If the guess is right, they get the square—color in the square with the appropriate team color. If the guess is incorrect, Team B gets a chance to answer and win the square. Team B then gets a turn. The object of the game is to create a line of colored squares horizontally, vertically, or diagonally. Teams should try to block each other's attempts by blocking their row.

CRITICAL THINKING

Appeal to authority

Warm-up

If possible, bring in a picture of Stephen Hawking (or another well-known authority figure). Put the picture on the board (or write his name if you don't have a picture), and ask students if they know who he is and what he is famous for. Ask students what makes him an *authority* on the nature of the universe. Students may mention his research, publications (*A Brief History of Time*, *The Universe in a Nutshell*), or the fact that he is a former Lucasian Professor of Mathematics at the University of Cambridge, England. He is now the Dennis Stanton Avery and Sally Tsu-Wong Avery Director of Research at the Department of Applied Mathematics and Theoretical Physics. Refer students to the *Appeal to authority* box to learn more about referring to authority. Check that students understand *appeal* in this context means *reference to*.

- 1 Ask students to read the student text and answer the questions in pairs.

ANSWERS

- 1 The government
- 2 Social, economic, and political data come from many areas, and governments might not hold all of the information.

- 2 Ask students to underline the authority figures mentioned in the sentences. (**Answers:** leading economic journalist, economic institution, winner of the Nobel Prize for Economics, survey of 5,000 people) Discuss why these could be valid authority figures. Ask students to read the sentences to identify which ones are weak. Open the discussion to include the whole class, and ask students what makes sentences 1 and 3 weak.

ANSWERS

1 and 3 are weak because they are just opinions. We know this because they use “believes it is” and “thinks it is.” Although the data in **2 and 4** needs analysis, they at least contain some information and are more than just the opinions of experts.

- 3 Ask students to discuss the questions with a partner. After a few minutes, open the discussion to include the whole class. Point out that the opinion of even the highest authority is just opinion. While many people might defer to their knowledge on the subject, it's their research findings that make the stronger argument, not their opinion.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Ask them to identify what they will learn about (**Answer:** using the unreal conditional in the past and writing for-and-against essays) and what they will do (**Answer:** write a for-and-against essay about speaking out against unethical behavior at work). At the end of the unit, they can use this as a checklist for what they have learned.

A Analyze

Ask students to read the ideas and categorize them into *for* or *against* the essay topic.

ANSWERS

For: It protects the wider society. It creates a fair situation for other companies. An inspection might change the law.
Against: They could lose their job. No crime is being committed. The company will have lawyers to defend them.

B Model

- 1 Ask students to read the model and answer the questions. Ask students why the writer presents the alternative position first. (**Answers:** This shows that the writer is considering both sides of the argument; the strongest argument usually comes last in the essay.)

ANSWERS

- 1 In recent times, there have been many controversies involving unethical behavior from companies. While their actions are not a crime, many feel that companies' ethics policies should make them behave more fairly. This essay will argue that if a company is behaving unethically, then an employee should speak out. It could be argued that an employee does not always need to speak out. (If a crime wasn't committed,) then limited action could be taken by a judge. Even if a crime had happened, the employee would have needed significant proof to make a case. (Large companies employ teams of lawyers to defend themselves,) and at the very least, the worker can expect to lose their job. However, many people would argue that the employee should take the initiative and try to force an inspection of the company. (Corporate organizations are very influential in society and need to be challenged to protect the wider community.) At a minimum, (this would create a fair situation for companies to compete in,) and may even result in laws being changed. In conclusion, while there is some personal risk to the individual, and unethical behavior is not illegal, they should still speak out to protect the wider society. If no one had ever challenged a large corporation about its behavior, many important laws that protect everyone's interests wouldn't have been introduced.
- 2 The writer thinks employees should speak out.
- 3 The writer presents the alternative position.

- 2 Students work in pairs or small groups to answer the questions, and brainstorm some arguments for and against. Collate their ideas on the board.

Unreal conditionals in the past

Warm-up

Give an example such as the one below to introduce unreal conditionals.

I left the house early to go to the movie theater. There was a lot of traffic, but I arrived on time. If I hadn't left the house early, I wouldn't have arrived on time.

Concept check: *Did I leave the house early? Did I arrive on time?*

Point out that the third sentence presents an unreal situation. Ask students when we might want to express an unreal situation. Refer them to the *Unreal conditionals in the past* box to find out more. Ask them to underline the past perfect in each sentence—which clause does it occur in? (**Answer:** the if-clause) Concept check: *Did he take the gifts?* (**Answer:** yes) *Did he lose his job?* (**Answer:** yes) *Did they work their full hours?* (**Answer:** no) *Was the company more productive?* (**Answer:** no)

- 1 Students complete the exercise. Ensure they understand that (+) means use a positive and (-) means use a negative. Do the first sentence together on the board. If needed, review the past participle forms of the verbs used in the exercise before setting the task. When going through the answers, ask concept check questions to ensure students understand the meaning. Note the double use of *had* in sentence 2—*had had* is the past perfect of *have*, and when saying the sentence, both “*hads*” are stressed.

ANSWERS

- 1 hadn't broken, wouldn't have gone
- 2 had had, would have known
- 3 had reacted, wouldn't have been
- 4 had paid, would have had
- 5 had known, would have been

- 2 To support lower-level students with this exercise, ask them to identify the clause in which the past perfect should occur—always in the if-clause. Ask students to check in pairs and then check as a class. Draw students' attention to the use of the comma after the if-clause when it comes first but not when it comes second. Sentence 5 presents an interesting mistake based on pronunciation of *have* in speech—*have* sounds like *of* because it is unstressed.

ANSWERS

- 1 If you **had been** more honest, you wouldn't have been in trouble.
- 2 If **I'd known** earlier, I wouldn't have done it.
- 3 If I hadn't lied on my résumé, I **would have gotten** the job.
- 4 The company would have been in trouble if I **had reported** it.
- 5 What would **have** happened if you had spoken out?

- 3 Do the first sentence together so that students understand what to do. Students work alone to write the sentences. Ask students to check in pairs and then check as a class. Point out that there may be other correct answers.

POSSIBLE ANSWERS

- 1 If they hadn't spent so much time on social media, they would have finished their work.
- 2 If they hadn't made lots of mistakes in the report, the company wouldn't have made the wrong decision.
- 3 If they hadn't left the confidential documents on the train, the newspapers wouldn't have published it.

Writing skill

Writing for-and-against essays

- 1 Remind students that they will be writing a for-and-against essay, and that this is a type of argument essay in which they state and support their opinion. Refer them to the *Writing for-and-against essays* box to learn more about for-and-against essays. Ask students to read the thesis statements, and decide which ones clearly show the writer's position. Tell students more than one may be correct. Ensure they understand what the writer's position is in each.

ANSWERS

2 and 3

- 2 Explain that certain phrases can be used to give different points of view. Ask students to read the phrases and categorize them into the three columns.

ANSWERS

Stating the first viewpoint: It can be argued that; One perspective is

Stating an alternative view: Others have argued that; Another viewpoint is

Giving the author's view: It is my belief that; This essay will argue that

- 3 Remind students that the opposing view comes first. Ask them to read the thesis statement and think about the arguments they could use *for* and *against*. They then look at the points and decide if they will go into the second paragraph (the opposing view) or the third paragraph (the supporting view).

ANSWERS

Paragraph 2: an unethical attitude does not mean a low standard; could badly affect the atmosphere; it is the company's responsibility not the employees

Paragraph 3: blame others for their mistakes; do not complete work to the best of their ability; do not start and finish at the correct time

Writing task

Brainstorm

You may want to do the brainstorm, planning, and writing sections of this writing task as if students were in an exam. Tell them they will have 45 minutes to complete the tasks. Ask them how they will allocate their time: *How long should you brainstorm? How long to plan? How long to write?* Before setting the timer, ensure students understand what they need to do in the *Brainstorm*, *Plan*, and *Write* sections. Set the timer and allow students to manage their time.

Students can use some ideas from the *Writing skill* section, from discussions, and from the readings, but they should also include their own ideas to complete the chart.

Plan

Before setting the timer, ensure students understand that they should answer the questions as part of their planning. They should also use one of the planning strategies they have learned in previous units.

Write

Before setting the timer, remind students of the *Writing model* on page 147 that they can refer to if needed. They can highlight the elements that should be included as listed in the task instructions.

Share

When time is up, ask students if writing in exam conditions went better this time—if they did this in the last unit. Did they plan their time wisely? In pairs, students provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Each student should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section. They should consider their partner's comments, and rewrite and revise their text, checking for errors. Remind them to pay particular attention to correct use of unreal conditional in the past. This stage could be done for homework if class time is short. Tell students to turn in their brainstorm, plan, and first draft (with peer comments), along with their final essay so you can assess their essay development.

Extension activity

Ask students to research what goes into a code of conduct (search: *code of conduct examples*). If they have relatives who work in a company, ask them to find out what their code of conduct includes. Using this information as a guide, ask them to work in groups to write a code of conduct for their college or university.

REVIEW

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 initiative 2 Ultimately 3 reverse 4 controversy
5 corporate

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

READING 1	Using graphic organizers
READING 2	Note taking
STUDY SKILL	What gets good marks?
VOCABULARY	Science verbs
GRAMMAR	Relative clauses
WRITING	Explanations: Varying sentence length

Warm-up

Write the following dates and words on the board in a random order and ask students to find the connection between the date and the word or name. They should say how they think they are connected.

1973 1927 1875 1900 1928

Alexander Graham Bell The Jazz Singer
TV radio cell phone call

After they have made their guesses, ask them to read the *Sounds in our world* infographic on page 152 to see if they were right.

Discussion point

Students discuss the questions in pairs or small groups. Ask students what they think a *phonautograph* is. Break the word down into its parts—*phon* has to do with sound; *auto* has to do with self; *graph* has to do with writing or pictures. Find out what devices students use to listen to music, audiobooks, or podcasts. Encourage students to listen to audiobooks in English as a way to improve their listening skills, grammar, and vocabulary—as well as for enjoyment. As a lead-in to the video, ask students what animals are known to communicate with sound, (**Answers:** dolphins, whales, chimps, etc.) or with movement (**Answers:** flocks of birds, schools of fish, etc.).

Extension activity

Ask students to find a picture online of a phonautograph and a description of how it worked. What was the phonautograph replaced by?

VIDEO

Before you watch

Students work alone to match the words with the definitions. Monitor the activity and help with pronunciation where needed. Go through the answers with the class.

ANSWERS

1 b 2 c 3 d 4 a

While you watch

Allow students a minute to read the questions. See if they can predict the answers. After watching, they can see if their predictions were correct.

ANSWERS

1 b 2 a 3 b

See pages 106–107 for the video script.

After you watch

Ask students to discuss the questions with a partner. After a few minutes, open the discussion to include the whole class. Find out how much students know about whales. For example, do they know that sperm whales produce ambergris, the base ingredient in many perfumes? It can be found washed up on beaches and is worth a small fortune.

READING 1

Seeing without your eyes

Warm-up

Ask students to think about the title *Seeing without your eyes*. Ask: *How can someone see without their eyes?* Ask them to think of ways humans who are sight-impaired “see,” and ways that animals who have poor vision “see.” Ask: *What other senses do animals rely on? Which animal senses are more acute than humans’?* For example, some animals can hear ultrasound frequencies that are out of the range of human hearing.

A Vocabulary preview

- 1 If class time is short, students can do the *Vocabulary preview* section for homework, adding the words to their vocabulary notebooks and word forms charts. Remind students that they might need to change the form of the word. In class, students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. Ask students to underline the stressed syllable(s). Note that the plural of *echo* is *echoes*. Ask students what materials absorb sound waves and which bounce them back.

ANSWERS

1 vibrations 2 air pressure 3 advanced
4 sound waves 5 determines 6 absorb 7 reflect
8 echo

- 2 Ask students to work in pairs to describe how an echo is made, trying to use as many words from Exercise 1 as possible. Group them with another pair to share their descriptions.

Extension activity

Ancient people created stories to explain natural phenomena. One story is about echoes. Ask them to find out about the Greek myth of the mountain nymph Echo. See if students have similar myths in their cultural history.

B Before you read

Activating prior knowledge

Ask students to discuss the question with a partner. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas.

C Global reading

Reading for main ideas

Ask students to read *Seeing without your eyes*. Students work alone to match the headings with the paragraphs. Set a time limit of four minutes for this activity. Ask students to highlight the words or phrases that gave them the clue to the correct heading. Ask students to check in pairs, giving reasons for their choices, and then check as a class. Note the pronunciation of the word *prey* (/preɪ/) in the glossary. Ask students to compare their description of how an echo is made with that in the text.

ANSWERS

A 3 B 6 C 1 D 5 E 4 F 2

D Close reading

Creating a text map

- 1 Ask students how they organize their notes from a reading. Do they create an outline? Do they use headings? When do they take notes from a reading? Refer them to the *Creating a text map* box to learn about organizing notes. Ask students to work alone to re-read the text and complete the text map. Ask students to check in pairs and then check as a class. Discuss why this method of note-taking is useful. (**Possible answer:** It shows the relationship of one thing to another.) Some students are reluctant to try this method of note-taking, but with practice, it can be very effective.

ANSWERS

1 vibration 2 sound waves 3 distance 4 see
5 hunt 6 intensity 7 stronger sound 8 Higher
9 hear

- 2 Ask students to work in pairs to create a text map for paragraph 5. Support lower-level students by writing the central idea—echolocation—on the board or asking students to underline key ideas before they add anything to the map. Ask a volunteer to draw his or her map on the board so that students can compare.

E Critical thinking

Give students some time to read and think about the questions. Put them into small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. If needed, give students another example of how animals have inspired technology. (For example, spider silk is very strong, and scientists have created synthetic “spider” silk that is stronger than steel.)

Extension activity

The article discusses animals that use high-frequency sound. Ask students to find out which animals communicate by using low-frequency sounds.

STUDY SKILLS

What gets good marks?

- 1 Ask students what they do to get good grades. Put some of their ideas on the board. Refer them to the *What gets good marks?* box to learn more about getting good grades. Ask students to work with a partner to complete the exercise, using an assessment they have both done for the text map. If necessary, they can use the criteria from their last writing assignment. Students join another pair for sharing.
- 2 Students will need to bring a copy of their last assignment to the class for this exercise. They read the criteria they mapped out in Exercise 1, and underline the parts of their assignment that demonstrate they have good ability in the criteria they listed.
- 3 Students turn to page 168 and read the task, and also look at the criteria in the checklist on page 189. Students may also like to look at the skills boxes in Unit 6 and Unit 8. In pairs, students decide what the grading criteria will be. If needed, collate some of the criteria on the board to support lower-level students. As a class, discuss how students might approach the task. For example, students can underline the key points in the essay question, write an outline, write at least one sentence with a relative clause, etc.

POSSIBLE ANSWERS

use of relative clauses
variety of sentence length
answering the essay question
discussion of how the changes have affected the types of relationships people have
clear thesis statement
evidence to support the argument
presentation of both sides of the argument
clear structure—introduction, body, conclusion
improvement on the second draft based on peer comments
appropriate use of vocabulary, grammar, and spelling

Extension activity

Ask students to use the categories from the *Using feedback from your tutors* box in Unit 6 to categorize the criteria in their brainstorm.

READING 2

A wireless world

Warm-up

Ask students if they have any wireless devices. Ask: *What are the pros and cons connected with wireless devices?* Write *wi-fi* on the board and see if students can guess what it actually stands for. They may guess that the *wi-* stands for *wireless*. Opinions vary as to what the *-fi* stands for, but it's possible that it doesn't stand for anything. It may be a play on words with *hi-fi*.

A Vocabulary preview

- 1 Students complete the *Vocabulary preview* section for homework, recording the word forms for each word and finding out their definitions. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. Ask students to group the words by number of syllables. With books closed, “hum” a word and see if students can guess it based on the syllables and stress pattern. Or, read the definition and ask students to write the word. Go through the answers with the class.

ANSWERS

1 broadcast 2 launch 3 interference 4 accelerate
5 Satellites 6 Incredibly 7 network 8 Unreliable

Extension activity

Ask students to find out what things that were originally mentioned in science fiction books, shows, or movies have become reality (search: *things from science fiction that came true*).

B Before you read

Preparing to read

- 1 Students work alone to rank the inventions before discussing their list with a partner. They should present arguments for their ranking.
- 2 Allow students one minute to see how many things they can list that use wireless technology. Collate their ideas on the board.

C Global reading

Reading for main ideas

Ensure students understand the term *intercepting* (**Answer:** to stop, catch, or take control of someone or something before they can get to the place they are going to) from heading F. Give students four minutes to read the headings and match them with the paragraphs, highlighting the key words or phrases they used as clues. Ask students to check in pairs and then check as a class. See if students can guess the meaning of *onerous* from context in paragraph 1. Ensure they understand what *patented* means from paragraph 3.

ANSWERS

A 2 B 4 C 6 D 1 E 5 F 3

D Close reading

Making notes

- 1 Ask students why they might need to make notes from a text they have read. Refer them to the *Making notes* box to find out more. Discuss their preferred method for making notes. Ask students to read the notes in Exercise 1, and then find the words in paragraph 1 that the notes were taken from. Draw students' attention to the way the note-maker paraphrased the original text.

ANSWERS

The legend of Pheidippides describes a Greek soldier and runner who is said to have run from Marathon to Athens to report the news of a military victory against the Persians at the Battle of Marathon. Communication over a great distance has proven to be a challenge for people for centuries. Empires extended over huge land masses, so passing a message from one location to another was an onerous task that could take months. For centuries, the main way to take a message from one location to another was by a person on horseback, until the telegraph and Morse code were developed in the early to mid-1800s. Even then, communication was limited to the length of the wire it traveled through. The theory of wireless communication was being developed at a similar time, but it would be much later before this became reality. What happened would go on to transform many aspects of the modern world.

- 2 Working alone, students read paragraphs 2 to 4 and complete the notes. Ask students to check in pairs and then check as a class. Discuss the information the notes contain. Ask: *How do you know what information to include?* In fact, this will vary according to the purpose for reading—e.g., to find information to support arguments in an essay—and the information that the reader finds important. Names, dates, and numbers are often considered main points. Key messages are also important to note.

ANSWERS

1 proposed 2 work 3 patented 4 FM 5 intercept
6 code 7 Satellite technology 8 *Sputnik 1* 9 2,000
10 GPS

- 3 Students read paragraphs 5 to 7, underlining key ideas that they will then turn into notes. They should write a short paragraph as in the example in Exercise 2, using no more than seven short sentences. To support students, discuss what information is key in paragraph 5 together, then let students decide on key information for paragraphs 6 and 7.
- 4 Students compare their notes with a partner. You could collect these for checking.

E Critical thinking

Give students a few minutes to read and think about the questions. Put them into small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask students how they communicate now—mostly via social media apps, through email, or in another way. How would they communicate if they didn't have technology? For question 2, ask students what affect sound waves generated from technology have on animals.

VOCABULARY

Vocabulary development

Science verbs

Warm-up

Write the word *science* on the board vertically and ask students to do the same in their notebook. See if they can come up with a science word for each letter in the word *science*. A more challenging rule is that the words have to start with the letters in *science* whereas the activity could be made simpler if they include the letters, but they can come anywhere in the word. An example of the second version is below:

a**S**trology
 C**H**emicals
 I**N**vestigation
 E**X**periment
 inve**N**tion
 C**O**mpound
 variable**E**

- If class time is short, ask students to complete this section for homework, adding the words to their vocabulary notebooks and recording word forms. Conduct a quiz to help with word forms. Ask: *Which words end in -tion in the noun form?* (**Answers:** calculation, classification, composition, observation, proposition) *Which word's noun form can end in -al or -tion?* (**Answers:** propose, proposal, proposition) *Which two verbs don't change in the noun form?* (**Answers:** signal, underline) *Which word ends in -ism in the noun form?* (**Answer:** criticize)

ANSWERS

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

- Students work alone to complete the sentences. Ask students to check in pairs and then check as a class. To extend the learning of the words, ask pairs to choose four to eight words and use them in a sentence or question. They compare sentences with another pair.

ANSWERS

1 signal 2 classifying 3 observing 4 criticized
 5 calculate 6 underlined 7 composed 8 propose

- Students can work with a partner to discuss the questions. For variety, divide students into three groups—A, B, and C. Group A answers question 1, group B question 2, and group 3 question 3. Re-group them into ABC groups to share their answers and ideas.

VOCABULARY

Academic words

- If class time is short, students can do *Academic words* Exercise 1 for homework, adding the words to their vocabulary notebooks and word forms charts, noting any other word forms. Go through the answers with the class, and help with pronunciation where needed. *Phenomenon* (/fə'namə,nən/) is a tricky word to say and spell. See if students can come up with a mnemonic to help remember both. Students test each other on the new words in pairs.

ANSWERS

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

- Students work alone to complete the sentences. Remind students that they might need to change the word form. Ask students to check in pairs and then check as a class.

ANSWERS

1 trigger 2 Prior 3 insights 4 comprised
 5 phenomenon 6 device 7 thereby 8 dominate

Extension activity

Thereby can be a tricky word to use in a sentence. Searching *thereby sentence examples* on the Internet results in lists of sentences using *thereby*. Ask students to read some examples and write their own sentences using *thereby*.

- Ask students to work with a partner to discuss the questions and to practice using the vocabulary.

CRITICAL THINKING

Logical order

Warm-up

Write the word *logical* on the board and ask students what it means. Ask: *If ideas are presented illogically, do they make sense? What is a logical argument?* Refer students to the *Logical order* box to learn about the topic.

- 1 Students read the paragraph and work alone to answer the questions. Discuss what makes the text illogical. Ask volunteers to share their ideas.

ANSWERS

- 1 It is about technology and its impact on life, but the focus is not clear.
 - 2 No. It jumps between positive and negative impacts.
- 2 Ask students to read the advice. Ask students if the paragraph follows this advice. Students rewrite the paragraph to make a logical one, using the advice and their own ideas. One way to support lower-level students with this is to photocopy or retype the text, and cut it up so that students can physically re-order the sentences. Students compare paragraphs in pairs. Ask them which of their paragraphs follows the advice the best.
 - 3 Put students into pairs for the discussion. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Highlight that all the work done in this section will build towards the final task, supporting the students and helping them to produce a quality piece of writing. At the end of the unit, they can use this as a checklist for what they have learned.

A Analyze

Students read the brainstorm and decide whether the essay will focus more on the positive or negative effect on communication at work.

ANSWER

Positive

B Model

Tell students to read the model essay. Ask them to underline or highlight the sentences that contain ideas from the brainstorm. Ask students to discuss and answer questions 1 to 2 in pairs.

ANSWERS

- 1 In the first question, the writer only needs to explain why this change has been positive or negative. In the second question, the writer would need to explain the positives and negatives of the statement.

Extension activity

Tell students to work in pairs to brainstorm an essay focusing on the negative aspects of technology. They compare brainstorms with another pair.

Defining and non-defining relative clauses

Warm-up

Write this sentence from the model essay on the board:

It was the vast improvements in cell technology that signaled a revolution in working practices).

Ask students: *What signaled the revolution in working practices?* (**Answer:** the improvements in cell technology) *Do we need this information to understand the sentence?* (**Answer:** Yes. Without it, we don't have enough information. We can't take it out.) *What if we took out the word that; would the sentence still make sense?* (**Answer:** no)

Explain that the part of the sentence starting with *that* is a relative clause. It gives essential information about the noun phrase that precedes it. Explain that this is an example of a *defining relative clause*.

Now write this sentence from *Seeing without your eyes*:

Bats produce both constant frequency sounds, which travel long distances, and varying frequency sounds.

Ask students: *What is the relative clause in this sentence?* (**Answer:** which travel long distances) *What does it start with?* (**Answer:** which) *If we take the relative clause out, does the sentence still make sense?* (**Answer:** Yes. The relative clause gives extra information that is not essential to the meaning of the sentence.) *What do you notice that is different from the first sentence?* (**Answer:** commas) *Can we delete which?* (**Answer:** no) Explain that this is an example of a non-defining relative clause.

Finally, write this sentence on the board:

These are some of the technological problems that people are facing.

Ask students: *Can we take out the relative clause?* (**Answer:** no) *Can we take out that?* (**Answer:** yes) *Why can we take out that in this sentence but not in the first?* (**Answer:** In this sentence, the relative clause is the object—people are facing technological problems. To illustrate this further, underline the subject and verb in each clause. Note that in the relative clause we have a subject and a verb.) Explain that this is an example of a defining relative clause.

Point out that *that* and *which* are common relative pronouns in academic writing and they are largely interchangeable, though in American English, *that* is preferred. Other relative pronouns include *who*, *whom*, *whoever*, *whomever*, and *whichever*.

Ask students to read the *Defining and non-defining relative clauses* box. Students read the model essay to find more examples of relative clauses. Ask: *Are they defining or non-defining?*

- 1 Ask students to read the sentences and decide if they contain defining or non-defining relative clauses. Encourage students to think about them carefully and not just look for the commas. They might notice, for example, that in sentences 3 and 5, the relative clause is an explanation or definition.

ANSWERS

- 1 defining 2 defining 3 non-defining 4 defining
5 non-defining

- 2 Students work alone to complete the exercise. To support lower-level students, ask them to draw parentheses around the clause and look at the clause to see if it has a subject and verb.

ANSWERS

- 1 (cannot be left out) 2 that 3 that 4 that
5 (cannot be left out)

Extension activity

Ask students to write some defining and non-defining relative clauses. They can exchange these with a partner and identify which are defining, and which are non-defining.

WRITING

Writing skill

Explanations: Varying sentence length

- 1 Ask students why they think having some short sentences and some long sentences in a text might be desirable. Ask them to read the *Explanations: Varying sentence length* box to find out about the topic. Students work alone to complete the sentences. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 c 2 a 3 d 4 b

- 2 Students work alone to write their explanation sentences. They compare answers in pairs. Collect these up for checking.
- 3 Refer students to the writing task on page 168. They can write their short and longer sentences down if needed, or do the activity for homework if they need more time. The speaking activity can then be done in class in the following lesson.

Writing task

Brainstorm

Decide if you want the students to do the brainstorm, planning, and writing sections of this writing task as if students were in an exam. If so, tell them they will have 45 minutes to complete the tasks. Before setting the timer, ensure students understand what they need to do in each section. Set the timer and allow students to manage their time.

Students should first decide if they will present a positive or negative view of how technology has changed the types of relationships people have. Students can use some ideas from the *Writing skill* section, from discussions, and from the readings, but they should also include at least one opposite viewpoint.

Plan

Before setting the timer, ensure students understand that they should answer the questions as part of their planning. They should also use one of the planning strategies they have learned in previous units.

Write

Before setting the timer, remind students of the *Writing model* on page 165 that they can refer to if needed. They can highlight the elements that should be included as listed in the task instructions.

Share

When time is up, ask students if writing in exam conditions went better this time—if they did this in the last unit. Did they plan their time wisely? In pairs, students provide feedback on each other's writing, using the checklist on page 189 and the grading criteria they looked at in the *Study skills* section. Each student should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section. They should consider their partner's comments, and rewrite and revise their text, checking for errors. Remind them to pay particular attention to correct use of defining and non-defining relative clauses. This stage could be done for homework if class time is short. Tell students to turn in their brainstorm, plan, and first draft (with peer comments), along with their final essay so you can assess their essay development.

Extension activity

Biomimetics is the study of the natural world to find solutions to problems. The example from the unit is the study of echolocation to create sonar technology. Ask students to find one example of biomimicry in the design of a new product. You can give the example of Velcro®—its design was based on observing how the hooks on some seed pods (burs) stuck to fabric. Students can present their findings in an infographic or on the class blog.

REVIEW

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class. Suggest ways to revise the vocabulary at home—with flashcards, by writing sentences, reviewing their notes, or with a friend. Another way to revise would be to re-do the exercises in the book.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 dominate 2 exposure 3 Prior 4 trigger
5 diversity

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

READING 1	Identifying conclusions and reasons
READING 2	Predictions in texts
STUDY SKILL	Overcoming writer's block
VOCABULARY	Science nouns
GRAMMAR	Future perfect simple
WRITING	Persuasive arguments

Warm-up

Ask students if they know of any predictions in the past that were wrong. Examples include:

"I think there is a world market for maybe five computers."
– Thomas Watson, chairman of IBM, 1943

"This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us." – Western Union internal memo, 1876

"The horse is here to stay but the automobile is only a novelty—a fad." – The president of the Michigan Savings Bank advising Henry Ford's lawyer not to invest in the Ford Motor Co., 1903

The people in these examples were short-sighted—they couldn't imagine a reality in which these inventions exist.

Refer students to the *Global predictions for 2050* infographic to read about predictions for 2050. Are there any they think are far-fetched? Ask students what the stupidest invention they have ever seen is. Give an example such as diet water to prompt ideas.

Discussion point

Students discuss the questions in pairs or small groups. In feedback, find out what predictions students have for 2050.

Extension activity

Ask students to find two more predictions from the past that were wrong. Were the predictions far-fetched or were the detractors short-sighted? Students discuss in class or on the class blog.

VIDEO

Before you watch

Ask students to look at the picture on pages 170 and 171. Ask: *What does it show? Are solar panels common where you live? Why / why not?* Some governments provide subsidies for homeowners to install solar panels. Is this the case in their countries? Students work alone to match the words with the definitions. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed.

ANSWERS

1 d 2 c 3 a 4 e 5 b

While you watch

Give students a minute to read the questions and predict the answers. Show the video. Go through the answers with the class, and find out if students have ever heard of Li-Fi before now. What have they heard?

ANSWERS

- 1 anywhere there is a light source
- 2 light to transmit Internet connectivity
- 3 decrease
- 4 light only travels in straight lines

See pages 106–107 for the video script.

After you watch

Ask students to discuss the questions in pairs. For question 2, you could give one topic to four different groups, and ask them to draw an infographic or text map to show the changes. Ask students if any of their ideas for inventions in question 3 are actually viable or far-fetched. Encourage students to use the sentence frames.

Extension activity

Ask students to research Li-Fi. Tell them to bring one true thing about it and one false thing about it to class. In class, see if students can spot the false fact.

READING 1

Products of the future

A Vocabulary preview

If class time is short, students can do the *Vocabulary preview* section for homework, adding the words to their vocabulary notebooks and word forms charts. In class, students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed, and ask students to underline the stressed syllable(s). Tell students to find the collocations in the sentences for *tackle* (**Answer:** tackle a problem), *revolutionary* (**Answer:** revolutionary material), *obsolete* (**Answer:** to become obsolete), and *efficiency* (**Answer:** to improve the efficiency of something). You also might point out that we often say that something will *revolutionize the way we do something*. For example: *This material will revolutionize the way we design clothing*. Point out that *revolutionary* has a positive connotation.

ANSWERS

- 1 tackle 2 devastating 3 revolutionary 4 obsolete
5 filter 6 particle 7 properties 8 efficiency

Extension activity

Ask students to write questions that include the vocabulary words. They then use the questions to interview their partner.

B Before you read

Preparing to read

Ask students to discuss the questions with a partner. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas.

C Global reading

Reading for the main idea

Ask students to read *Products of the future*. Students work alone to complete the text with the correct headings for each paragraph. Give them four minutes to do this. Go through the answers with the class.

ANSWERS

- 1 The most important discovery of the future?
- 2 Revolutionizing IT and mobile communications
- 3 Environmental impact
- 4 Water shortages
- 5 Medical miracle
- 6 The next Industrial Revolution

D Close reading

Understanding conclusions

Warm-up

Introduce the collocation *to draw conclusions* with a sentence such as: *We don't want to draw any conclusions yet, but the initial findings look promising*. Ask students what they think *draw conclusions* means. Ask: *Where does a writer usually draw his or her conclusions?* Refer students to the *Understanding conclusions* box to find out more about conclusions in texts.

- 1 Ask students to re-read *Products of the future* and match the development with the conclusion, annotating the text as they go. Ask students to check in pairs and then check as a class. Ask students what clues they used to find the answers. For example, for letter c, the text says that *this research is still in its infancy*. This means the same as *has only just started*.

Exam skills

Words and phrases in an exercise are unlikely to be the same as those in the text in an exam, so students need to recognize synonyms and synonymous phrases.

ANSWERS

- 1 b 2 d 3 a 4 c

- 2 Ask students to complete the sentences in pairs, highlighting or annotating the text as they find the answers. Go through the answers with the class. Ask students if they know what graphite is used for every day. (**Possible answers:** inside pencils or as a lubricant)

ANSWERS

- 1 batteries 2 environmental / nuclear disasters 3 salt
4 reduce 5 impact

E Critical thinking

Give students a few minutes to read and think about the questions. Put them into small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class.

Extension activity

Ask students to find out more about graphene. Ask: *Have any of the uses mentioned in the text been made into products yet? Who won the Nobel Prize in Physics for their pioneering work?* Ask them to research using Internet sites such as <http://www.graphene.manchester.ac.uk/explore/the-story-of-graphene/>.

STUDY SKILLS

Overcoming writer's block

- 1 Ask students to look at the picture on page 175 and say what it shows. Ask them if they sometimes have to discard their ideas and start again when they write. Explain that when you can't think of ideas it is known as *writer's block*. Ask students to read the questions and discuss them in pairs. Ask volunteers to share their ideas with the class. Write their tips on the board.
- 2 Ask students to read the *Overcoming writer's block* box for tips on the topic. Ensure students understand what *scribble* means. Find out how many students start their writing on paper and how many start on their computer. Were any of the ideas they discussed in Exercise 1 mentioned in the *Overcoming writer's block* box?
- 3 Ask students to read the essay question and choose one of the techniques listed in the *Overcoming writer's block* box to brainstorm ideas. You will have to allow students to record themselves on their phones if they choose the second option.
- 4 Students discuss the technique with a partner. Encourage students to try another technique when they brainstorm their next writing assignment.

READING 2

New technology: Is greater regulation needed?

Warm-up

Brainstorm some technologies on the board with students. Ask them to look at the list and say what regulations exist. For example, there may be regulations about cell phone charges to ensure consumers aren't being charged too much to use them.

A Vocabulary preview

- 1 If class time is short, students can complete the *Vocabulary preview* section for homework. In class, students work alone to complete the sentences. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. *Deteriorate* /di'tɪəriə,reit/ and *stagnant* /'stægnənt/ are tricky words to pronounce. Ask questions to extend the learning of the vocabulary—e.g., *What do family or friends become if you don't call for a week?* (**Answer:** concerned) *What will happen if you leave your bag out in the weather for a year?* (**Answer:** It will deteriorate.) *What is water that isn't moving?* (**Answer:** stagnant)

ANSWERS

1 exaggerate 2 stagnant 3 moral 4 effectively
5 concerned 6 potential 7 poverty 8 deteriorate

- 2 Ask students to put a check (✓) by the sentences they agree with and compare answers with a partner, saying why they agree.

Extension activity

Draw a 4x8 table on the board. Label the columns *noun*, *verb*, *adjective*, and *adverb*. Add the vocabulary words to the table, and ask students to provide the other forms without looking back at their notes. Some words may have more than one noun form. They can add these to their vocabulary notebooks and word forms charts.

B Before you read

Activating prior knowledge

Give students five minutes to talk about what they know about each of the things in the box. Reorganize the pairs so that they can share their ideas with another pair. Open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Ask students if they are looking forward to driverless cars. Can they think of any threats / potential risks that these technologies might present?

C Global reading

Reading for main ideas

Students quickly read the text and match the research questions with the paragraphs. They should highlight or annotate the text as they read. Ask students to check in pairs and then check as a class.

ANSWERS

A 3 B 5 C 2 D 6 E 4 F 7 G 1

D Close reading

Understanding text predictions

Warm-up

Ask students to read the *Understanding text predictions* box. On the board, note the ways writers make predictions throughout their writing. Ask students to find an example of each in the text and write these on the board. (**Possible answers:**

future structures—will be lost; will likely be; will have deteriorated

modals—could also be argued; could lead to; might be that
adjectives / adverbs to show stance—more difficult task; huge potential; serious risks; risks are exaggerated; obvious and imminent threats; one very immediate worry; undoubtedly our roads would be safer; has arguably reduced; a certain and pressing danger; is likely to increase inequality)

- 1 Ask students to decide if the author thinks the situations are likely or unlikely. They should give reasons for their answers; what future structures, modals or adjectives / adverbs led them to their conclusion about the author's stance? Ask students to check in pairs and then check as a class.

ANSWERS

1 U 2 L 3 L 4 U

- 2 Ask students to complete the exercise alone, then compare answers in pairs. For Y (Yes) and N (No) answers, they should identify where they got the information in the text.

ANSWERS

- 1 N (The challenge for governments around the world is the assessment of potential risks and gains—something they haven't always done effectively.)
- 2 N (It could also be argued that modern technology has allowed for the rapid spread of misinformation, ...)
- 3 NG
- 4 Y (There will likely be fewer jobs to compete for, and those that are available are likely to require a high level of education.)
- 5 N (Big data has huge benefits such as decoding DNA, ...)
- 6 Y (While unlikely, due to government regulations, the race to get the first driverless car on the road potentially places many lives at risk.)
- 7 N (... this eliminates the need to work and gives people more leisure time; the reality is that is also likely to increase inequality ...)

E Critical thinking

Give students a few minutes to read and think about the questions. Put them into pairs or small groups to discuss the questions. After a few minutes, open the discussion to include the whole class. Ask volunteers to share their ideas with the class. Encourage students to use the sentence frames.

Vocabulary development

Science nouns

Warm-up

Before moving onto science nouns, see if students can remember the science verbs from the last unit. With books closed, read the definitions from page 162. Students write down the words. Go through the answers with the class.

- If class time is short, ask students to complete this section for homework, adding the words to their vocabulary notebooks and identifying word forms. In class, students work alone to complete the exercise. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. Note that *force* and *source*, though spelled differently, are minimal pairs: /fɔːrs/, /sɔːrs/. Ask students to test each other on the new vocabulary in pairs. See if students can name the three parts to an atom (**Answers:** proton, neutron, electron), any of the parts of a cell (**Answers:** nucleus, mitochondrion), and a substance from daily life that is pressurized (**Possible answers:** air in a tire, soda in a can, water in a fire hydrant). Ask students to say which field of science each term belongs to—biology, chemistry, physics, or science in general.

ANSWERS

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

- Ask students to work in pairs to complete the sentences with words from Exercise 1. Monitor the activity and help with vocabulary where needed. Put students into new pairs to write new sentences with blanks for four to eight of the words. They can use the nouns as listed or other word forms. They exchange with another pair and complete the sentences with blanks with books closed.

ANSWERS

1 source 2 atom 3 force 4 evaluation
5 cell 6 decay 7 pressure 8 discovery

Academic words

- Assign *Academic words* Exercise 1 for homework. In class, help with pronunciation and ask students to add the words to their vocabulary notebooks and word forms charts, noting any other word forms. Ensure they underline the stressed syllable in each word form as the stress may change according to word form. For example: *derive* / *derivation*; *exhibit* / *exhibition*; *isolate* / *isolation*; *regulate* / *regulation*; *investigate* / *investigation*. Ask students to write a rule for the pronunciation of nouns ending in *-tion*.

ANSWERS

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

- Students work alone to complete the sentences. Ask students to check in pairs and then check as a class.

ANSWERS

1 nuclear 2 regulate 3 investigation 4 assessment
5 exhibit 6 derived 7 isolating

- Ask students to work with a partner to discuss the questions in Exercise 2

Extension activity

To prepare for the final course exam, ask students to look back at the wordlists in the *Review* section for each unit. They put a check (✓) next to the words they know the meaning of, a double check (✓✓) next to words they feel confident using, and an asterisk (*) next to words they don't feel confident about. This will help them see which words they need to study more and which they need to try to use. Encourage students to set up study groups (online or face-to-face) to review vocabulary.

CRITICAL THINKING

Identifying unreasonable assumptions

Warm-up

Remind students about questioning assumptions from Unit 4. Ask: *What does it mean to question an assumption?* Write the examples below from Unit 4 on the board and ask students to identify the assumptions. Ask: *Which one is reasonable?* (**Answer:** sentence one)

Obviously, prescribed forest fires cannot be allowed to burn unattended.

Clearly, global warming has no effect on forest fires.

Refer students to the *Identifying unreasonable assumptions* box to read about the topic. Check students understand the word *imply* (= to suggest something without saying it directly).

- 1 Students read the text and think about what the implied assumptions are. They then read the assumptions below the text and check (✓) the ones the writer is making. Ask students to check in pairs and then check as a class.

ANSWERS

Students check sentences 1 and 2.

- 2 Ask students to work in pairs or small groups to read and discuss the assumptions in each of the sentences. They should give reasons for their opinions.

POSSIBLE ANSWERS

- 1 Unreasonable. The implied assumptions are that people will not be able to find new jobs and that people are not adaptable.
- 2 Unreasonable. The implied assumption is that all students find coursework less stressful.
- 3 Unreasonable. The implied assumptions are that work contacting people makes them stressed, that the ease of contact makes people stressed, and that technology means people cannot switch off from work.

WRITING

Writing model

Ask students to read through the information in the *Writing model* introduction to find out what they will be learning in this section of study. Ask them to identify what they will learn about (**Answer:** using the future perfect simple) and what they will do (**Answer:** write an essay discussing whether the risks and challenges outweigh the benefits of new technology). At the end of the unit, they can use this as a checklist for what they have learned.

A Analyze

Ask students to read the ideas in the brainstorm. They circle the three ideas they think are most important and discuss their choices in pairs. As a class, find out who thinks the challenges and risks outweigh the benefits, and who thinks they don't.

B Model

- 1 Ask students to read the model essay and decide if the writer focused on the same points they circled. Ask them to highlight the points the writer focused on from the brainstorm. Ask students to identify the thesis statement in the essay. (**Answer:** last sentence in paragraph 1)

Extension activity

Ask students to study the way the writer structured the essay. They should notice that he / she starts with the opposite argument—challenges and risks—in the first two body paragraphs, then provides a counter argument to build the case for benefits. Her strongest argument is in the third body paragraph. Note that she still mentions the opposing view, but quickly dismisses it.

- 2 Put students into pairs to discuss the arguments in the essay. Encourage them to give reasons for their answers. After a few minutes, open up the discussion to the whole class.

GRAMMAR

Future perfect simple

Warm-up

Revisit the infographic from the beginning of the unit. Ask students questions about it using the future perfect: *Do you think that the world's population will have reached ten billion by 2050? Will computers have become thousands of times faster?* Write one of the predictions the students agree with on the board. For example, *The world's population will have reached ten billion by 2050.*

Ask concept check questions: *In this sentence, when will the population reach ten billion? Before or after 2050?* (**Answer:** before) *What tense is this?* Refer students to the *Future perfect simple* box to identify the tense, and read more about how and when it is used.

- 1 Students work alone to complete the exercise. Point out that they may have to use a negative so that the sentence makes sense. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 will have taken
- 2 will have traveled
- 3 will have banned
- 4 won't have replaced
- 5 will have reduced

- 2 Do the first sentence as an example with the whole class. Students work alone to complete the exercise. Ask students to check in pairs.

ANSWERS

- 1 By 2025, solar energy will have become more important than oil.
- 2 Research will have stopped all food shortages by 2025.
- 3 Companies will have connected all electronic devices wirelessly by 2030.
- 4 By 2035, manufacturers will have replaced all plastic packaging with biodegradable packaging.
- 5 By 2040, scientists will have mapped all human DNA from birth to reduce the risk of disease.

Extension activity

Ask students to research what people are predicting for the year 2050. They can share the most far-fetched ones in class or on the class blog.

As a review for the final exam, hold a grammar auction. Write 10–15 sentences on a handout, focusing on grammar from the unit. Most sentences should be incorrect, but make sure there are several correct ones, too. Errors in sentences can be based on typical errors students make. Put students into groups of three or four for the auction. Give them the handout—they must decide which sentences are correct and which are not. They cannot use their books or notes. Each group should give themselves a group name—write each on the board. Next to the group name, write \$1,000. This is the money they have for the auction. Start the auction. Ask groups to bid for the first sentence. Whoever bids the highest buys the sentence. Subtract the money they spent on it. You may find that students will bid on sentences without intending to buy them just so that others will—they can be very strategic! At the end, the team with the most money and the most sentences is the winner.

WRITING

Writing skill

Expressing perspective and stance

Warm-up

To introduce the idea of a person's perspective, ask students to use their phones to take a picture of you from where they are sitting. They then show the pictures to someone who is sitting far away from them. How are the pictures different? Similarly, your perspective can change according to how you look at a topic. Ask students how the perspective about global warming might be different if you were a scientist who studies global warming, a politician, a businessperson in the oil industry, or someone who lives on a low-lying island. (**Possible answers:** The scientist's perspective might be based on data collected; the politician's on making people happy so that they can stay in power; a businessperson's perspective might be based on making money; the islander's may be based on concern about rising sea levels. Because of their perspective, they will take a different stance on climate change.)

Ask students to read the *Expressing perspective and stance* box to learn more about the topic. Ensure students understand that they can choose different perspectives in their writing. Ask them to read *New technology: Is greater regulation needed?* to identify the perspective. (**Answer:** The writer has a social perspective because he / she is mostly interested in the impact on humanity. He / She mentions business and law, but the main perspective is the impact of technology on society.)

- 1 Students work alone to complete the table. Ask students to check in pairs and then check as a class. Monitor the activity and help with pronunciation where needed. Note that all the *adverb* forms have a double *l*.

ANSWERS

Adjective	Adverb	Noun
political	politically	politics
legal	legally	law
social	socially	society
ethical	ethically	ethics
financial	financially	finance
historical	historically	history

- 2 Ask students to work alone to complete the sentences with the correct form of the words. To support lower-level students, ask them to work in pairs to identify the word form that should go into each blank. Go through the answers with the class, asking students what the perspective in each sentence is.

ANSWERS

- 1 financially 2 legally 3 political 4 Historically
5 Society 6 ethics

WRITING

Writing task Brainstorm

You may want to do this section of this writing task as if students were in an exam. Tell them they will have 45 minutes to complete the tasks. Ask them how they will allocate their time: *How long should you brainstorm? How long to plan? How long to write?* Before setting the timer, ensure students understand what they need to do in each section. Set the timer and allow students to manage their time.

Students use the table to brainstorm their ideas, using information from the unit if needed.

Plan

Before setting the timer, ensure students understand that they should answer the questions as part of their planning. They should also use one of the planning strategies they have learned in previous units.

Write

Before setting the timer, remind students of the *Writing model* on page 183 which they can refer to if needed. They highlight the elements that should be included as listed in the task instructions.

Share

When time is up, ask students how comfortable they felt in writing under time pressure. Did they plan their time wisely? In pairs, students provide feedback on each other's writing, using the checklist and the questions on page 189 of the Student's Book to guide their discussion. Each student should write their feedback on their partner's essay paper.

Rewrite and edit

Students read the tips in the *Rewrite and edit* section. They should consider their partner's comments, and rewrite

and revise their text, checking for errors. Remind them to pay particular attention to correct use of the future perfect simple. This stage could be done for homework if class time is short. Tell students to turn in their brainstorm, plan, and first draft (with peer comments), along with their final essay so you can assess their essay development.

Extension activity

Ask students to work in pairs to identify a problem in society (including medicine, business, politics, sport, etc.) that could be solved with the right technology. They create an invention to solve this problem. They should **1**) identify the problem, **2**) describe their new invention, **3**) say how the invention will be a revolution. The inventions need not be too serious—students can have fun with this and can invent something that is far-fetched. They present their idea in a PowerPoint presentation or article.

REVIEW

Wordlist

Students work in pairs or small groups to work through the wordlist, checking that they remember what each word or phrase means, how to pronounce it, and how it was used in the unit. Monitor the activity, discussing any problems or misunderstandings with the class. Suggest ways to revise the vocabulary at home—with flashcards, by writing sentences, reviewing their notes, or with a friend. Another way to revise would be to re-do the exercises in the book.

Academic words review

Students work alone to complete the sentences. Note that academic words in this exercise could come from previous units. Ask students to check in pairs and then check as a class.

ANSWERS

- 1 derived 2 assessment 3 code 4 comprised
5 isolate

Unit review

Students work through the list alone to decide what they can and can't do. They discuss their answers in pairs, including what they remember from the unit about each point.

Finally, open the discussion to include the whole class. Pay particular attention to any boxes that students didn't check. Explore with them ways of overcoming remaining problems.

Unit 1: Identity

NARRATOR: A fashion item? A watch? Or a new concept in changing your mood and how you feel? From its design ... to the various prototypes ... to a gadget you can wear on your wrist. This new technology might look like a watch, or a fitness tracker, but it is much more than that, say its creators.

This team were researching the way a person's mind and body work and react together, and created a device you can use to change your mood.

This device works using rhythm and pulses against the skin and is worn against the pulse on your wrist. One of the co-creators explains why.

JACK HOOPER: We wear it on the inside of the wrist rather than the outside of the wrist, as you can see. And that's because, because this is a psychological mechanism, having Doppel's pulse where you expect to feel your own pulse amplifies the effect.

NARRATOR: So how does the device work? Andreas and Jack explain.

ANDREAS BILICKI: Doppel, as it stands, delivers two separate rhythms—one high and one low. The high rhythm essentially delivers a rhythm which is higher than that of your resting heartbeat, and the lower one which is lower. Er, and it works in a very similar way to when you listen to upbeat or downbeat music. So, in the same way that upbeat music can excite you or bring you up, make you more alert; Doppel does this. And it does the same thing with the downbeat tempo which you feel calming you down and even helping you into sleep.

NARRATOR: So, it works by pressing buttons to slow or speed up the pulses, which then calm you down or make you more upbeat and energetic.

JACK HOOPER: You take your resting heart rate through your phone, and then that's the bio-data we need to then set the levels that you need to either calm or to get going. And, so, it's kind of ... not a lot of data, but we're using it very smartly, and that's the approach we take.

NARRATOR: So why is this wearable technology unique?

ANDREAS BILICKI: As far as we are aware, no one else has developed this type of technology—it's a new breed of wearable. It actually allows you to change the way you feel in a natural and simple way. And to that end, we've geared all our technology to deliver the best experience possible.

Unit 2: Design

NARRATOR: The town of Nabeul, on the coast of Tunisia, is famous for its pottery. But now, local craftsmen say their work is in danger because large companies and foreign imports are filling the market with cheaper products.

Anwar Torqui has been a craftsman for 40 years, making pottery by hand, but much of his work has gone.

ANWAR TORQUI: The richer pottery traders control everything and exploit artisans. Another important factor is the high tax we have to pay and the foreign products that are on the market. We need to promote Tunisian products and protect our market.

NARRATOR: Artisans have to pay 102 Tunisian Dinars, or around 78 U.S. dollars, a month in income tax. They believe this is far too high. Some have changed their working lives.

RABEH HMANDI: I work only three or four months each year. Often I'm forced to leave my job when demand drops. I have to look for other sources of income.

NARRATOR: However, some believe the Tunisian pottery industry can compete effectively.

IMED: We can compete with external markets by providing high-quality products here in Tunisia. In this way, we can develop our pottery industry. If we continue using the same old traditional methods, this workmanship will decline.

NARRATOR: Tunisian artisans and craftsmen who produce pottery the traditional way are hoping for help from the Tunisian government so they can compete with large pottery traders and cheap international imports.

Unit 3: Thought

NARRATOR: Would you like to like yourself more?

Researchers say you can do this now by using virtual reality.

Psychologists and computer scientists from University College London, University of Barcelona, and University of Derby have developed a special suit that allows a set of cameras to follow body movements.

Wearing a display, you see a virtual 3D environment. In the virtual scene, you are asked to express compassion to a virtual child. The crying child appears to respond positively to your words. The roles are then changed and you are put into the body of the child, and you see yourself giving comfort to the child. Scientists checked the mood and state of people before and after the experiment.

DR. CAROLINE FALCONER: Afterwards, participants are a lot more self-compassionate, and they're a lot less self-critical. Okay, so, this is from a one-off session. We're now looking at the longevity of these effects in the ongoing work that we're doing.

NARRATOR: Dr. Caroline Falconer, lead author, claims that compassion is important for mental as well as physical health. Previous studies show that people with high self-compassion are better able to cope with stress and negative life events. She says they are trying to promote self-compassion, but what the virtual reality does is provide a tool to help with various mental health problems. The technology is getting much cheaper, so this could soon make virtual reality a useful method of treatment at home. Scientists are now doing more research to see how long the positive effects will last.

Unit 4: Fire

NARRATOR: Fires burn through the Indonesian countryside, spreading thick smoke across parts of the country. But what has caused them?

They aren't due to extreme weather or any other natural phenomenon, but are instead part of a man-made process called slash and burn. This process of cutting down and burning trees in order to plant new crops is used by many companies.

Unfortunately, these fires produce thick smog that causes numerous negative health effects, which in turn has disrupted flights, and forced the closure of schools in certain regions.

BENNI GUSTIAN: We cannot be sure how long the school will be closed for. Every two days we are updated on the situation by the state's Education Department and determine whether or not to reopen the school.

NARRATOR: Visibility in these conditions is poor—around only 80 meters—and flights to and from the city's airport have either been delayed or canceled.

OSVIAN: For two weeks now, flights to and from Pekanbaru have been disrupted. Every day, nearly 50 flights have been affected by the smog. As a tour agent, I feel disappointed as many tour groups have ended up canceling their trips. Our second group from Malaysia and a local group from east Java have both just canceled their trips as their planes cannot land.

HASNAN: So far, there have been no arrivals or departures today. Of the 74 flights scheduled for today, 19 have already been canceled.

NARRATOR: The negative health effects of this blanket of smog cannot be underestimated. In South Sumatra, one of the main centers of the fires, 22,585 cases of acute respiratory tract infections have been reported in just a few days.

Companies use slash-and-burn techniques every year, causing similar health problems and disruption to everyday life. Current laws are not strict enough to prevent this from happening.

Unit 5: Movement

NARRATOR: Times are changing for the nomadic tribes of Mongolia living in remote areas of the Gobi desert. One of the world's greatest deserts, temperatures can reach 40 degrees Celsius in summer and drop as low as minus 40 in winter. Each year, the desert swallows more of the grasslands that are necessary for the tribespeople to maintain their way of life.

Dariimaa Damdindoo and her husband Tsogladrahe lived as nomadic farmers in the village of Altai Aimak. However, desertification, drought, overgrazing, and unemployment has forced them to move to Mongolia's capital.

DARIIMAA DAMDINDOO: Compared to my youth, nature is completely different. The grass is short. When we were children the grass was very long. Everything is sparse these days, even water. I don't know why.

NARRATOR: The traditional nomadic way of life gave the grasslands time to recover. Now, families tend to settle in one place which quickly kills the grass as it no longer has a seasonal break.

Horse breeder Urjinjav Dondog moved to the outskirts of Ulan Bator because the desert had overrun his fields. Urjinjav complained he was unable to sell his racehorses as they were too thin due to lack of food.

URJINJAV DONDOG: Of course I am worried about desertification. The desert area is moving from the South and coming closer and closer to us.

NARRATOR: Reclaiming desert land is possible, but very expensive, and the government has to work hard to prevent further expansion. Desertification is believed to affect around one fifth of the world's population.

Unit 6: Disease

NARRATOR: The world's largest mosquito factory in China breeds millions of insects a week in the fight against the spread of diseases like dengue and Zika. The technology, developed by Professor Zhiyong Xi, involves injecting mosquito eggs with a bacteria.

PROFESSOR ZHIYONG XI: If the male mosquito carries this bacteria, they mate with a female and make the female sterile. However, if the female carries the bacteria, they are able to suppress diseases such as Zika, dengue, and yellow fever replicating in the mosquito body. Therefore, they reduce the potential for the mosquito to spread the disease.

NARRATOR: Xi started his work in 2012 and last year he released three million male mosquitos. Mosquito eggs are collected from cages containing 5,000 females and 1,600 males and then injected with the bacteria. A researcher can inject around 200 eggs a day. The male mosquitos are then released. On the island of Sharzai 1.5 million mosquitos are released every week. Xi said that the mosquito population has been reduced by 90%. Liang Jintian, who has lived in the village for six decades, said the process was so effective he didn't have to sleep with a mosquito net any longer.

LIANG JINTIAN: We used to have a lot of mosquitos in the past. Back then some people were worried that if mosquitos were released here, we would get even more. But we have far fewer now.

NARRATOR: Professor Xi said that several countries had expressed interest in the technology, especially Brazil and Mexico.

Unit 7: Survival

NARRATOR: Lake Titicaca in Bolivia is one of the world's highest lakes—and South America's largest. It is home to more than 530 species of wildlife, and for many years, local tribes have depended on its water for farming and fishing. But the lake may be in danger because of the presence of a nearby city. El Alto is a settlement which has recently grown, and now over one million people call it home. The water used by the citizens of El Alto makes its way to Lake Titicaca. It is dirty, polluted, and may contain dangerous chemicals. These chemicals are in turn absorbed by animals, plants, and people who live by the lake. Esteban Mamani Quispe explains the problems this causes.

ESTEBAN MAMANI QUISPE: We used to live off of cattle and dairy here. We make cheese to sell and we plant seeds. We sell these products and we eat them. That is why this is so worrying. If there is no solution to this, I don't know what we'll do. That is why our little kids and younger brothers leave here for other countries. They migrate. They go to Argentina, Brazil, Spain. This is the main reason people migrate.

NARRATOR: Esteban's friends and family feel that the polluted water is a threat to their survival. If they cannot continue farming and fishing around Titicaca, they will leave. Elvis Veliz Vilca works for an environment agency. He understands how serious the problem is.

ELVIS VELIZ VILCA: The pollution is an enormous factor for the development of the area. It limits milk, meat, and sheep production. The problem is very complicated. For example, the heavy metals from the mines that are in the reeds, which are fed to the cattle, affect the cattle's health. If their production is smaller, the income in the area drops, too.

NARRATOR: The nature around Lake Titicaca, as well as the culture of the people around it, will need to be protected to ensure their survival. Fortunately, Elvis Veliz Vilca thinks it is still not too late to reverse the process of lake destruction. Esteban and his family will have to hope he is right.

Unit 8: Law

NARRATOR: A new French law has been introduced protecting employees from the pressure to remain connected, even when out of the office. This is the first time a government has protected an employee's work-life balance in such a way. The new law was welcomed by people working in Paris's business district where dozens of office workers cross the esplanade attached to their smartphones.

CAROLINE: Today, people tend to be hyper-connected, all the time, especially if you like your job. If you really enjoy what you do, it can be difficult to switch off, so I think it's really important to have this law that aims to help those who need this right to log off.

GREGOIRE: I think that, yes, it is necessary to make a distinction between professional and private lives. This is still not very clear in today's society.

NARRATOR: According to recent research, the time spent processing information takes up to 40% of people's working time, which has negative consequences.

CAROLINE SAUVAJOL-RIALLAND: The feeling of not being able to follow the flow of information sent to us creates a feeling of frustration, stress, a feeling of incompetence. And all these feelings can result in a burn-out. Admitting that you can't keep up in our world today is dangerous in a professional career. So people don't admit what is happening and what they find difficult.

NARRATOR: Office workers are receiving seven times more information now, and this will increase to 32 times more by 2020. The French firm *La Poste* recently established a rule stating that employees can ignore emails during their off-hours. When they introduced the new rule, they had to define what "off-hours" meant, setting it from 8:00 p.m. to 7:30 a.m. Monday to Friday and all of the weekend.

Unit 9: Sound

NARRATOR: Researchers in Spain have created a system to measure the impact of noise pollution on the world's whales. The team at the Technical University of Catalonia has produced a network of underwater microphones on the sea bed in the Atlantic and Pacific Oceans and the Mediterranean Sea.

The sounds they find can be monitored via the Internet and make it possible to analyze how noise caused by human activity, like shipping or drilling, can affect the natural balance of oceans.

DR. MICHEL ANDRĀ: What we know now from these sound sources in the marine environment is that some of them are so loud they can lead to the death of living things nearby.

NARRATOR: The project helps researchers to understand how man-made noise is affecting whales, dolphins, and other sea creatures.

DR. MICHEL ANDRĀ: We will be able to see if there is a real impact on these populations, and we may be able to put some systems in place that will protect against these negative impacts.

NARRATOR: Shipping, fishing, and the military are all responsible for a level of noise pollution. Whales and dolphins rely on their hearing to hunt, communicate, and navigate, and noise pollution could interfere with all of these activities. Scientists plan to use this network to develop a warning system to notify them when whales approach areas with high noise levels.

DR. MICHEL ANDRĀ: Human beings who use the sea and produce noise have to realize that it has to stop. Giving people the tools to prevent them from harming this environment is vital.

Unit 10: Tomorrow

NARRATOR: A technology that turns the light bulb above your head into an Internet transmitter could have a huge impact on the way we access the Internet according to makers PureLi-Fi. Li-Fi uses high-speed changes in light to provide a fast and more secure Internet connection.

NIKOLA SERAFIMOVSKI: The way we achieve wireless communication using light is by changing the intensity of the LED light. Effectively, we are modulating, or turning the light on and off, millions of times per second.

NARRATOR: Li-Fi can be used in connected devices in the home, driverless cars, and street lights, and anywhere there is a light source. Li-Fi uses a small smartphone-sized box on the ceiling to convert the light from the light bulb into a Li-Fi signal. You also need a USB attachment on your laptop or tablet with a blue lens to pick up the signal from the light.

NIKOLA SERAFIMOVSKI: The blue eye is effectively the visible light receiver which picks up the rapid changes in the LED light that's in the ceiling. Immediately next to it is an infrared LED which provides transmission for the uplink. So the dongle and Li-Fi offer both uplink, using infrared, and downlink communications which is from the light to the device.

NARRATOR: The first Li-Fi device went on the market in September 2016. The company sold about 100 devices at the time of launch. The Li-Fi bulbs cost 2,300 euros each but the company expects prices to decrease as more and bigger companies get involved. Li-Fi has a bandwidth 10,000 times that of traditional Wi-Fi, but there are problems—light can't travel through walls or around corners.

ANSWER KEY

UNIT 1 IDENTITY

Discussion point

Students' own answers

Video

Before you watch

Students' own answers

While you watch

- 1 F (It only looks similar to a watch.)
- 2 F (You can use it to change your mood.)
- 3 T
- 4 T
- 5 F (And, so, it's kind of ... not a lot of data, but we're using it very smartly.)

After you watch

Students' own answers

Reading 1

A Vocabulary preview

- | | |
|----------------|--------------|
| 1 mature | 5 define |
| 2 desirable | 6 debate |
| 3 tensions | 7 categorize |
| 4 consequences | 8 confirmed |

B Before you read

Students' own answers

C Global reading

- | | |
|------------------------------|------------------------------|
| 1 Types of identity traits | 3 Dangers of social identity |
| 2 The importance of identity | 4 Implications |

D Close reading

- 1
- 1 An ascribed trait is one that you are born with.
 - 2 An achieved trait is one you work for.
 - 3 A chosen trait is one that you choose for yourself.
- 2
- 1 a 2 d 3 g 4 i 5 h 6 f 7 e 8 c 9 b

E Critical thinking

Students' own answers

Study skills

Students' own answers

Reading 2

A Vocabulary preview

- 1
- 1 e 2 a 3 h 4 d 5 b 6 g 7 c 8 f
- 2
- | | |
|---------------|----------------|
| 1 correlation | 5 suggest |
| 2 tend to | 6 participants |
| 3 current | 7 rated |
| 4 frustrated | 8 modest |

B Before you read

Students' own answers

C Global reading

POSSIBLE ANSWER

The tone is informal. It has a conversational style, and uses contractions, informal expressions, and non-academic vocabulary. It is intended for psychology students or people working in that area, or research students or people working in that field.

D Close reading

- 1 other; people to get along with
- 2 each other; ratings in different years
- 3 other; people in general
- 4 each other; a person you knew in school
- 5 another (note that this is being used as a determiner); chance
- 6 one another; employees in a workplace

E Critical thinking

Students' own answers

Vocabulary development

- 1
- | | |
|---------------|---------------|
| 1 Thinking | 5 Feeling |
| 2 intuitive | 6 introverted |
| 3 judging | 7 perceiving |
| 4 Extroverted | 8 Sensing |

- 2
- 1 b 2 d 3 a 4 c

3

Students' own answers

Academic words

- 1
- 1 c 2 e 3 a 4 b 5 f 6 d
- 2
- | | |
|-----------------|-------------|
| 1 journal | 4 scope |
| 2 comprehensive | 5 variables |
| 3 volunteers | 6 outcome |

3

Students' own answers

Critical thinking

- 1
- a girl who talks too much; a possible change is: a person who talks too much
- a guy who's too pushy; a possible change is: someone who's too pushy
- 2
- b and c are over-generalizations
- b not all women "abandon" their jobs; *abandon* is a strong word with a negative connotation—*leave* is a more neutral word; men may also leave their job in order to spend more time with their children
- c shorter children may not have lower self-esteem (why would they?); other factors may affect self-esteem; teachers should take other things into account when forming study groups

3

Students' own answers

Writing model

A Model

1

not born with a fixed identity
raised determines your personality
agree
reasons
relevant examples
own knowledge or experience

2

Yes, the student gave their own opinion and included reasons and examples.

B Analyze

1

1 introduction 3 supporting example
2 supporting example 4 conclusion

2

Both research and personal experience have led me to think that the most important factor is the identity that people have from birth. It appears in paragraph 1.

3

Outside research appears first.
It is more convincing than just personal experience.

Grammar

1

1 themselves 4 himself
2 yourself 5 herself
3 ourselves

2

1 You yourself are responsible for paying the fee.
2 I myself don't believe identity is very important.
3 Nobody was more surprised by the results of the study than the researchers themselves!
4 Ms. Jimenez herself couldn't believe the outcome of her research.
5 Jack created the contest, and then he himself won it!

3

themselves (paragraph 3); refers to *people*
yourself (paragraph 7); refers to *you*; used for emphasis
yourselves (paragraph 9); refers to *you and your (childhood) friends*
myself (paragraph 11); refers to the speaker
themselves (paragraph 11); refers to *patients*

Writing skill

1

1 word map 2 free writing 3 chart

2

Students' own answers

3

Students' own answers

Writing task

Students' own answers

Review

Academic words review

1 scope 4 outcome
2 volunteer 5 variables
3 comprehensive

UNIT 2 DESIGN

Discussion point

Students' own answers

Video

Before you watch

1 c 2 e 3 a 4 b 5 d

While you watch

1 T

2 T

3 F (They compete by providing higher quality products.)

4 F (The artisans think the Tunisian government should help them.)

After you watch

Students' own answers

Reading 1

A Vocabulary preview

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

B Before you read

Students' own answers

C Global reading

2 From definitions to examples to applications

D Close reading

1

1 c 2 c 3 a 4 b 5 b

2

1 T

2 NG

3 F (Para 5: In fact, artists who value the *wabi-sabi* aesthetic create works that are deliberately imperfect)

4 T

5 NG

E Critical thinking

Students' own answers

Study skills

1

Pre-writing / planning	Writing the first draft	Editing and revising
Focus on the assignment question. Clarify your core points.	Use your plan. Write headings and subheadings. Add in supporting details. Link it up.	Stick to your plan.

2

Students' own answers

3

Students' own answers

4

Students' own answers

5

Students' own answers

Reading 2

A Vocabulary preview

1

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

2

- | | |
|----------------------|--------------|
| 1 on good terms with | 5 objections |
| 2 entirely | 6 thick |
| 3 romantic | 7 functional |
| 4 harm | 8 delicate |

B Before you read

Students' own answers

C Global reading

1

Mostly disagree

2

Yes. They each acknowledge the other person's opinion.

D Close reading

- | | |
|---------------------|--------------------------------|
| 1 e; That is | 4 c; that's another example of |
| 2 d; as one example | 5 b; to name just a few |
| 3 a; One example is | |

E Critical thinking

Students' own answers

Vocabulary development

1

POSSIBLE ANSWERS

Positive: appealing, durable, innovative, multifunctional

Negative: generic, fake

Neutral: contemporary, mass-produced

2

Students' own answers

Academic words

1

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

2

- | | |
|--------------|-------------|
| 1 survived | 4 tradition |
| 2 notion | 5 enhanced |
| 3 philosophy | 6 overseas |

3

Students' own answers

Critical thinking

1

- 1 Repeatedly restating the claim
- 2 Attacking the opposing view
- 3 Using irrelevant evidence

2

Students' own answers

Writing model

A Model

1

some advantages
specific reasons and examples

2

three advantages; the last one is the most important

B Analyze

1

Thesis statement: While it's true that handmade pieces can be very beautiful, there are three important advantages to machine-made items.

Two sentences come before the thesis statement. Their purpose is to give context and introduce the comparison.

2

First,
For example,
Another important reason
Finally,
such as
This means that

3

The writer mentioned handmade products a few times to show the other side and strengthen their own argument by showing consideration for the opposite view.

Grammar

1

- 1 It can take a very long time to sew a quilt.
- 2 It can be difficult to tell if a scarf was knitted by machine or by hand.
- 3 Works of art can usually be found in people's homes as well as in museums.
- 4 The culture of a country can often be understood through its traditions.
- 5 Some people can identify the maker of a piece of furniture just by looking at it.
- 6 Many craftsmen believe that no piece of art can be perfect.

2

- 1 It can be relaxing to create art by hand.
- 2 People can sometimes be reluctant to pay more for imperfect items.
- 3 Machinery can be used to create things more quickly.
- 4 Factories can be located in both cities and small towns.
- 5 Quilts can be made by machine as well as by hand.
- 6 People can usually understand why handmade items cost more.

Writing skill

Students' own answers

Writing task

Students' own answers

Review

Academic words review

- | | |
|-----------|--------------|
| 1 survive | 4 philosophy |
| 2 enhance | 5 tradition |
| 3 journal | |

UNIT 3 THOUGHT

Discussion point

Students' own answers

Video

Before you watch

1 b 2 d 3 c 4 a

While you watch

- 1 cameras track your movements
- 2 comforting
- 3 help prevent
- 4 get their treatment at home

After you watch

Students' own answers

Reading 1

A Vocabulary preview

- | | |
|---------------|-----------------|
| 1 constantly | 5 point of view |
| 2 sort | 6 concrete |
| 3 fascination | 7 lead to |
| 4 logical | 8 hypothesizing |

B Before you read

Students' own answers

C Global reading

- 1
Jean Piaget: French psychologist
Jacqueline: Piaget's daughter
Gerard: Piaget's nephew

- 2
Most children know that when they can't see an object, it still exists at around 21 months old.
Most children learn through playing from two to six years old.
Most children begin to think more about the feelings of other people from six or seven to 11 years old.

D Close reading

- 1 c 2 a 3 c

E Critical thinking

Students' own answers

Study skills

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

- 2
Students' own answers

Reading 2

A Vocabulary preview

- 1
1 a 2 c 3 e 4 b 5 d 6 f 7 g 8 h
- 2
1 anxious 5 emotional
2 inappropriate 6 strength
3 rational 7 guilty
4 encounter 8 deadlines

B Before you read

Students' own answers

C Global reading

POSSIBLE ANSWERS

- 1 a general adult audience or people who are interested in psychology; informal
- 2 To mark the four key functions. The bullets make it easy to locate each function.

D Close reading

- 1
1 Interest 3 Interest 5 Importance
2 Importance 4 Importance

2

- 2 Para 1: Even people who pride themselves on being logical, rational thinkers may be more influenced by their emotions than they realize.
- 4 Paragraphs 7–9
- 5 Para 10: build extra time into your decision-making process; give yourself time to logically evaluate situations; make a list of advantages and disadvantages

E Critical thinking

Students' own answers

Vocabulary development

- 1
Words and phrases that compare:
by the same token, equally, similarly, in the same way
Words and phrases that contrast:
despite, in spite of, on the contrary, whereas

2

- | | |
|--------------------|---------------------|
| 1 on the contrary | 5 By the same token |
| 2 Despite | 6 whereas |
| 3 In spite of this | 7 Similarly |
| 4 Equally | 8 In the same way |

Academic words

- 1
1 f 2 c 3 d 4 h 5 e 6 a 7 g 8 b
- 2
1 depressed 5 reluctant
2 solely 6 categories
3 interpret 7 complex
4 maximize 8 abstract

3

Students' own answers

Critical thinking

- 1
1 *Ignoring emotional intelligence would be like serving dinner without dessert.* The two situations being compared are emotional intelligence and dinner.
- 2
2 is the only reasonable analogy. Because emotional and intellectual intelligence both make up a person's personality, it can be compared to all three primary colors making up the color wheel.

3

Students' own answers

Writing model

A Model

Students' own answers

B Analyze

POSSIBLE ANSWERS

- 1 The writer said nurture is more important.
- 2 The writer gave two supporting points. This was previewed in the introduction.
- 3 Yes—you know from the thesis sentence that family influence will be the first body paragraph and peer influence will be the second body paragraph.

Grammar

1

- 1 Most girls both walk and talk at an earlier age than boys.
- 2 Many people feel somewhat depressed in the winter because of the lack of sunshine.
- 3 Some people believe that the power of thought can cure almost any illness.
- 4 For some people, thinking can be more difficult in the middle of the afternoon.
- 5 Most teachers believe that positive thinking can help almost every student get better results.
- 6 In most cases, people can be taught to think more logically.

2

POSSIBLE ANSWERS

- 1 In some cases, people think better during the day if they eat breakfast.
- 2 Thinking too much at night makes it difficult to sleep for some people.
- 3 Many bilingual people have thoughts in one language they don't have in the other.
- 4 Teens develop abstract thinking at approximately age 12, for the most part.
- 5 Most right-brained people are often good at playing music.

Writing skill

1

It uses point-by-point organization: in each body paragraph, the writer first discusses nature, then nurture.

2

Students' own answers

Writing task

Students' own answers

Review

Academic words review

- | | | |
|-----------|-------------|------------|
| 1 notion | 3 interpret | 5 maximize |
| 2 complex | 4 abstract | |

UNIT 4 FIRE

Discussion point

Students' own answers

Video

Before you watch

- 1 c 2 d 3 a 4 e 5 b

While you watch

- | | |
|--------------------|----------|
| 1 man-made process | 3 are |
| 2 canceled | 4 change |

After you watch

Students' own answers

Reading 1

A Vocabulary preview

- | | |
|-------------|---------------|
| 1 supervise | 5 wilderness |
| 2 enforce | 6 maintenance |
| 3 costly | 7 rural |
| 4 to melt | 8 beneficial |

B Before you read

Students' own answers

C Global reading

- 1 c 2 b 3 b

D Close reading

1

- 1 gradual; slowly
- 2 capable; able to do something
- 3 reduce; to make smaller
- 4 clarified; made clear
- 5 unsupervised; not being watched or taken care of

2

- | | |
|---------------|-------------|
| 1 rapidly | 5 equipment |
| 2 destructive | 6 risky |
| 3 nature | 7 properly |
| 4 local | |

E Critical thinking

Students' own answers

Study skills

Students' own answers

Reading 2

A Vocabulary preview

1

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

2

- | | |
|----------------|-----------------|
| 1 threaten | 5 to extinguish |
| 2 Historically | 6 vegetation |
| 3 employ | 7 latter |
| 4 renew | 8 conduct |

B Before you read

Students' own answers

C Global reading

- 1 Paragraph 5
- 2 They give background about forests and fires.
- 3 They describe consequences of controlled burns.

D Close reading

1

- 1 Par. 2: *Understandably*, homeowners and farmers didn't want to risk their property or their lives.
- 2 Par. 5: ... the Park Service *mistakenly* decided to employ a technique called a "controlled burn."
- 3 Par. 8: *Fortunately*, the town's 18,000 residents were all evacuated, and no lives were lost.
- 4 Par. 10: Today, many "controlled burns" go as planned, and *admittedly*, may save the forests from natural disasters.
- 5 Par. 10: *Obviously*, both sides share the same goal—to keep forests healthy and whole, and to protect the surrounding communities.

E Critical thinking

Students' own answers

Vocabulary development

1

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

2

Students' own answers

Academic words

1

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

2

- | | |
|-----------|----------------|
| 1 capable | 4 regulations |
| 2 federal | 5 decades |
| 3 error | 6 acknowledged |

3

Students' own answers

Critical thinking

1

We all agree that the problem of forest fires is growing.
Obviously, something needs to be done about it.
 But after the disastrous fire of 2016, surely we can see that none of these methods can work.
 ... it's clear that what we should do instead is keep homes away from forests.

2

Students' own answers

3

Students' own answers

Writing model

A Analyze

Students' own answers

B Model

- Problems: natural causes (lightning) and human causes (campfires and fireworks); Solutions: developing healthier forests, increasing educational programs, making it a crime to engage in dangerous behavior in or near a forest, hiring more staff at national parks
- The writer doesn't recommend them because they can be dangerous.
- quote / expert testimony
- The conclusion gives a final argument for the proposed solution.

Grammar

1

1, 3, 4, 6

2

- Teaching fire safety to everyone is important.
- Banning smoking in forests is necessary.
- Reading this article will help people understand fire.
- Losing so many acres of land to wildfires was unfortunate.
- Studying how erosion happens in the wilderness is important.
- Training new park service employees will be expensive.

Writing skill

1

- lightning strikes; campfires and fireworks
- with a reason—consequences of prescribed burns are severe
- examples (of how forests are unhealthy; of steps Forest Service personnel could take to improve them) and reasons (a fire in a healthy forest is less serious than in an unhealthy one)

2

- | | |
|------------------------|------------------------|
| 1 c (reason) | 3 d (expert testimony) |
| 2 a (expert testimony) | 4 b (example) |

3

Students' own answers

Writing task

Students' own answers

Review

Academic words review

- | | |
|-------------|-----------|
| 1 solely | 4 error |
| 2 depressed | 5 federal |
| 3 capable | |

UNIT 5 MOVEMENT

Discussion point

Students' own answers

Video

Before you watch

1 b 2 c 3 d 4 e 5 a

While you watch

- the impact of desertification
- they couldn't live in their traditional way
- drought and overgrazing
- an international problem

After you watch

Students' own answers

Reading 1

A Vocabulary preview

- | | |
|----------|------------------|
| 1 swamp | 5 cargo |
| 2 treaty | 6 toll |
| 3 zone | 7 circumnavigate |
| 4 feat | 8 fumigate |

B Before you read

Students' own answers

C Global reading

1

Highlight in text:

- Par. 1: ... other countries could be reached by ship, traders and travelers ...; Par. 2: Attention then turned to Central America, the narrowest land barrier between the Atlantic and the Pacific Oceans.
- Par. 4: The first country to attempt a canal was France, ...; Par. 5: The United States was the next country to be interested.; Par. 10: In 1977, the United States signed a treaty to eventually return control of the land to Panama.
- Par. 4: ... and malaria and yellow fever from the region's many mosquitos.; Par. 12: ... 22,000 workers died, mostly from malaria or yellow fever.

2

Students' own answers

D Close reading

1

- | | | | |
|----------|-----|-----|------|
| a 4 / 12 | c 9 | e 6 | g 4 |
| b 2 | d 1 | f 9 | h 13 |

2

- | | | | |
|--------|---------|---------|-------|
| 1 1869 | 4 6,000 | 7 1,000 | 10 90 |
| 2 1880 | 5 1914 | 8 1999 | |
| 3 1907 | 6 8.6 | 9 77 | |

Distractor—1977

E Critical thinking

Students' own answers

Study skills

Students' own answers

Reading 2

A Vocabulary preview

- | | |
|----------|--------------|
| 1 marine | 5 indigenous |
| 2 halted | 6 reef |
| 3 arises | 7 dispute |
| 4 sparse | 8 coastal |

B Before you read

Students' own answers

C Global reading

- a background to the issue—Par. 2
- b conclusion—Par. 12
- c examples of benefits to less ice on the land—Par. 4
- d changes to shipping routes (x2)—Par. 7 and Par. 8
- e how climate change affects the land—Par. 3
- f how climate change affects the water—Par. 5
- g the Arctic Council—Par. 10
- h future challenges—Par. 11
- i introduction—Par. 1
- j land problems resulting from climate change—Par. 3
- k water problems resulting from climate change—Par. 6
- l which countries own the area—Par. 9

D Close reading

- | | |
|---------------|--------------------------|
| 1 81% | 4 the Northern Sea route |
| 2 600 million | 5 eight |
| 3 25% | 6 1996 |

E Critical thinking

Students' own answers

Vocabulary development

1

To add or add to	To change the shape of	To take away or diminish
develop extend	make into remodel replace transform	demolish tear down

2

- | | |
|---------------|------------|
| 1 torn down | 5 demolish |
| 2 transformed | 6 develop |
| 3 extend | 7 replaced |
| 4 make | 8 remodel |

Academic words

1

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

2

- | | |
|-------------------|----------------|
| 1 purchased | 4 alternative |
| 2 primary | 5 Nevertheless |
| 3 straightforward | 6 abandoned |

3

Students' own answers

Critical thinking

1

- 1 V 2 P 3 F

2

- 1 b 2 c 3 a

3

- 1 c 2 b 3 a

Writing model

A Model

Students' own answers

B Analyze

1

- 1 restate the writing prompt
- 2 summarize the changes
- 3 discuss removal of natural features
- 4 discuss new construction

2

No

Grammar

1

- 1 will be reduced
- 2 will be killed
- 3 will be built
- 4 will not / won't be planned
- 5 will be demolished
- 6 will not / won't be replaced

2

- 1 Our kitchen will be remodeled next year.
- 2 A new lock for the canal will be constructed this month.
- 3 The contract will not / won't be signed before the meeting.
- 4 Additional funding will be found.
- 5 The land will be cleared.
- 6 Ships will not / won't be charged more than \$10,000 to use the canal.
- 7 Two hundred more workers will be hired.

Writing skill

1

- 1 The village is set to be replaced by a large factory complex.
- 2 This change is projected to have happened by the end of 2050.
- 3 The population is likely to increase dramatically over the next decade.
- 4 The industrial areas are due to be demolished in the coming months.
- 5 Most of the trees are expected to be removed to allow the construction of new housing.
- 6 The number of malaria cases is forecast to decrease in the next few years.

2

- 1 The government plans on reducing the amount of parkland in the area.
- 2 The city plans to dramatically increase the amount of public transportation in the area by the end of this decade.
- 3 We plan to have doubled our profits by the end of this financial quarter.
- 4 The city plans on increasing the size of its park area within the next few years.
- 5 The department plans on making most of its staff take a pay cut.

Writing task

Students' own answers

Review

Academic words review

- | | |
|-------------------|---------------|
| 1 straightforward | 4 alternative |
| 2 decade | 5 primary |
| 3 reluctant | |

UNIT 6 DISEASE

Discussion point

Students' own answers

Video

Before you watch

- 1 d 2 c 3 b 4 a

While you watch

- 1 T
 2 F (They make the female mosquitos sterile.)
 3 T
 4 T

After you watch

Students' own answers

Reading 1

A Vocabulary preview

- | | |
|-------------|-------------|
| 1 proof | 5 effective |
| 2 supply | 6 infected |
| 3 associate | 7 major |
| 4 Polluted | 8 gather |

B Before you read

Students' own answers

C Global reading

1

Students' own answers

2

- 1 the effects of cholera and its treatment
 2 cholera during the first industrial revolution; the spread of cholera
 3 early theories about how cholera is spread
 4 John Snow's theory about how cholera is spread
 5 Snow's research about his theory and proposed solutions
 6 the acceptance of Snow's theory

D Close reading

1

- A 2 B 5 C 4 D 1 E 6 F 3

2

- A A pandemic is an outbreak of a disease that rapidly leads to large numbers of people being affected.
 B The actual cause of the spread of infectious diseases—germ theory—was not yet known.
 C Instead, it attacked people's bowels and caused very bad diarrhea.

- D With this and other evidence, he was able to persuade the local government to close the Broad Street pump and arguably stop the pandemic.
 E As a result, a huge sewer system was built beneath London to give people access to clean water.

E Critical thinking

Students' own answers

Study skills

1

Minor

- 1 a, b 2 c

Major

- 3 d 4 e 5 f

2

Students' own answers

3

Students' own answers

Reading 2

A Vocabulary preview

1

- | | |
|----------------|-------------|
| 1 alarmed | 5 related |
| 2 productivity | 6 Overall |
| 3 overlooked | 7 doubtful |
| 4 distinguish | 8 dependent |

2

Students' own answers

B Before you read

Students' own answers

C Global reading

- A 3 B 6 C 2 D 5 E 7 F 4

D Close reading

- 1 reporting (reporting on SARS and the estimated loss of jobs in South-East Asia)
 2 naming (the name "Stoptober")
 3 defining (the explanation of "infectious disease")
 4 speculating (the use of the word "perhaps")
 5 classifying (two main groups)

E Critical thinking

Students' own answers

Vocabulary development

1

- 1 Many days can be taken off sick. (As a result, companies may lose income.)
 2 In the worst cases, a lower birth rate can result from a sharp rise in an infectious disease.
 3 Lifestyle choices can result in an increase in many diseases.
 4 The world's population fell by 5% because of the 1918 flu.
 5 People often fear a breakout of a new disease. (Therefore, governments need to communicate their effects quickly.)
 6 A sharp increase in the levels of any disease can place pressure on the medical profession. (Consequently, many governments have emergency plans to help deal with this.)

2

- | | |
|-----------------|----------------|
| 1 resulted in | 4 Therefore, |
| 2 Consequently, | 5 Because of |
| 3 resulted from | 6 As a result, |

3

Students' own answers

Academic words

1

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

2

- | | |
|--------------|----------------|
| 1 Virtually | 5 Hence |
| 2 Ultimately | 6 Exposure |
| 3 collapse | 7 transmission |
| 4 undergo | 8 widespread |

3

Students' own answers

Critical thinking

1

POSSIBLE ANSWERS

- The support is loose. Arguably, the lost working days could affect profitability, but we do not know how relevant it is in comparison to other factors. Also, it is likely that most companies would factor in this amount of sick leave when determining someone's rate of pay.
- It is limited because it is only European and only a small sample of major companies. Smaller companies and the rest of the world have been excluded.

2

POSSIBLE ANSWERS

- This is not significant enough. There are many other factors involved here. For example, these could in general be richer countries with longer life expectancies.
- Not relevant. The question focuses on countries not companies.
- Relevant. Although it is only one country, it would be a good example to support the essay question.

3

POSSIBLE ANSWERS

- The evidence supports the whole claim, not just part of it; the evidence is available from a number of sources; there are different types of evidence that support the claim.
- Ensure the information is up-to-date; the information is directly connected to the issue; the information supports the whole claim.
- It may lead you to false conclusions; the data will no longer support your claim.

Writing model

A Analyze

- Unless children do this before eating, they have a significantly increased chance of being infected.
- Provided good hygiene is established at a young age, it can be effective in reducing the breakout of a disease.
- Many diseases, unless prevented by a vaccine, can potentially lead to a loss of life.
- However, as a result of vaccination, this number was reduced to just a few hundred within 20 years.

B Model

Students' own answers

Grammar

1

- | | | |
|------------|------------|------------|
| 1 Provided | 3 Provided | 5 Provided |
| 2 Unless | 4 Unless | 6 Provided |

2

- Unless people listen carefully, they won't know what to do.
- Unless governments act soon, there might be a pandemic.
- Unless it's an emergency, doctors won't see people.
- You're not allowed in unless you are a relative.

Writing skill

1

- The flu** is a contagious illness *transmitted between individuals*.
- Quarantine** is a secure place *for putting infected people in isolation*.
- A campaign** is a series of organized events *for raising awareness of and protesting against an issue*.

2

- Typhoid is an infectious disease transmitted by consuming contaminated water.
- Bacteria are small living organisms that are made up of one tiny cell.
- The immune system is a complex system within the body that protects you from contracting diseases.

3

POSSIBLE ANSWERS

- Medicine is a substance that you take to treat an illness.
- Non-infectious disease is a disease that cannot spread from one person to another.
- Evidence is facts or physical signs that help to prove something.
- A researcher is someone who does research collecting facts and ideas, investigating issues to solve problems or discover more knowledge.

Writing task

Students' own answers

Review

Academic words review

- | | |
|----------------|--------------|
| 1 collapse | 4 widespread |
| 2 Nevertheless | 5 undergo |
| 3 hence | |

UNIT 7 SURVIVAL

Discussion point

Students' own answers

Video

Before you watch

- 1 e 2 c 3 b 4 d 5 a

While you watch

- | | | |
|---------|-----------|-----------|
| 1 South | 3 migrate | 5 reverse |
| 2 city | 4 fishing | |

After you watch

Students' own answers

Reading 1

A Vocabulary preview

1

- | | |
|----------------|------------|
| 1 widely | 5 Ruling |
| 2 superior | 6 official |
| 3 Urbanization | 7 Commerce |
| 4 Minority | 8 nation |

2

Students' own answers

B Before you read

Students' own answers

C Global reading

A 3,4 B 2 C 5 D 1 E 6

D Close reading

1

- 1 In North America, for example, there are over 150 languages. However, around half of these are spoken by only a small number of people. In fact, around 25% of the world's languages are in a similar situation.
- 2 ... it is either enforced through law, or has a special status in education, it makes it hard for other languages to survive.
- 3 More recently, the economic power of the U.S.A. has continued to push the status of the English language.
- 4 Education, from nursery to college, is available in Welsh. Dedicated Welsh TV channels are also broadcast.

2

3

E Critical thinking

Students' own answers

Study skills

1

- 1 He assumed the class wouldn't be technical.
- 2 He stopped attending seminars and didn't meet other students to prepare for the final assessment.

2

Students' own answers

3

Students' own answers

Reading 2

A Vocabulary preview

1

- | | |
|-------------|--------------|
| 1 disrupt | 5 food chain |
| 2 shortages | 6 habitat |
| 3 thrive | 7 breed |
| 4 die out | 8 threat |

2

Students' own answers

B Before you read

Students' own answers

C Global reading

1

A 6 B 7 C 1 D 2 E 5 F 3 G 4

D Close reading

1

- | | |
|--------------------------|------------------|
| 1 the edge of extinction | 3 the population |
| 2 One reason | |

2

- | | |
|-------------------------|-----------|
| 1 One big risk; dangers | 3 diverse |
| 2 tiny group | |

3

- | | |
|-------------------------|----------------------------|
| 1 food chain | 4 food, water |
| 2 protection | 5 20 th century |
| 3 critically endangered | 6 carbon levels |

E Critical thinking

Students' own answers

Vocabulary development

1

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

2

- | | |
|-------------|--------------------|
| 1 Well over | 5 substantial |
| 2 peaked | 6 slight |
| 3 growing | 7 in the region of |
| 4 steadily | 8 comparison |

3

Students' own answers

Academic words

1

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

2

- | | |
|--------------|------------------|
| 1 minority | 5 assist |
| 2 reverse | 6 grant |
| 3 inevitable | 7 Discrimination |
| 4 Diversity | 8 distribution |

3

Students' own answers

Critical thinking

Students' own answers

Writing model

A Model

1

- 1 Animal populations in an African region between 1960 and today
- 2 The change to vultures is substantial, and the change to foxes and dragonflies is slight.

2

substantial fall, remained stable, declining rapidly, dramatically decreased, fall, declining, falling steadily, declining slowly, decrease in diversity, growing in number

B Analyze

Students' own answers

Grammar

1

- | | |
|----------------------|---------------------|
| 1 have been filming | 4 has been trying |
| 2 has been declining | 5 has been thriving |
| 3 have been studying | 6 has been using |

2

- 1 The crew has been filming for two days.
- 2 Bee numbers have been falling recently.
- 3 The organization has been traveling for six months.

3

POSSIBLE ANSWERS

- 1 The world's population has been growing since 2000.
- 2 Sea levels have been rising for the last 50 years.
- 3 Renewable energy use has been increasing since 2010.

Writing skill

1

- 1 The rise in elephant numbers may have been as a result of the ban on hunting, although there is no evidence for this in the data.
- 2 The fall in gazelle numbers is perhaps due to competing for land with farmers.
- 3 The growth in a number of animal populations could be the product of government policy.
- 4 The decline in gorilla numbers may have been due to the increased levels of deforestation.
- 5 The growing number of cod in certain regions could be attributed to the limits placed on the number of fish that can be caught.
- 6 The change in bird numbers could be a consequence of a loss of habitat.

2

- | | |
|-----------------|--------------------------------|
| 1 hunting | 4 a national park was created |
| 2 overfishing | 5 changes in government rules |
| 3 a hunting ban | 6 being given protected status |

3

Any of the phrases are possible, but each should occur in these locations.

- 1 The tiger population perhaps fell due to hunting.
- 2 The fall in tuna numbers may be the result of overfishing.
- 3 The growth in bison numbers could be the product of a hunting ban.
- 4 The recent growth in wolf numbers may have been due to the creation of a national park two years ago.
- 5 The leveling off in otter numbers could be attributed to changes in government rules.
- 6 Hippo numbers could be rising as a consequence of being given protected status.

Writing task

Students' own answers

Review

Academic words review

- | | | |
|--------------|-------------|----------|
| 1 inevitable | 3 minority | 5 assist |
| 2 grant | 4 Virtually | |

UNIT 8 LAW

Discussion point

Students' own answers

Video

Before you watch

- 1 a 2 e 3 c 4 b 5 d

While you watch

- 1 T
- 2 F (The law will protect them from the pressure to remain connected even when out of the office.)
- 3 T
- 4 F (The off-hours are 8:00 p.m. until 7:30 a.m. from Monday to Friday, and all weekend.)

After you watch

Students' own answers

Reading 1

A Vocabulary preview

1

- | | |
|------------------------------|------------------|
| 1 basis | 4 ideal, illegal |
| 2 ethics | 5 scandal |
| 3 breaks the law, punishment | 6 a fine line |

2

Students' own answers

B Before you read

Students' own answers

C Global reading

1

Students' own answers

2

Students' own answers

D Close reading

1

- 1 F (Paragraph 1: However, clearly not all unethical behavior is illegal ...)
- 2 F (Paragraph 2: The law is a set of written rules and regulations, ...)
- 3 F (Paragraph 1: Ethics and law are closely connected and there is a fine line between the two. Paragraph 2: However, ethics differs significantly from law.)

4 T

5 NG

6 NG

2

- | | |
|------------------------------------|-----------------|
| 1 Lying | 4 Tax avoidance |
| 2 punishment | 5 Tax evasion |
| 3 schools and hospitals / services | 6 harder |

E Critical thinking

Students' own answers

Study skills

1

Students' own answers

2

- 3 Both sides are considered, and the opinion is hedged.

3

- 1 This is just a statement and contains no convincing opinion.
- 2 This contains a limited opinion, but does not consider two sides of an argument.

4

Students' own answers

5

Students' own answers

Reading 2

A Vocabulary preview

1

- | | | | |
|-----------|--------------|----------|-----------|
| 1 recruit | 3 extent | 5 tactic | 7 occur |
| 2 conduct | 4 intentions | 6 states | 8 declare |

2

Students' own answers

B Before you read

Students' own answers

C Global reading

A 3 B 6 C 1 D 7 E 8 F 2 G 5 H 4

D Close reading

1

- | | |
|------------------|-------------------|
| 1 proportion | 5 code of conduct |
| 2 measures | 6 values |
| 3 interpretation | 7 praising people |
| 4 résumé | |

2

Students' own answers

E Critical thinking

Students' own answers

Vocabulary development

1

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

2

- | | |
|------------------|-----------|
| 1 lawyer, defend | 5 crime |
| 2 judge | 6 justice |
| 3 witness | 7 trial |
| 4 arrest | |

3

Students' own answers

Academic words

1

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

2

- | | | | |
|--------------|---------------|-------------|--------------|
| 1 initiative | 3 controversy | 5 Corporate | 7 Institute |
| 2 code | 4 ministry | 6 clause | 8 inspection |

3

Students' own answers

Critical thinking

1

- 1 The government
2 Social, economic, and political data come from many areas, and governments might not hold all of the information.

2

1 and 3 are weak because they are just opinions. We know this because they use "believes it is" and "thinks it is." Although the data in 2 and 4 needs analysis they at least contain some information and are more than just the opinions of experts.

3

Students' own answers

Writing model

A Analyze

For: It protects the wider society. It creates a fair situation for other companies. An inspection might change the law.
Against: They could lose their job. No crime is being committed.
The company will have lawyers to defend them.

B Model

1

1 In recent times, there have been many controversies involving unethical behavior from companies. While their actions are not a crime, many feel that companies' ethics policies should make them behave more fairly. This essay will argue that if a company is behaving unethically, then an employee should speak out.

It could be argued that an employee does not always need to speak out. (If a crime wasn't committed,) then limited action could be taken by a judge. Even if a crime had happened, the employee would have needed significant proof to make a case. (Large companies employ teams of lawyers to defend themselves) and at the very least, the worker can expect to (lose their job.)

However, many people would argue that the employee should take the initiative and try to (force an inspection) of the company.

(Corporate organizations are very influential in society and need to be challenged to protect the wider community) At a minimum, (this would create a fair situation for companies to compete in,) and (may even result in laws being changed.)

In conclusion, while there is some personal risk to the individual, and unethical behavior is not illegal, they should still speak out to protect the wider society. If no one had ever challenged a large corporation about its behavior, many important laws that protect everyone's interests wouldn't have been introduced.

2 The writer thinks employees should speak out.

3 The writer presents the alternative position.

2

Students' own answers

Grammar

1

- 1 hadn't broken, wouldn't have gone
2 had had, would have known
3 had reacted, wouldn't have been
4 had paid, would have had
5 had known, would have been

2

- 1 If you **had been** more honest, you wouldn't have been in trouble.
2 If I **d known** earlier, I wouldn't have done it.
3 If I hadn't lied on my résumé, I **would have gotten** the job.
4 The company would have been in trouble if I **had reported** it.
5 What would **have** happened if you had spoken out?

3

POSSIBLE ANSWERS

- 1 If they hadn't spent so much time on social media, they would have finished their work.
2 If they hadn't made lots of mistakes in the report, the company wouldn't have made the wrong decision.
3 If they hadn't left the confidential documents on the train, the newspapers wouldn't have published it.

Writing skill

1

2 and 3

2

Stating the first viewpoint: It can be argued that; One perspective is
Stating an alternative view: Others have argued that; Another viewpoint is

Giving the author's view: It is my belief that; This essay will argue that

3

Paragraph 2: an unethical attitude does not mean a low standard; could badly affect the atmosphere; it is the company's responsibility not the employees

Paragraph 3: blame others for their mistakes; do not complete work to the best of their ability; do not start and finish at the correct time

Writing task

Students' own answers

Review

Academic words review

- | | |
|--------------|---------------|
| 1 initiative | 4 controversy |
| 2 Ultimately | 5 corporate |
| 3 reverse | |

UNIT 9 SOUND

Discussion point

Students' own answers

Video

Before you watch

- 1 b 2 c 3 d 4 a

While you watch

- 1 b 2 a 3 b

After you watch

Students' own answers

Reading 1

A Vocabulary preview

- | | |
|----------------|--------------|
| 1 vibrations | 5 determines |
| 2 air pressure | 6 absorb |
| 3 advanced | 7 reflect |
| 4 sound waves | 8 echo |

2

Students' own answers

B Before you read

Students' own answers

C Global reading

- A 3 B 6 C 1 D 5 E 4 F 2

D Close reading

- | | | | |
|---------------|------------|------------------|----------|
| 1 vibration | 3 distance | 6 intensity | 8 Higher |
| 2 sound waves | 4 see | 7 stronger sound | 9 hear |
| 5 hunt | | | |

2

Students' own answers

E Critical thinking

Students' own answers

Study skills

1

Students' own answers

2

Students' own answers

3

POSSIBLE ANSWERS

use of relative clauses
variety of sentence length
answering the essay question
discussion of how the changes have affected the types of relationships people have
clear thesis statement
evidence to support the argument
presentation of both sides of the argument
clear structure—introduction, body, conclusion
improvement on the second draft based on peer comments
appropriate use of vocabulary, grammar, and spelling

Reading 2

A Vocabulary preview

1

- | | | | |
|-------------|----------------|--------------|--------------|
| 1 broadcast | 3 interference | 5 Satellites | 7 network |
| 2 launch | 4 accelerate | 6 Incredibly | 8 Unreliable |

2

Students' own answers

B Before you read

Students' own answers

C Global reading

- A 2 B 4 C 6 D 1 E 5 F 3

D Close reading

1

The legend of Pheidippides describes a Greek soldier and runner who is said to have run from Marathon to Athens to report the news of a military victory against the Persians at the Battle of Marathon. Communication over a great distance has proven to be a challenge for people for centuries. Empires extended over huge land masses, so passing a message from one location to another was an onerous task that could take months. For centuries, the main way to take a message from one location to another was by a person on horseback, until the telegraph and Morse code were developed in the early to mid-1800s. Even then, communication was limited to the length of the wire it traveled through. The theory of wireless communication was being developed at a similar time, but it would be much later before this became reality. What happened would go on to transform many aspects of the modern world.

2

- | | |
|-------------|------------------------|
| 1 proposed | 6 code |
| 2 work | 7 Satellite technology |
| 3 patented | 8 Sputnik 1 |
| 4 FM | 9 2,000 |
| 5 intercept | 10 GPS |

3

Students' own answers

4

Students' own answers

E Critical thinking

Students' own answers

Vocabulary development

1

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

2

- | | |
|---------------|--------------|
| 1 signal | 5 calculate |
| 2 classifying | 6 underlined |
| 3 observing | 7 composed |
| 4 criticized | 8 propose |

3

Students' own answers

Academic words

1

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

2

1 trigger	5 phenomenon
2 Prior	6 device
3 insights	7 thereby
4 comprised	8 dominate

3

Students' own answers

Critical thinking

1

1 It is about technology and its impact on life, but the focus is not clear.
2 No. It jumps between positive and negative impacts.

2

Students' own answers

3

Students' own answers

Writing model

A Analyze

Positive

B Model

1 In the first question, the writer only needs to explain why this change has been positive or negative. In the second question, the writer would need to explain the positives and negatives of the statement.

2 Students' own answers

Grammar

1

1 defining	4 defining
2 defining	5 non-defining
3 non-defining	

2

1 (cannot be left out)	4 that
2 that	5 (cannot be left out)
3 that	

Writing skill

1

1 c 2 a 3 d 4 b

2

Students' own answers

3

Students' own answers

Writing task

Students' own answers

Review

Academic words review

1 dominate	4 trigger
2 exposure	5 diversity
3 Prior	

UNIT 10 TOMORROW

Discussion point

Students' own answers

Video

Before you watch

1 d 2 c 3 a 4 e 5 b

While you watch

1 anywhere there is a light source
2 light to transmit Internet connectivity
3 decrease
4 light only travels in straight lines

After you watch

Students' own answers

Reading 1

A Vocabulary preview

1 tackle	4 obsolete	7 properties
2 devastating	5 filter	8 efficiency
3 revolutionary	6 particle	

B Before you read

Students' own answers

C Global reading

1 The most important discovery of the future?
2 Revolutionizing IT and mobile communications
3 Environmental impact
4 Water shortages
5 Medical miracle
6 The next Industrial Revolution

D Close reading

1

1 b 2 d 3 a 4 c

2

1 batteries	3 salt
2 environmental / nuclear disasters	4 reduce
	5 impact

E Critical thinking

Students' own answers

Study skills

Students' own answers

Reading 2

A Vocabulary preview

1

1 exaggerate	3 moral	5 concerned	7 poverty
2 stagnant	4 effectively	6 potential	8 deteriorate

2

Students' own answers

B Before you read

Students' own answers

C Global reading

A 3 B 5 C 2 D 6 E 4 F 7 G 1

D Close reading

1

1 U 2 L 3 L 4 U

2

- 1 N (The challenge for governments around the world is the assessment of potential risks and gains—something they haven't always done effectively.)
- 2 N (It could also be argued that modern technology has allowed for the rapid spread of misinformation, ...)
- 3 NG
- 4 Y (There will likely be fewer jobs to compete for, and those that are available are likely to require a high level of education.)
- 5 N (Big data has huge benefits such as decoding DNA, ...)
- 6 Y (While unlikely, due to government regulations, the race to get the first driverless car on the road potentially places many lives at risk.)
- 7 N (... this eliminates the need to work and gives people more leisure time; the reality is that it is also likely to increase inequality ...)

E Critical thinking

Students' own answers

Vocabulary development

1

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

2

- | | | | |
|-----------|--------------|---------|-------------|
| 1 sources | 3 force | 5 cell | 7 pressure |
| 2 atom | 4 evaluation | 6 decay | 8 discovery |

Academic words

1

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

2

- | | | |
|-----------------|--------------|-------------|
| 1 nuclear | 4 assessment | 7 isolating |
| 2 regulate | 5 exhibit | |
| 3 investigation | 6 derived | |

3

Students' own answers

Critical thinking

1

Students check sentences 1 and 2.

2

POSSIBLE ANSWERS

- 1 Unreasonable. The implied assumptions are that people will not be able to find new jobs and that people are not adaptable.
- 2 Unreasonable. The implied assumption is that all students find coursework less stressful.
- 3 Unreasonable. The implied assumptions are that work contacting people makes them stressed, that the ease of contact makes people stressed, and that technology means people cannot switch off from work.

Writing model

Students' own answers

Grammar

1

- | | |
|----------------------|-----------------------|
| 1 will have taken | 4 won't have replaced |
| 2 will have traveled | 5 will have reduced |
| 3 will have banned | |

2

- 1 By 2025, solar energy will have become more important than oil.
- 2 Research will have stopped all food shortages by 2025.
- 3 Companies will have connected all electronic devices wirelessly by 2030.
- 4 By 2035, manufacturers will have replaced all plastic packaging with biodegradable packaging.
- 5 By 2040, scientists will have mapped all human DNA from birth to reduce the risk of disease.

3

Students' own answers

Writing skill

1

Adjective: political, legal, social, ethical, financial, historical
Adverb: politically, legally, socially, ethically, financially, historically
Noun: politics, law, society, ethics, finance, history

2

- | | | |
|---------------|----------------|-----------|
| 1 financially | 3 political | 5 Society |
| 2 legally | 4 Historically | 6 ethics |

Writing task

Students' own answers

Review

Academic words review

- | | |
|--------------|-------------|
| 1 derived | 4 comprised |
| 2 assessment | 5 isolate |
| 3 code | |

Academic words revision

Units 1–5

- | | |
|---------------|--------------|
| 1 complex | 6 categories |
| 2 abandon | 7 regulation |
| 3 purchase | 8 outcome |
| 4 abroad | 9 journal |
| 5 acknowledge | 10 tradition |

Units 6–10

- | | |
|------------------|------------------|
| 1 transmission | 6 device |
| 2 regulate | 7 clause |
| 3 exhibit | 8 phenomenon |
| 4 discrimination | 9 thereby |
| 5 distribution | 10 investigation |

MARKING KEY FOR ASSESSMENT CRITERIA

25 points: Excellent achievement. Student successfully fulfills the expectation for this part of the assignment with little or no room for improvement.

20 points: Good achievement. Student fulfills the expectation for this part of the assignment, but may have a few errors or need some improvement.

15 points: Satisfactory achievement. Student needs some work to fulfill the expectation for this part of the assignment, but shows some effort.

5 points: Poor achievement. Student does not fulfill the expectation for this part of the assignment.

UNIT 1 IDENTITY

Student name: _____

Date: _____

Unit assignment: *“Some people believe that your personality doesn’t change over time. To what extent do you agree with this idea? Give specific examples to support your opinion.”*

	25 points	20 points	15 points	5 points
The student successfully presents and supports an opinion.				
The student uses appropriate vocabulary and successfully includes reflexive pronouns.				
The student shows evidence of clear organization.				

Total: _____ / 75

Comments:

UNIT 2 DESIGN

Student name: _____

Date: _____

Unit assignment: *“Discuss some advantages of handmade products over machine-made products. Use specific reasons and examples in your answer.”*

	25 points	20 points	15 points	5 points
The student presents and supports arguments clearly and logically.				
The student includes <i>can</i> to express general truths, and uses appropriate vocabulary.				
The student includes a clear introduction and conclusion.				

Total: _____ / 75

Comments:

UNIT 3 THOUGHT

Student name: _____

Date: _____

Unit assignment: *“Which is more important in the workplace: emotional intelligence or intellectual intelligence?”*

	25 points	20 points	15 points	5 points
The student shows evidence for the arguments presented.				
The student uses appropriate vocabulary and adverbs to hedge where necessary.				
The student structures the essay successfully.				

Total: _____ / 75

Comments:

UNIT 4 FIRE

Student name: _____

Date: _____

Unit assignment: a problem / solution essay—*“Preventing campfires from causing wildfires is a major challenge. What are some reasons for this? What can be done to solve this problem?”*

	25 points	20 points	15 points	5 points
The student describes both problems and solutions.				
The student uses appropriate vocabulary, and gerunds and reduced clauses where necessary.				
The student supports opinions appropriately.				

Total: _____ / 75

Comments:

UNIT 5 MOVEMENT

Student name: _____

Date: _____

Unit assignment: a comparative description—*“The two maps show an existing city and proposed changes for the next ten years. Summarize the information by selecting and reporting the main features. Make comparisons where relevant.”*

	25 points	20 points	15 points	5 points
The student successfully summarizes and compares the main developments.				
The student uses a range of vocabulary, and includes the future passive appropriately.				
The student uses a range of language to describe future plans.				

Total: _____ / 75

Comments:

UNIT 6 DISEASE

Student name: _____

Date: _____

Unit assignment: a cause-and-effect essay—*“How important is it for countries to fund research into disease?”*

	25 points	20 points	15 points	5 points
The student successfully describes both causes and effects.				
The student uses relevant vocabulary, and <i>unless</i> and <i>provided</i> appropriately.				
The student includes a range of language to express cause and effect.				

Total: _____ / 75

Comments:

UNIT 7 SURVIVAL

Student name: _____

Date: _____

Unit assignment: a descriptive summary—“*This graph compares trends in animal populations. Write a summary describing the trends and give reasons for the changes.*”

	25 points	20 points	15 points	5 points
The student summarizes the trends accurately.				
The student uses appropriate vocabulary, and successfully includes the present perfect progressive where necessary.				
The student infers reasons for the changes effectively.				

Total: _____ / 75

Comments:

UNIT 8 LAW

Student name: _____

Date: _____

Unit assignment: a for-and-against essay—“*Should employees speak out if their colleagues are unethical?*”

	25 points	20 points	15 points	5 points
The student presents the main arguments clearly.				
The student uses a range of vocabulary, and the unreal conditional in the past where appropriate.				
The student uses an effective structure to support their opinion.				

Total: _____ / 75

Comments:

UNIT 9 SOUND

Student name: _____

Date: _____

Unit assignment: *“How has technology affected the types of relationships people have? Has this been a positive or negative development?”*

	25 points	20 points	15 points	5 points
The student presents their opinion effectively.				
The student uses a range of vocabulary, and relative clauses where appropriate.				
The student successfully uses varying sentence length.				

Total: _____ / 75

Comments:

UNIT 10 TOMORROW

Student name: _____

Date: _____

Unit assignment: an opinion essay—*“There are more challenges and risks than benefits to new technology.”*

	25 points	20 points	15 points	5 points
The student presents clear opinions and arguments.				
The student uses a range of vocabulary, and the future perfect simple where appropriate.				
The student effectively demonstrates perspective and stance.				

Total: _____ / 75

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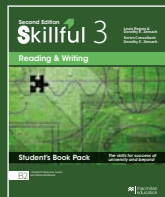
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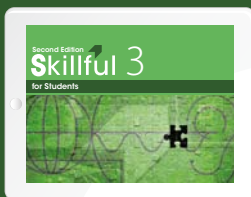
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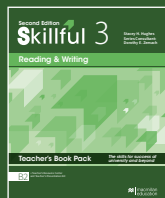


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