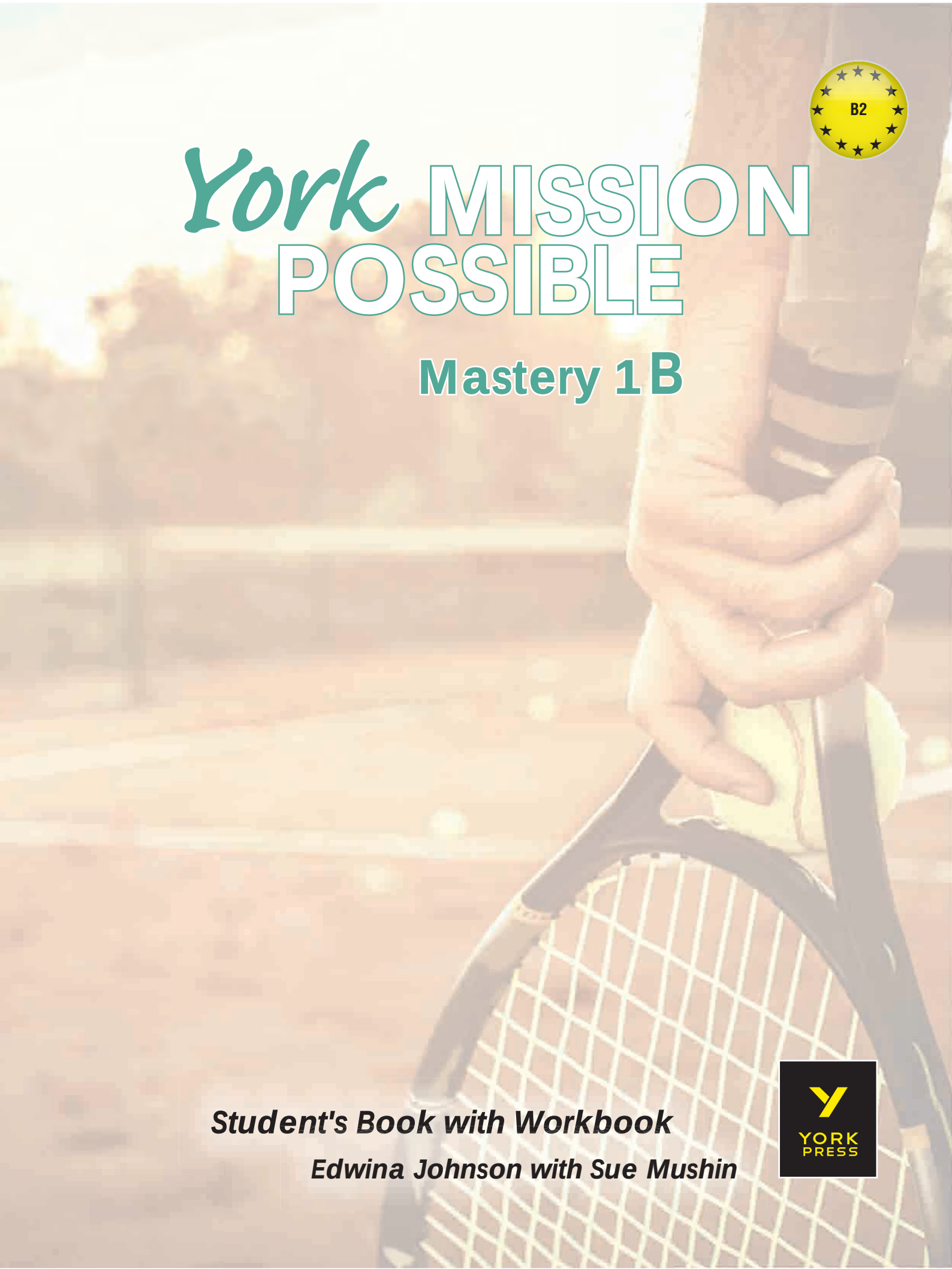


York MISSION POSSIBLE

Mastery 1B

Student's Book with Workbook

Edwina Johnson with Sue Mushin

YORK PRESS

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Scope and sequence

UNIT	LANGUAGE	SKILLS
Module 1 People ***page 5***		
1 Friends *page 6*	**Grammar:** the simple present; the simple past **Vocabulary:** adjectives to describe personality; adjectives to describe appearance **Pronunciation:** the /ə/ sound **Functions:** expressing routines; describing personality; describing appearance	**Reading:** first impressions; people introducing themselves **Listening:** a radio show about friendship **Speaking:** talking about what you do on the weekend; talking about friends; describing someone at your school; talking about people's personalities and appearances **Writing:** a short paragraph about a friend; a description of a friend
2 Famous people in the past *page 12*	**Grammar:** the simple past and the past perfect **Vocabulary:** the theater **Functions:** expressing criticism; giving reasons; giving facts	**Reading:** Napoleon Bonaparte; famous people from the past **Listening:** a trip to the theater; Cyrus the Great **Speaking:** talking about characteristics of famous people; talking about famous people you admire **Writing:** a theater review; a paragraph about a person you admire
Project: Write a short biography.		
Module 2 Adventure ***page 19***		
3 The ocean *page 20*	**Grammar:** the present perfect **Vocabulary:** water sports; species of fish; marine pollution **Pronunciation:** intonation **Functions:** recounting past experiences; recounting events; proposing solutions	**Reading:** lost in time; the Red Sea coral reef **Listening:** an advertisement for a vacation to the Red Sea **Speaking:** talking about water sports; talking about a day at the Red Sea; talking about the Red Sea coral reef **Writing:** a short paragraph about a sea creature; a journal entry about a day at the Red Sea
4 Extreme sports *page 26*	**Grammar:** adjectives ending in *-ed* or *-ing* **Vocabulary:** extreme adjectives; wordbuilding; adventure sports **Functions:** expressing feelings; expressing opinions; recounting events	**Reading:** skydiving over the Great Barrier Reef; on top of the world; an adventure sports questionnaire **Listening:** a radio show about a stuntman **Speaking:** talking about adventure sports; choosing equipment for mountain climbing; talking about a stuntman's job **Writing:** a paragraph about an exciting experience; a journal entry about an adventure sport
Project: Write a magazine article about two adventure sports. **Review A** ***page 33***		
Module 3 Exploration ***page 35***		
5 Explorers *page 36*	**Grammar:** the simple past and the present perfect **Vocabulary:** methods of travel; time expressions **Pronunciation:** the /o/ and /ɑ/ sounds **Functions:** recounting past events; expressing opinions; giving reasons	**Reading:** the amazing adventures of Ibn Battuta; Scott's race to the Pole **Listening:** fact files about three explorers **Speaking:** describing what you have done today; talking about a sailing journey; talking about Scott's expedition **Writing:** a description of a journey; a journal entry about the South Pole expedition
6 Ocean voyages *page 42*	**Grammar:** the present perfect; the present perfect and the simple past with *just* **Vocabulary:** boats and ships; sailing and the ocean **Functions:** making inferences; conducting an interview; giving facts	**Reading:** the experience of a lifetime; a letter from a sailor; a poem about a journey on a ship; the *Golden Hinde* **Listening:** a sailor's experience in the Tall Ships race; a poem about a journey on a ship **Speaking:** role-playing an interview; talking about the *Golden Hinde* **Writing:** an interview with a sailor; a short description of a voyage by ship
Project: Write about an explorer from the past or the present.		
Module 4 The natural world ***page 49***		
7 Rainforests *page 50*	**Grammar:** the present perfect with *yet* and *already* **Vocabulary:** rainforests; animals and plants **Functions:** giving information about past events; proposing solutions; giving facts	**Reading:** a hidden world; a leaflet about rainforests; an e-mail about a stay in New york; the oldest trees on Earth **Listening:** a radio show about life on Earth **Speaking:** talking about tasks; discussing how to save the rainforests; comparing the oldest trees **Writing:** a paragraph about saving the rainforests; a leaflet about the oldest trees
8 Treasures of the earth *page 56*	**Grammar:** *some, any, much, many, a lot of, lots of, too,* and *enough* **Vocabulary:** precious stones **Functions:** expressing quantity; making descriptions; giving reasons	**Reading:** life stories; a guide to gems; emeralds in Egypt; the Topkapi treasures and dagger **Listening:** a guide to precious stones **Speaking:** describing precious stones; describing treasures **Writing:** a short description of a precious stone; a description of two treasures
Project: Write about the discovery of a treasure. **Review B** ***page 63***		

Module 5 Science *page 65*		
9 The Nobel Prize *page 66*	**Grammar:** the present progressive **Vocabulary:** Nobel Prizes; science **Functions:** expressing annoyance; expressing opinions; describing actions	**Reading:** super scientists; the Nobel Prizes; Robert's letter about his scientific experiments **Listening:** an interview about Alfred Nobel **Speaking:** talking about annoying habits; talking about Nobel Prizes; talking about experiments **Writing:** a short text about a Nobel Prize winner; a letter about a school project
10 Science and scientists *page 72*	**Grammar:** stative and action verbs **Vocabulary:** science and scientists **Functions:** expressing opinions; agreeing and disagreeing; reporting findings	**Reading:** science matters; Dmitri Mendeleev; winners wear red; an experiment **Listening:** an interview with a scientist **Speaking:** talking about science; talking about experiments **Writing:** a summary of an article; a short report about an experiment

Project: Write about a Nobel Prize winner.

Module 6 Journeys *page 79*		
11 Polar regions *page 80*	**Grammar:** the first and second conditionals **Vocabulary:** the polar regions; polar animals **Pronunciation:** intonation **Functions:** expressing conditions; making descriptions; giving facts	**Reading:** the North and South Poles; cruise to Antarctica; Reza's e-mail; penguins **Listening:** information about polar bears **Speaking:** discussing a visit to the Poles; talking about a cruise to Antarctica; talking about conditions; talking about a polar animal **Writing:** an e-mail about a visit to the Arctic; notes about a polar animal
12 Planning a trip *page 86*	**Grammar:** making suggestions: *will/won't, should, Let's …, How/What about …, Why don't we …* **Vocabulary:** geographical features; tours **Functions:** making suggestions; making plans; recounting events	**Reading:** a family's vacation plans; a very long swim **Listening:** a description of a tour in Uluru **Speaking:** making suggestions about vacations; making plans for a vacation in India; choosing items to take on a trip; discussing the longest trip you have taken **Writing:** a short description of the Amazon River; an account of a memorable trip

Project: Write about a country.
Review C ***page 93***

Module 7 Climate and the Earth *page 95*		
13 Weather and climate *page 96*	**Grammar:** defining relative clauses **Vocabulary:** climate change; climates; disasters **Functions:** giving information; reporting a problem; giving facts; proposing solutions	**Reading:** one world, many climates; monsoon floods in India **Listening:** a radio show about weather and climate **Speaking:** describing the climate where you live; describing a drought in Australia **Writing:** a summary of a radio show; a newspaper report about a drought in Australia
14 The Earth *page 102*	**Grammar:** non-defining relative clauses **Vocabulary:** geographical features; climate change; adjectives; volcanoes **Functions:** adding information; giving reasons; recounting an event	**Reading:** the Earth's story; volcanoes **Listening:** a news report about the Sahara Desert **Speaking:** talking about climate change **Writing:** sentences about a town; a paragraph about the causes of climate change; an account of a volcanic eruption

Project: Write a report about climate change.

Module 8 Design past and present *page 109*		
15 Tourist attractions *page 110*	**Grammar:** the simple present passive **Vocabulary:** architectural features; materials; wildlife **Functions:** giving general information; making descriptions; giving reasons	**Reading:** the Alhambra; a postcard about a vacation in Venice; birds in Iran **Listening:** a description of Burj Khalifa **Speaking:** talking about Islamic architecture; talking about an object; talking about a good place to visit **Writing:** three paragraphs about your country or region; a description of an object; a postcard about a wildlife sanctuary
16 Inventors in the past *page 116*	**Grammar:** the simple past passive **Vocabulary:** wordbuilding; art and artists **Functions:** giving general information; expressing opinions; agreeing and disagreeing; making descriptions	**Reading:** the power of imagination; famous inventors **Listening:** a description of da Vinci's flying machine **Speaking:** talking about a painting; talking about geniuses; talking about artists and inventors; talking about inventions **Writing:** sentences about artists and inventors; a description of an invention

Project: Write a description of a building.
Review D ***page 123***
Extra reading ***page ER1: Journey to the Center of the Earth*** **by Jules Verne;** ***Gulliver's Travels*** **by Jonathan Swift**

Wordlist ***page W91***
Student grammar review ***page W95***
Irregular verbs ***page W98***

MODULE 5

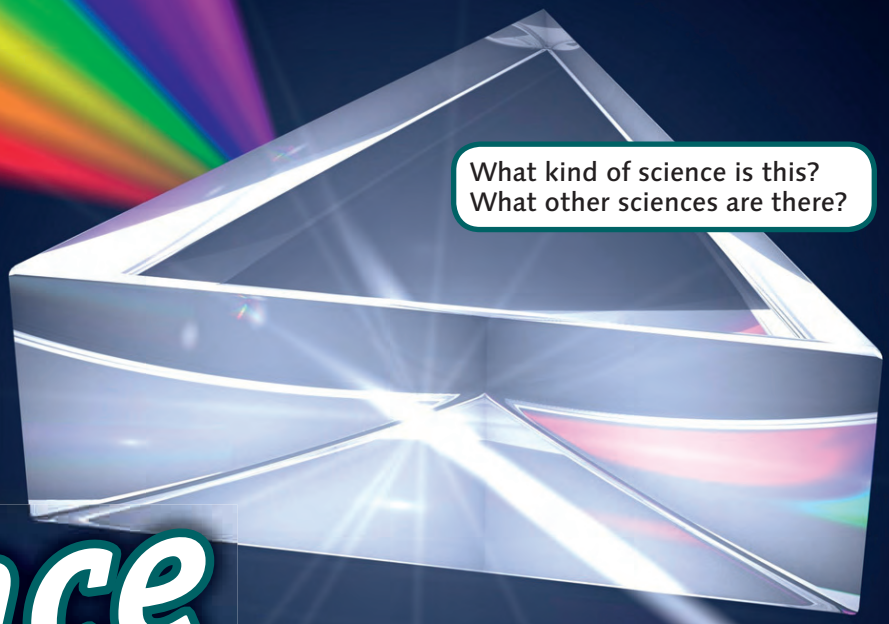
What can you see? What do you use this equipment for?



Who is this famous scientist? What did she discover?



What kind of science is this? What other sciences are there?



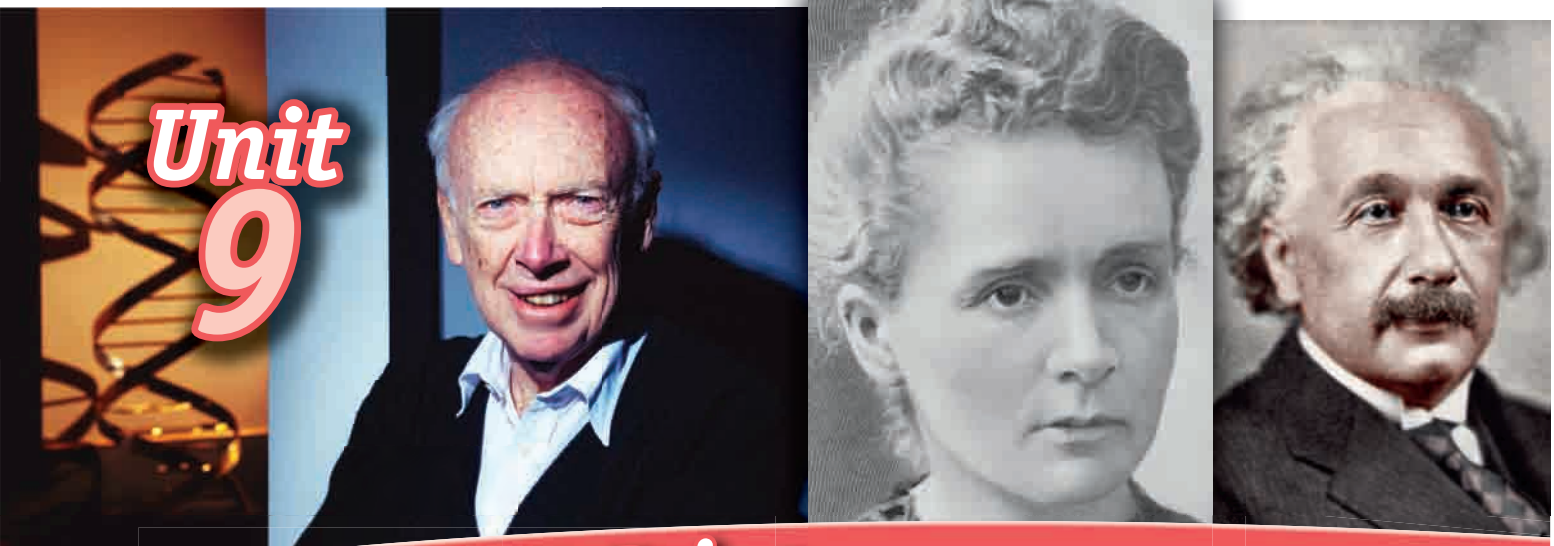
Science

Outcomes

- To read about super scientists, the Nobel Prize, scientific experiments, science matters, Dmitri Mendeleev, and a scientific discovery about the color red
- To listen to an interview about Alfred Nobel and an interview with a scientist
- To use vocabulary related to Nobel Prizes, science, and scientists
- To talk about annoying habits, Nobel Prizes, science, and experiments
- To use the present progressive, and stative and action verbs
- To write about a Nobel Prize winner, a letter about a school project, a summary of an article, and a report about an experiment

Project

Write about a Nobel Prize winner.



Unit 9

The Nobel Prize

Grammar
the present progressive

BEFORE YOU BEGIN

1 Who are the scientists in the pictures? What are they famous for?

2 Read the words in the box. Which can refer to Nobel Prizes? Check the meaning of any words you don't know in a dictionary.

Physics	Chemistry	Medicine	Economic Sciences
Literature	Peace	Biology	Mathematics

3 9.1 Why are the scientists in the article called "super scientists"? Read and listen to the text to find out.

Super scientists

In the last 1,000 years, science has made much progress. Today, science is an international subject. In 1901, a Swedish scientist named Alfred Nobel founded the Nobel Prizes. Since then, there have been six Nobel Prizes every year. They are for Medicine, Physics, Chemistry, Economic Sciences, Literature, and Peace. Since 1901, there have been more than 700 Nobel Prize winners.

Marie Curie was a Polish scientist. She was the first woman to win a Nobel Prize. In fact, she was the winner of two Nobel Prizes – for Physics in 1903 and for Chemistry in 1911. Her great discovery was radium.

In 1921, German scientist **Albert Einstein** received the Nobel Prize for Physics. He did important research into light and how it travels.

The Scottish doctor **Sir Alexander Fleming** won the Nobel Prize for Medicine in 1945. Fleming discovered penicillin in 1929. Penicillin is a very important medicine today.

In 1962, British and American scientists **Francis Crick** and **James Watson** won the Nobel Prize for Medicine. Together, they found out more about DNA (deoxyribonucleic acid). It is DNA that makes each of us different.

Sir Ronald Ross, a British doctor, won the Nobel Prize for Medicine in 1902. He received the prize for his work on malaria. He laid the foundation for successful research on this disease and ways to fight it.

Who are the super scientists of the future? Are scientists making discoveries that will change the world? Nobody knows. But one thing is certain: today, thousands of scientists are carrying out experiments. New areas of science are developing, and life is changing.

COMPREHENSION

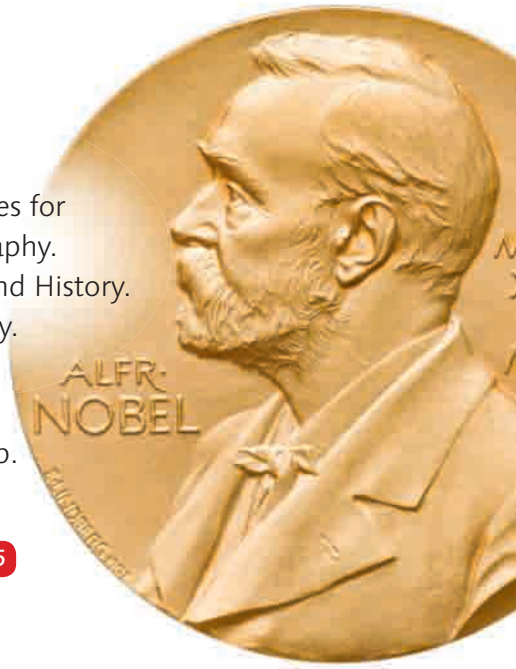
4 9.1 **Read and listen to the article again and choose the correct answers below.**

1 Science has made a lot of progress
- **a** every year.
- **b** in the last 1,000 years.
- **c** since 2010.

2 You can win Nobel Prizes for
- **a** Medicine and Geography.
- **b** Economic Sciences and History.
- **c** Physics and Chemistry.

3 Since 1901, there have been
- **a** two Nobel Prize winners.
- **b** thousands of Nobel Prize winners.
- **c** more than 700 Nobel Prize winners.

4 Science today is
- **a** staying the same.
- **b** continuing to develop.
- **c** not changing.



GRAMMAR: The present progressive

Student grammar review page W95

5 **Complete the sentences from the text with the verbs in the box.**

changing ~~developing~~ continuing making carrying out

1 New areas of science are developing.
2 Life is _____.
3 Are scientists _____ discoveries that will change the world?
4 Thousands of scientists are _____ experiments.
5 He is _____ his research in this important area of science.

6 **Complete the sentences using *always* and the present progressive form of the verbs in the box.**

play look get ~~talk~~ complain tell

1 I don't like him very much. He is always talking about other people.
2 He's a very impatient person – he _____ at his watch.
3 I don't like fruit, but my mother _____ me to eat it.
4 The bus takes so long. I _____ home late.
5 Why don't we play tennis today for a change? We _____ soccer.
6 Why don't you say something nice? You _____.



SPEAKING

7 **What are your friends and family always doing that annoys you? Work in pairs and tell each other, using *always* and the present progressive.**

A: My brothers are always arguing.
B: My sister is always borrowing my pen without asking me first.

Speaking strategies

Preparing what to say
- Think about your family and friends. Take notes on what you can say. Prepare five sentences.
- Check any vocabulary that you don't know and you need in a dictionary before you begin.

More than 700 people have received Nobel Prizes. How many of these have been women?



READING

1 Complete this summary of the text on page 66 with the missing words.

Nobel Prizes **winners** ~~**scientist**~~ **Physics** **became** **develop** **win**

The Nobel Prizes began in 1901, when Alfred Nobel, a Swedish **(1)** scientist, founded them. You can **(2)** _____ a Nobel Prize if your work is very important.

Each year, there are six **(3)** _____. People can win them for Medicine, **(4)** _____, Chemistry, Economic Sciences, Literature, and Peace. Since the Nobel Prizes started, there have been more than 700 **(5)** _____.

Marie Curie discovered radium, and she **(6)** _____ the first woman to receive a Nobel Prize, in 1903. She also won a second Nobel Prize in 1911. Other scientists who have carried out important work to **(7)** _____ new areas of science include Sir Ronald Ross, who received a Nobel Prize for Medicine in 1902.

SPEAKING



2 Can you remember? Work in pairs. Choose from each column to make sentences.

Marie Curie	Chemistry	1902
Albert Einstein	Physics	1903
Sir Alexander Fleming	Medicine	1962
Francis Crick and James Watson		1921
Sir Ronald Ross		1945
		1911

Sir Alexander Fleming won the Nobel Prize for Medicine in 1945.

LISTENING

3 What do you know about Alfred Nobel and the Nobel Prizes? Read the sentences with a partner. Which sentences are true and which are false?

1 Alfred Nobel was born in Sweden in 1843.
2 Nobel invented dynamite.
3 Nobel studied Economics at a French college.
4 Nobel was poor when he died.
5 The newest Nobel Prize is for Literature.

4 9.2 Listen to an interview with a student about Alfred Nobel and the Nobel Prizes. Check your answers to Exercise 3.

COMPREHENSION

5 9.2 **Listen again and answer the questions. Use complete sentences.**

1 What is Mark's class doing a project on?
They're doing a project on the Nobel Prizes.
2 What is Mark's teacher always saying?
3 Is Mark researching a Nobel Prize winner?
4 Which area of science did Alfred Nobel first study?
5 What happened to Alfred's money when he died?
6 How many Nobel Prizes are there now?
7 What is Mark hoping to be in the future?
8 What is he doing this afternoon?

Listening strategies

Checking your answers

- Pay attention to why your answers are correct.
- Also, pay special attention to the questions that you couldn't answer before. Remember, the questions are in the order that they appear on the CD.

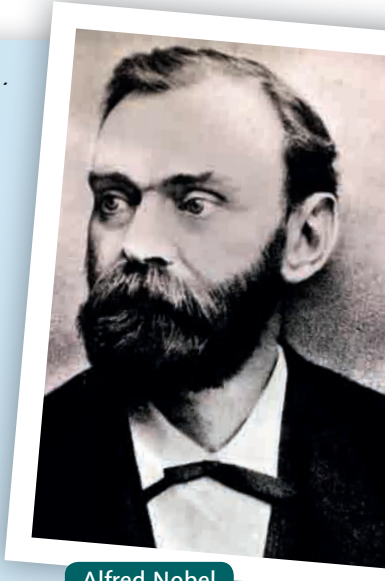
VOCABULARY: Science

6 **Complete the extract from Mark's project using the words in the box.**

Peace Chemistry annual explosive ~~award~~ experiments laboratory

A Nobel Prize is the highest **(1)** award anyone can receive for their work. It was the Swedish scientist Alfred Nobel who set up the prizes. He was very wealthy, and when he died he left over $9 million for **(2)** _____ prizes in five fields: Literature, Physics, Chemistry, Medicine, and **(3)** _____. But Alfred Nobel is also famous because he invented dynamite, a safe **(4)** _____.

Alfred Nobel was born in Sweden in 1833. His father was an engineer. He first studied **(5)** _____ in France and the U.S., but went back to Sweden in 1859. He set up a **(6)** _____ with his brother, Emil. They wanted to produce a safe and useful kind of explosive. But in one of their **(7)** _____, an explosive killed Emil. Alfred continued with the experiments, and in 1867 he introduced dynamite to the world. He is best known, though, for creating the Nobel Prizes. In 1969, a sixth prize was added for Economic Sciences.



Alfred Nobel

SPEAKING

7 **Work in pairs. Who would you award a Nobel Prize to? In what field and why? Write some notes and then discuss with your partner.**

WRITING

8 **Write a short text about your chosen prizewinner and why you are awarding him/her the prize.**

> ***I never see what has been done;***
> ***I only see what remains to be done.***
> **Marie Curie, scientist (1867–1934)**

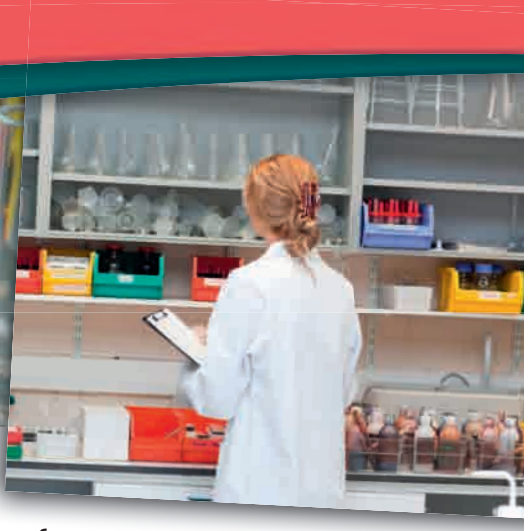
Writing strategies

Pre-writing

- Before you start work, prepare what you want to say. Take notes on the important points.
- Consider how your material can be divided into paragraphs. Prepare a simple writing plan.
- You are then ready to start writing!







VOCABULARY: Science

1 Match words 1 to 6 with definitions a to f.

1 microscope	**a** information discovered after an investigation
2 research	**b** written information about a subject
3 report	**c** what scientists use for their work
4 findings	**d** the study of something to find out information
5 laboratory	**e** the place scientists work
6 equipment	**f** a piece of equipment for looking at very small objects

Reading strategies

Reading for main idea

- Look at the first line and the question to predict what you will read about.
- When you read for the first time, don't worry about not understanding every word. In your first reading of the text, you want to get a general idea of what the text is about.

READING

2 Read Robert's e-mail. What does he want help with?

3 Read Robert's father's reply. Did he answer Robert's question?



Robert

Hi Dad,
I'm doing an interesting Science project for school right now. Can you help me? For instance, what are scientists doing when they carry out experiments?
Love,
Robert

Hi Robert,
I'm glad you are showing interest in my work as a scientist! Right now, I am working on a project in Australia. That's because there's a lot of very useful equipment here, and I am using this equipment to carry out my experiments. For example, there's a huge microscope in the laboratory, which is helping me with my research.
When scientists carry out an experiment, they first decide what to investigate. They ask a question about why something is happening and try to think of a possible answer. This possible answer is called a theory. Scientists then carry out experiments to test their theory. They observe the results and, if necessary, they change their theory. Finally, scientists write a report about what they have found out. This is how they share their findings with other scientists.
I'm only working in Australia for two more weeks. Then I'm coming home!
See you soon!
Love,
Dad

COMPREHENSION

4 Read Robert's father's e-mail again and order the events.

a He writes a report.
b He observes the results.
c Then he carries out experiments to test the theory.
d The scientist decides what to investigate. 1
e He might change his theory.
f He creates a theory.

GRAMMAR: The present progressive

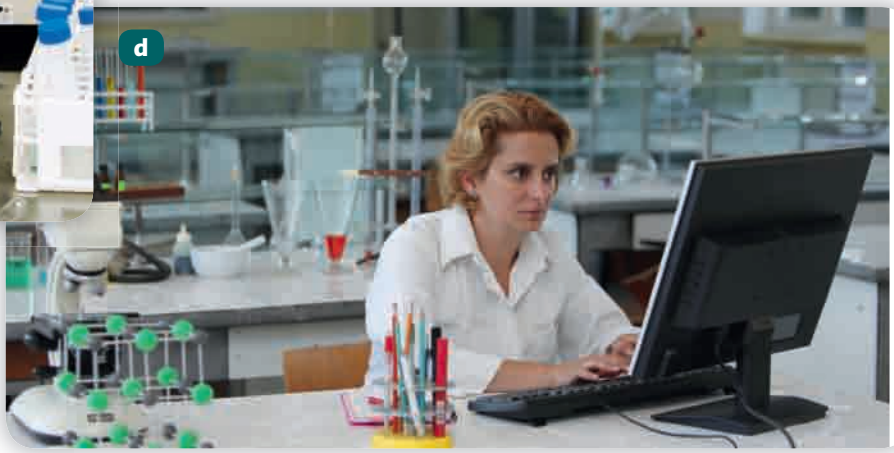
Student grammar review page W95

5 Match the pictures with the sentences.









1 He is observing the results.
2 She is looking through a microscope.
3 He is setting up an experiment.
4 She is writing a report.

Talk together

6 In pairs, ask and answer questions about the pictures in Exercise 5.

A: Are you writing a report?
B: No, I'm not. I'm observing the results. Are you writing a report?
A: Yes, I am.

WRITING

7 Write an e-mail to a relative about a school project you are working on right now. Tell what you are learning about and how you are doing the work.

Writing strategies

Writing an e-mail

- Consider how you are going to begin and end your e-mail. See the example e-mails on page 70.



Unit 10

Science and scientists

Grammar
stative and action verbs

BEFORE YOU BEGIN

1 Look at the pictures and say what you can see in each one. What is the name of the type of science shown in each picture?

2 Read the words in the box. What areas are covered in these types of science? Check the meaning of any words you don't know in a dictionary.

botany ecology zoology astronomy geology environmental science

3 10.1 Read and listen to Part 1 of an extract from a science radio show. Write down the questions that you hear about the three main areas of science.

Science matters

Do you like science? Whatever you think of science, there is no doubt that it can be very surprising.

Science tries to answer many of the questions that we like to ask about the world around us. Do you know, for example, that elephants are the only mammals that can't jump? Or that lightning is ten times hotter than the sun? Or that one hundred million microorganisms live in your mouth?

The three main areas of science are biology, chemistry, and physics. Biology is the study of living things. It includes the fields of botany, zoology, ecology, and environmental science. Chemistry is the study of the building blocks of nature and how they combine to form the solids, liquids, and gases that make up everything. Physics is the branch of science that deals with matter and energy and how they interact. It includes the study of heat, light, and other forms of energy.

Science tries to answer questions such as: Why do we see lightning before we hear thunder? Why do we need to breathe in more air during exercise? And what do oil and coal come from?

4 Discuss the questions you wrote down in Exercise 3 with a partner and try to answer them.

5 10.2 Read and listen to Part 2 and check your answers.

Physicists have shown us that light travels faster than sound. It is the fastest thing we know. Biologists explain that when we exercise, the cells in our body need more oxygen. Chemists have found that oil and coal come from plants and animals that lived millions of years ago.

Today, scientists are working in many areas to advance knowledge. But remember – they still don't know everything. For instance, they still don't know what 97% of the universe consists of!

COMPREHENSION

6 10.1, 10.2 Read and listen to the texts again and choose the correct answers.

1 The three main areas of science are
a biology, chemistry, and physics. **b** biology, math and chemistry.
c chemistry, zoology, and physics.

2 Botany is a branch of
a chemistry. **b** physics. **c** biology.

3 Scientists who work in the area of physics are called
a botanists. **b** physicists. **c** chemists.

4 We see lightning before we hear thunder because
a lightning is very bright. **b** thunder is far away. **c** light travels faster than sound.

5 When we exercise, our bodies
a need less oxygen. **b** need more cells. **c** need more oxygen.

6 Scientists
a still don't know what 97% of the universe consists of.
b already know what the whole universe consists of.
c know what 97% of the universe consists of.



GRAMMAR: Stative and action verbs

Student grammar review page W95

7 Read the sentences and circle the correct tense.

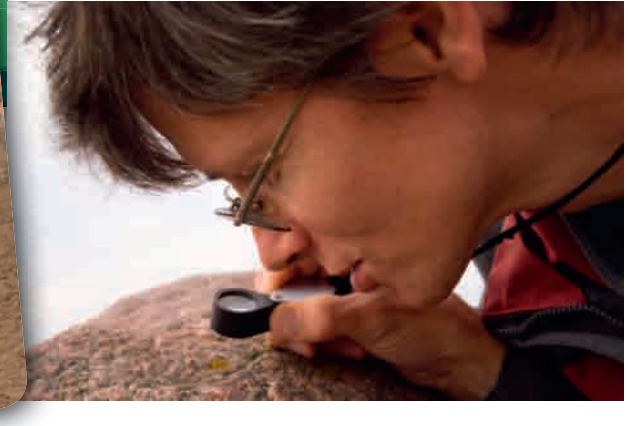
1 Science answers many questions we *are liking / like* to ask.
2 *Do you know / Are you knowing* that elephants can't jump?
3 We *are seeing / see* lightning before we hear thunder.
4 Right now, we *are exercising / exercise*.

8 Complete the sentences with the correct form of the verb in parentheses.

1 Scientists need (need) microscopes to do their research.
2 I _____ (not like) physics because it is very hard.
3 We _____ (see) many colors reflected through a prism.
4 Our bodies _____ (need) more oxygen when we exercise.
5 Biologists have discovered that two-thirds of the human body _____ (consist) of water.
6 What _____ (you think) of chemistry? _____ (you like) it?
7 Chemists _____ (know) that oil and coal come from plants that lived long ago.







SPEAKING

1 **In pairs, ask and answer the following questions using the correct verb forms. Use complete sentences.**

1 Do you have an English dictionary?
2 What do you think of Science?
3 Does Biology seem hard?
4 What subjects do you like in school?
5 What languages do you know?
6 When do you feel happy?

LISTENING

2 **10.3 Listen to this interview with a scientist. Which area of science does he believe is the most important today?**

COMPREHENSION

3 **10.3 Listen to the interview again. Are the sentences true or false? Correct any sentences that are false.**

1 Scientists study the world around us. True
2 Professor Allen is a zoologist.
3 Environmental scientists are trying to solve environmental problems.
4 Professor Allen is working with some huge green plants.
5 These plants produce flowers when they grow.
6 Scientists think that their research is important for cars in the future.

4 **Complete the summary about the interview using the simple present or the present progressive form of the verbs in the box.**

live **carry out** **produce** **think** ~~**be**~~ **react** **work** **grow**

Professor Allen **(1)** is an environmental scientist. He **(2)** _____ on a research project with tiny green plants. These tiny plants **(3)** _____ in rivers and in the ocean and they **(4)** _____ to sunlight. The scientists **(5)** _____ experiments with these plants. They **(6)** _____ them in huge numbers. When the plants grow, they **(7)** _____ a liquid. Scientists **(8)** _____ that cars can use this liquid in the future.



Professor Allen

> *Half of science is putting forth the right questions.*
> **Proverb**

Talk together

5 **Do you think that science is exciting? Which area of science do you think is the most important? Discuss with your partner. Give reasons.**

A: I think that science is exciting because you can have surprising results when you do experiments.
B: I think that medicine is the most important area of science because it helps people when they are sick.



VOCABULARY: Science and scientists

6 **Complete these definitions using the correct nouns.**

1 Geology is the study of rocks and stones.
A person who studies rocks and stones is a geologist.
2 _____ is the study of animals.
A person who studies animals is a zoologist.
3 Botany is the study of plants.
A person who studies plants is a _____.
4 Meteorology is the study of the weather.
A person who studies the weather is a _____.
5 Ecology is the study of the environment.
A person who studies how plants, animals, and humans live together is an _____.
6 _____ is the study of stars and anything outside the Earth's atmosphere.
A person who studies the stars is an astronomer.



SPEAKING

7 **Work in pairs. Take turns saying what you are working on. Your partner says what kind of scientist you are.**

A: I am carrying out research into what whales eat.
B: I think you are a zoologist.

READING

8 **Read about a famous chemist. How did he order the elements in his table?**

Dmitri Mendeleev



Dmitri Mendeleev was a Russian chemist in the nineteenth century who invented the periodic table of chemical elements. He was one of fourteen children. Mendeleev went to college at the age of sixteen. He became professor of Chemistry at the college in St. Petersburg, Russia. In 1869, he arranged the elements that scientists knew about into a table. He organized them according to their properties and atomic weight. He found that all the elements in the same column were similar to each other. Mendeleev left gaps in his table where he felt elements should be. He looked at the elements in the same column as each gap and predicted what the new element would be like. At first, other scientists didn't believe these predictions, but a few years later, three of the new elements were discovered and Mendeleev became famous throughout the world.

COMPREHENSION

9 **Read the text again and answer the questions.**

1 What did Mendeleev invent? He invented the periodic table of chemical elements.
2 What did he create in 1869?
3 What did he discover about all the elements in the same column in the table?
4 Why did he leave gaps in the table?
5 What did he predict about the new elements?
6 Why do you think scientists didn't believe his predictions?

? **How many elements are there in the periodic table?**







READING

1 Look at the title of the article below. Why do you think winners wear red? Discuss with a partner.

2 Read the article. What have scientists discovered about the color red? Take notes.

WINNERS WEAR RED

Scientists today are investigating how colors can make people think and react. It is becoming clear that colors have an important effect on humans and animals.

One of the first scientists to research the effect of red on animals was Niko Tinbergen, a biologist and Nobel Prize winner. About sixty years ago, he observed that each time his fish saw a small red truck on the road outside, they swam with their heads down. The only other time they did this was when they fought one another.

Since then, scientists have discovered that red has an important effect in sports.

Athletes who wear red win more games than athletes who wear other colors, such as blue. In the last fifty-six years in England, for example, teams that wear red have won more games than teams wearing other colors. Liverpool, Manchester United, and Arsenal are England's most successful soccer teams, and they all wear red. And in the 2004 soccer finals in Portugal, teams that had red as their main color also won more games and scored more goals.

Scientists have discovered that people feel more confident when they are wearing red. But when they see someone else in red, they feel less confident about themselves. This may be because, in nature, red can show anger. It can also mean danger. For example, we use red for warnings and important road signs.

In one experiment, scientists showed a group of one hundred students some pencils. Each pencil was a different color. The scientists asked the students which pencil looked the strongest. Red won.

In another experiment, a group of students took a test. Half of the test papers had questions in red. The other test papers had the same questions in black. The students who answered the questions in black got better scores than the students who answered the same questions in red.

Most people don't know that they react differently to different colors. Today, scientists are carrying out more research into this surprising area. Next time you are wearing red, watch out for the effect it has on other people!



COMPREHENSION

3 Read the article again. Are the sentences true or false? Correct any sentences that are false.

1 Colors have an important effect on humans and animals. *True*
2 Niko Tinbergen was a physicist.
3 Tinbergen researched the effect of the color blue on animals.
4 Teams wearing red win more games than teams wearing black.
5 People feel less confident when they are wearing red.
6 In nature, the color red indicates anger or danger.
7 On one test, students who answered questions written in red got better scores than students who answered questions written in black.
8 A lot of people know that they react differently to different colors.

SPEAKING

4 Do you agree with the article? Work in pairs and discuss whether you agree or disagree, and why.

WRITING

5 Write a summary of the "Winners wear red" article. Use the summary on page 74 as a model. Then share your work with the class.

Writing strategies

Writing a summary

- Read the article and decide on the most important parts of the text.
- Write a short paragraph. Check your spelling and grammar.

READING

6 The way humans react is fascinating, and it is a growing area of scientific research. Read the instructions for this experiment. Then work in pairs and carry it out. Take notes about your findings.

Experiment – How fast do you react?

1. Ask a partner to hold up a ruler. His or her hand should be at the top. Put your hand close to the zero mark at the bottom. Don't touch the ruler!
2. Ask your partner to drop the ruler suddenly. Try to catch it.
3. Look where your hand is on the ruler. Write down the number next to your hand. It shows how far the ruler has fallen.
4. Repeat the experiment three more times. Can you catch the ruler faster each time? Look at the numbers you write down to find out.

WRITING

7 Read *What's happening?* below. Use this information and your notes from Exercise 6 to write a short report about your experiment. Then share your work with the class.

Writing strategies

Writing a report

- Your report should tell the reader what happened in the experiment and what the experiment showed.
- Use the information in Exercises 6 and 7, but do not copy. Use your own words.
- Use short, simple sentences. Sometimes reports are written in the passive, so you can use this tense if you can.

What's happening?

EXPERIMENT – HOW FAST DO YOU REACT?

You catch the ruler when a message travels from your eyes to your hand. It takes a short time for this to happen. You can catch the ruler faster with practice, but the message always needs time to travel.

Project

Write about a Nobel Prize winner.

Your task

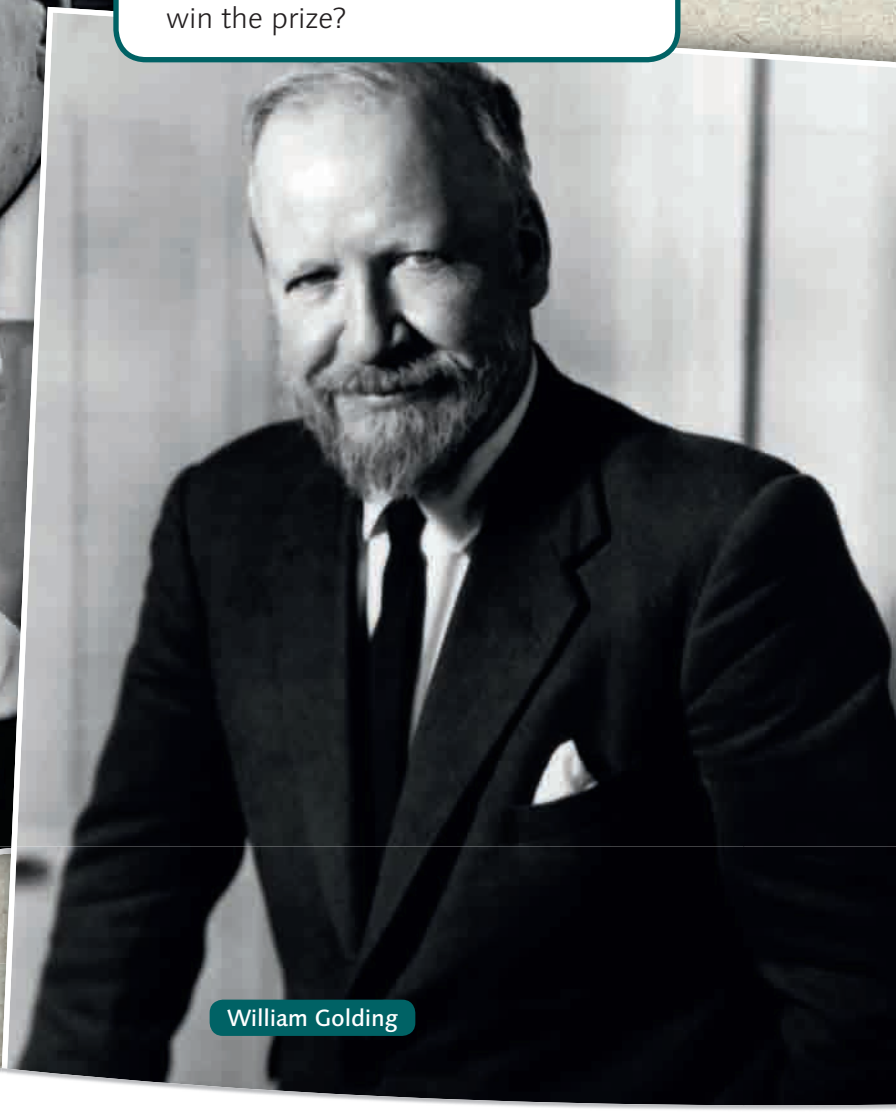
- Choose a winner of a Nobel Prize and find out some information about him/her.
- Find out the answers to the questions. Use books or the Internet.
- ☒ Write a short text of about 100 words about the winner.
- ☒ Illustrate your project with your own pictures from magazines, etc.
- ☒ Present your project to the class.

Questions

- When did he/she live?
- Which Nobel Prize did he/she win?
- What was his/her achievement?
- Why do you think he/she deserved to win the prize?



Alexander Fleming



William Golding

MODULE 6

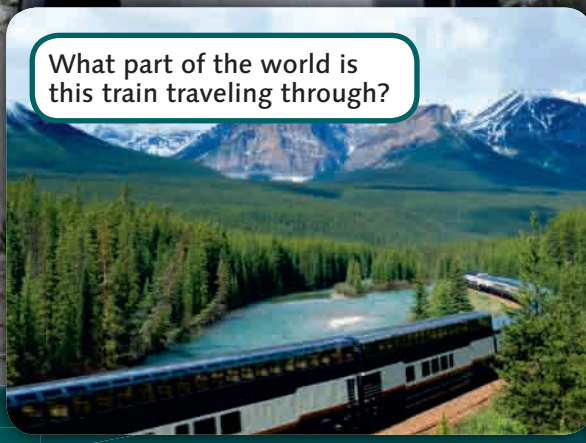
Journeys

Where is this river? What journey is this man making?



Where is this in the world? Would you like to visit? Why / Why not?

What part of the world is this train traveling through?

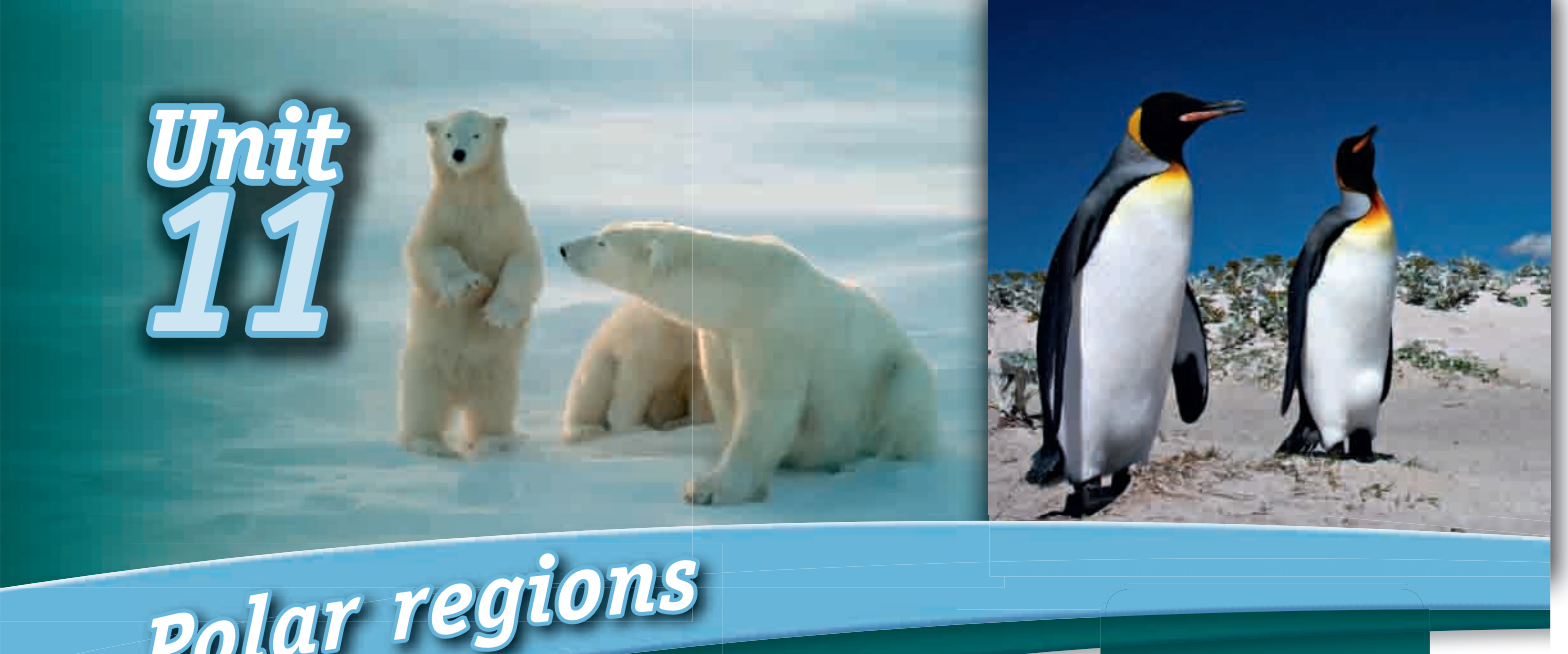


Outcomes

- To read about the polar regions, cruises to Antarctica, penguins, vacation plans, and the longest swim
- To listen to information about polar bears, and a description of a tour in Uluru
- To use vocabulary related to the polar regions, polar animals, geographical features, and tours
- To talk about visiting the North and South Poles, a cruise to Antarctica, future possibilities, a polar animal, suggestions about vacations, vacation plans, and items to take on a trip
- To use the first and second conditionals, and *will/won't*, *should*, *Let's …*, *How/What about*, *Why don't we …* to make suggestions
- To write about a visit to the Arctic, a polar animal, a description of the Amazon River, and an account of a memorable journey

Project

Write about a country.



Unit 11

Polar regions

Grammar
the first and second conditionals

BEFORE YOU BEGIN

1 Look at the pictures. Which picture do you think shows the North Pole and which picture shows the South Pole?

2 These words are all related to the North and South Poles. Which words refer to animals? Check the meaning of any words you don't know in a dictionary.

iceberg wildlife seal snowstorm ice cap reindeer musk oxen
Arctic fox polar bear whale frozen penguin treeless

3 11.1 What similarities are there between the North and South Poles? Read and listen to the text to find out.

THE NORTH AND SOUTH POLES

Not many people have the chance to visit the North and South Poles. Very few people visit every year. But if you had the opportunity to visit the Poles, they would appear superficially similar because both are places of extreme cold. Both are also places of spectacular beauty, with their frozen landscapes of snow, ice, and icebergs. If you went on a special adventure cruise when you visited, you would be able to observe the unique wildlife of these places. You would be unlucky if you didn't see any seals. If you went on your trip in the winter, you would probably experience severe snowstorms.

There are important differences between the Arctic and Antarctica, however. The Arctic is the area inside the Arctic Circle around the North Pole. It is a huge frozen ocean. If you went there in the winter, you wouldn't see the sun because it never comes above the horizon. The land areas around the Arctic Ocean are generally flat and treeless. In the winter, the soil is frozen and covered with snow. In the summer, plants grow and these provide food for reindeer and musk oxen. Other animals, like the Arctic fox and the polar bear, survive by hunting.

Antarctica is the world's coldest continent. It is much colder than the North Pole because it sits on top of a very thick ice sheet, which is over three kilometers thick. The huge ice caps and very low temperatures make it hard for most living things to survive there. The animals that do live in Antarctica, such as whales, penguins, and seals, depend on the ocean to live.

Scientists are very concerned about how climate change is affecting these polar regions. They predict that if the Earth continues to warm up and the ice caps continue to melt, then by 2100 sea levels will rise by forty-three centimeters. If this happens, there will be disastrous consequences for the Earth and its population.



COMPREHENSION

4 11.1 **Read and listen to the text again and choose the correct answers.**

1 At the North and South Poles it is
a very hot. **b** very cold. **c** tropical.
2 In the winter, there is
a a lot of sunshine. **b** some very bad weather. **c** a lot of rain.
3 The North Pole is in
a Antarctica. **b** the Arctic. **c** North America.
4 The land in the Arctic is
a very mountainous. **b** mostly flat. **c** full of trees.
5 The ice sheet below Antarctica makes it
a warmer than the North Pole. **b** colder than the North Pole.
c easy for living things to survive there.
6 If global warming continues,
a the sea levels will rise. **b** the ocean will freeze. **c** the sea levels will fall.

GRAMMAR: The first and second conditionals

Student grammar review pages W95 and W96

5 **Read the sentences from the text and decide if they use the first or second conditional. Write *first* or *second*.**

1 If you went on a special adventure cruise, you'd be able to observe the unique wildlife of these places. second
2 If you went on your trip in the winter, you would probably experience severe snowstorms.
3 If you went there in the winter, you wouldn't see the sun.
4 If the ice caps continue to melt, then by 2100 sea levels will rise by forty-three centimeters.
5 If this happens, there will be disastrous consequences for the Earth and its population.

6 **Complete the second conditional sentences with the correct form of the verbs in parentheses.**

1 If you went (go) to the North and South Poles, you would see a lot of snow and ice.
2 If I _____ (see) a polar bear, I'd take a lot of pictures.
3 If you _____ (visit) the North Pole, you wouldn't see any penguins.
4 If I _____ (travel) to the Arctic in the winter, I wouldn't see the sun.
5 If I _____ (win) a lot of money, I'd go on an Arctic cruise.

7 **Match the beginning and end of each conditional sentence.**

1 If you were in Istanbul next week,	**a** if I passed my test.
2 If you saw a polar bear in the desert,	**b** they would be healthier.
3 If people always had clean water to drink,	**c** I'd meet you there.
4 If I didn't have so much homework,	**d** I'd be amazed.
5 My mother would be happy	**e** if we knew.
6 We'd tell you	**f** I'd go out this evening.

SPEAKING

8 **If you went to the North or the South Pole, what would you see or do? Take notes. Then, in pairs, tell your partner.**

> ***We must always remember with gratitude and admiration the first sailors who steered their vessels through storms and mists, and increased our knowledge of the lands of ice in the South.***
> **Roald Amundsen, Polar explorer (1872–1928)**

READING

1 What happens in the summer in Antarctica? Read the text to find out.

CRUISE TO ANTARCTICA

Do you know a place where it is day for six months of the year? And where ice and weather, not clocks and calendars, determine when and where people travel?

If you visit Antarctica on one of our adventure trips, you'll discover a continent that is exactly like this. Antarctica is the southernmost continent and is surrounded by the Atlantic, Pacific, and Indian Oceans. With its snow, ice, water, and rock, Antarctica has incredible beauty. It also offers a unique opportunity to see wildlife close up – seals, whales, and penguins are all common. Because Antarctica is an undisturbed continent, these animals are not scared of visitors.

If you come on one of our fascinating trips, your adventure will begin with a flight to Argentina. From there, you will travel with our guide to Ushuaia, the most southerly city in the world, and join our special cruise ship.

On the way to the South Pole, our ship passes through amazing scenery. If you go on deck, you will see huge icebergs, as well as whales, seals, and many different sea birds. And if you have any questions, our team of experts will be there to help you.

Passengers go on excursions every day if the weather is good. One of our most popular excursions is to Half Moon Island. If you go in February, you'll see the tiny penguin chicks there. Passengers can also spend an afternoon at the boiling hot springs of Deception Island. You'll be able to swim in them if you want to!

There's lots of time to enjoy your trip, because it's light for twenty hours a day during the summer in the Antarctic. A cruise to Antarctica is an unforgettable experience.

Please remember:

- Our cruises are from November through February. We don't take passengers to Antarctica unless it is summer there.
- You need warm clothes if you come!
- Don't get too close to the wildlife: some animals attack if you come near them.
- There are no banks in Antarctica. If you want to buy something, you'll need some money.
- If you book before September 1, you'll get a free visit to the Amundsen-Scott research base.



COMPREHENSION

2 Read the article again. Are the sentences true or false? Correct any sentences that are false.

1 The tour begins with a flight to Antarctica.
False. The tour begins with a flight to Argentina.
2 You will be alone on deck.
3 The penguins have their chicks in April.
4 You can swim at Deception Island.
5 It's light for most of the time in the summer in the Antarctic.

READING

3 Complete Reza's e-mail with the correct words.

seals | icy | research base | ~~frozen~~ | penguin | icebergs | snowstorms | wildlife

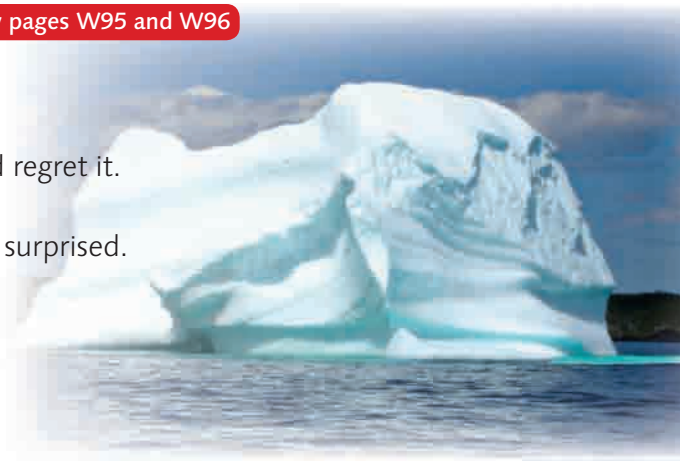
Dear Alex,
I'm having the most incredible time on board the cruise ship. I've seen some amazing scenery: **(1)** frozen ice sheets, snow, and huge **(2)** _____ floating in the ocean. It's really beautiful. There is a lot of incredible **(3)** _____ to observe. If you go on deck, you see whales, **(4)** _____, and all kinds of sea birds. If we go to Half Moon Island, we'll see the **(5)** _____ chicks, too. If I want, I will be able to visit the Amundsen-Scott **(6)** _____. I think it will be really interesting, so I will go unless the weather is really bad. Antarctica can have terrible weather, such as blizzards and **(7)** _____, but we have been pretty lucky. There are some **(8)** _____ winds, though. You would love it if you came on this cruise.
Best wishes,
Reza

GRAMMAR: The second conditional

Student grammar review pages W95 and W96

4 Complete the second conditional sentences with the correct form of the verbs in parentheses.

1 If I visited (visit) Antarctica in the winter, I think I'd regret it.
2 If you _____ (go) on a cruise, you'd enjoy it.
3 If we _____ (not see) any whales, I would be very surprised.
4 If the ship _____ (hit) an iceberg, it would sink!
5 Would you swim in the hot springs if you _____ (get) the chance?



SPEAKING

5 Imagine you are thinking about going on a cruise to Antarctica and you are asking Reza what it would be like before you decide to go. Ask and answer the questions in pairs. Use the text in Exercise 1 to help you.

1 If I went on deck, what scenery would there be?
A: If I went on deck, what scenery would there be?
B: There would be huge icebergs.
2 What animals would I see?
3 What would I do if the weather was good?
4 What would I see on Half Moon Island?
5 Would I need warm clothes?
6 Would I see any polar bears?

WRITING

6 Imagine you are visiting the Arctic. Write an e-mail to a friend describing your visit. What scenery and wildlife can you see?

? In Antarctica it is nearly always dark in the winter, and in the summer it is nearly always light. Why?

Writing strategies

Writing an e-mail

- Consider how you will begin and end your e-mail. See the example in Exercise 3.
- Only include the most important information.





LISTENING

1 **What do you know about polar bears? Work in pairs and try to answer the questions.**

1 Where do polar bears live?
2 How do polar bears protect themselves from cold weather conditions?
3 Can polar bears swim?
4 How far can polar bears swim?

2 **11.2 Listen to the information about polar bears. Check your answers to Exercise 1.**

COMPREHENSION

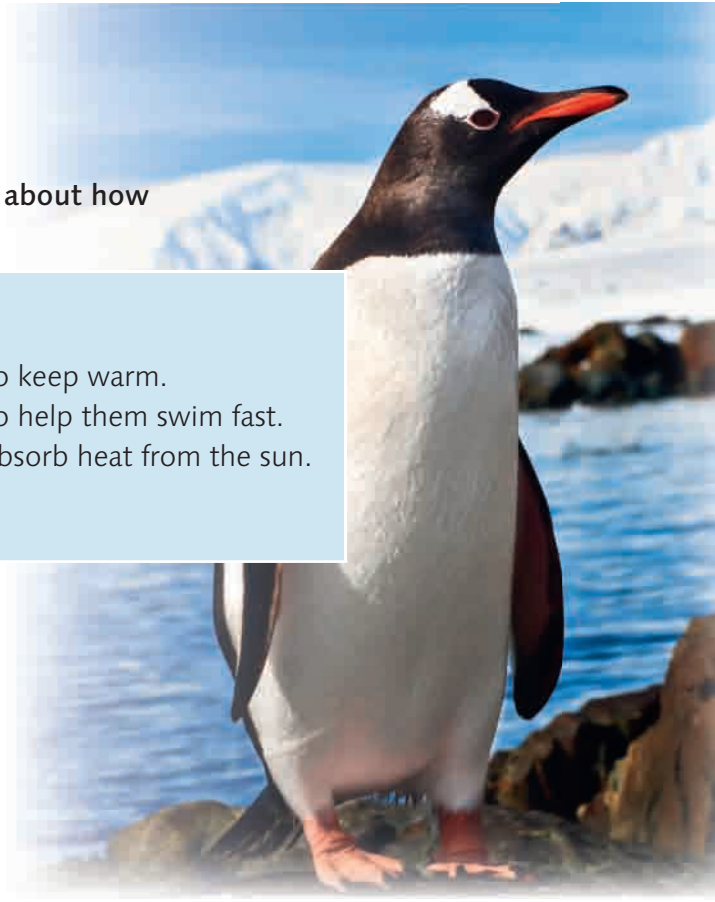
3 **11.2 Listen again and complete the chart.**

Living conditions	Adaptations to its environment	Food
extreme cold ...		

READING

4 **Read the following text about penguins and complete a chart like the one above.**

All penguins live in the Southern Hemisphere. Many live in Antarctica, on pack ice and in the oceans, where it is extremely cold and water temperatures never rise above freezing. All penguins are excellent swimmers. They have webbed feet for powerful swimming. Their bodies are streamlined to help them swim fast. They have flippers that also help them swim underwater at speeds of up to twenty-four kilometers per hour. Penguins keep warm with thick skin and lots of fat under the skin. They also huddle together to keep warm. Penguins have dark colored feathers on their back. These absorb heat from the sun, which helps them warm up, too. Their feathers are tightly packed and overlap to provide warmth and waterproofing. Penguins eat a variety of small fish. Different species of penguins have slightly different diets, so there isn't much competition among penguins for food.



COMPREHENSION

5 Read the text in Exercise 4 again. Make sentences about how penguins are adapted to their habitat.

1 They have webbed feet	to keep warm.
2 Their bodies are streamlined	to help them swim fast.
3 Their wings are shaped like flippers	absorb heat from the sun.
4 They have thick skin and lots of fat	
5 The dark feathers on their back	
6 Their feathers are tightly packed and overlap	
7 They huddle together	

They have webbed feet to help them swim fast.

PRONUNCIATION: Intonation

6 11.3 Listen and repeat. Practice the intonation.

1 If I won a lot of money, I'd go on an Arctic cruise.

2 If I went to the North Pole, I'd see polar bears.

Talk together

7 Work in pairs. Ask and answer the questions. What would you do if …

you won a lot of money?	**you could live anywhere in the world?**
you traveled to the Arctic?	**you saw a famous person?**
you could live until you were 150?	**you invented something very important?**
you won a Nobel Prize?	**you played a musical instrument very well?**
you could speak many foreign languages?	**you were very rich?**

A: What would you do if you won a lot of money?
B: If I won a lot of money, I would give it to charity.
A: I would do the same. I would also give some money to my family.

8 Tell the class about some of the answers you and your partner gave.

If Ali won a lot of money, he would give it to charity. I would do the same, and I would also give some money to my family.

WRITING

9 Choose a polar animal. Find out about it. Consider the following and take notes.

1 Where does it live and what is it like there?
2 How is its body adapted to the living conditions?
3 What food does it eat? Does it hunt other animals?

SPEAKING

10 Tell your partner about the animal you chose in Exercise 9.





Unit 12

Planning a trip

Grammar

making suggestions: *will/won't, should, Let's …, How/What about …, Why don't we …*

BEFORE YOU BEGIN

1 What would be your ideal vacation? Discuss with a partner.

2 12.1 Read and listen to Mr. and Mrs. Kamali discussing their vacation plans. What kind of vacation are they planning and in which country?

Where should we go?

Mrs. Kamali: So, where should we go on vacation this year?

Mr. Kamali: Well, I went to the travel agency this morning and picked up a brochure, *Adventures by Rail*. I'll show it to you.

Mrs. Kamali: Yes, do. Hold on a minute. I'll just get my glasses. Oh, I can't find them. You'll have to read it to me.

Mr. Kamali: This trip across Australia sounds exciting. Listen: "Enjoy a spectacular ride through central Australia via the magnificent Uluru." Can you see these pictures?

Mrs. Kamali: Yes. The scenery looks wonderful, but we went to Australia two years ago. Why don't we go somewhere different this year? How about Canada?

Mr. Kamali: That's a great idea. I'll see if there are any trips to Canada. Oh here, there's a train journey in the Canadian Rockies. It looks fantastic. Listen. "See the natural wonders of the west of Canada. Your journey will begin in Vancouver in British Columbia. From there, you will travel through the Coastal Mountain Range and Fraser Canyon with its dramatic landscape. You will follow the Fraser River, famous for its salmon fishing. You will pass by the Albreda Glacier and the magnificent Pyramid Falls. The highlight of your journey will be Mount Robson, the highest peak in the Canadian Rockies."

Mrs. Kamali: I really like the sound of that. Let's book the vacation today. When should we go?

Mr. Kamali: Well, there are departures every two weeks. Let's go in September. I think it will be cheaper then than in August. What about September 1?

Mrs. Kamali: Yes, that sounds great. Aila will be happy.

Mr. Kamali: I'll book the train tickets, then. I think I'll book them online. It will be cheaper.

Mrs. Kamali: Should I check the flights to Canada? We'll have to fly to Vancouver to get the train.

Mr. Kamali: Thanks! That sounds great.

COMPREHENSION

3 12.1 **Read and listen to the text again and answer the questions.**

1 Where did Mr. Kamali go this morning? He went to the travel agency.
2 What kind of vacations does the brochure contain?
3 What is the scenery like on the journey across Australia?
4 Why doesn't Mrs. Kamali want to go to Australia?
5 How will they travel through the Canadian Rockies?
6 What is special about Mount Robson?
7 Who will book the train tickets?
8 Do you think the family will have an exciting vacation?

Reading strategies

Post-listening

- After you listen to the dialogue for the first time, compare your answers with another student. If the answers are different, pay special attention to this point the next time you listen.

GRAMMAR: Making suggestions

Student grammar review page W96

4 **Choose the correct answer.**

1 Should we *to go* / (*go*) / *going* to Canada this year?
2 Why *don't we to* / *don't we* / *don't* visit somewhere different?
3 Should I *to check* / *checking* / *check* the price of the flights?
4 How about *to go* / *go* / *going* on a train trip?
5 Let's *book* / *to book* / *booking* the tickets today.

5 **Complete each suggestion with *Should we* or *How about*.**

1 How about going on vacation to Hawaii?
2 _____ go to the theater this evening?
3 _____ take the train?
4 _____ driving to Florida?
5 _____ go sightseeing in San Francisco?

SPEAKING

6 **In pairs, make dialogues with these phrases.**

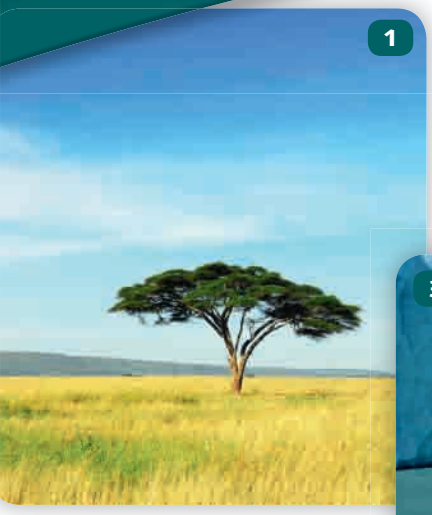
How/What about ...? Why don't we ...? Should we ...? Let's ...
That's a great idea! I'd love to!

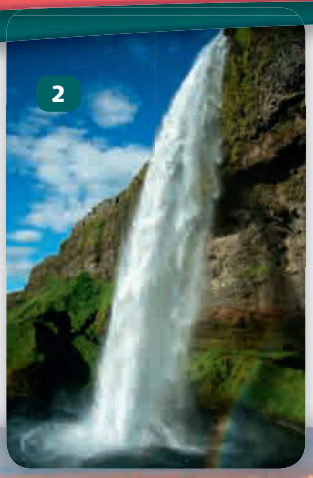
1 (go) on safari in Kenya
A: How/What about going on safari in Kenya?
B: That's a great idea!
2 (go) surfing in Australia
3 (go) mountain climbing in Switzerland
4 (go) skiing in Canada
5 (go) sightseeing in New York City
6 (go) camping in Scotland



? Canada is the second largest country in the world, but it only has one-half of one percent of the world's population. What is Canada's population today?

VOCABULARY: Geographical features





1 Match the pictures with the words in the box.

waterfall glacier ~~plain~~ canyon

1 plain





2 Read and complete the first part of Aila Kamali's e-mail about her trip to the Canadian Rockies.

waterfall ~~scenery~~ route trip mountain range highlight

Dear Lisa,
I've been traveling for two days now, and I have seen some wonderful **(1)** scenery. I'm on a train called *The Rocky Express* with my family. We're crossing the Rockies, the spectacular **(2)** _____ in western Canada. We're following the **(3)** _____ of the Fraser River, and Dad has been able to go salmon fishing there. The **(4)** _____ of the **(5)** _____ for me so far has been the **(6)** _____ called Pyramid Falls. It was spectacular!

GRAMMAR: *will/won't*

Student grammar review page W96

3 Read and complete the second part of Aila's e-mail. Use the verbs in the box with the future form *will* or *won't*. Check the meaning of any words you don't know in a dictionary.

stay ~~see~~ arrive show not have rent

Tomorrow we **(1)** will see the Albreda Glacier. Then it's Jasper National Park, where we **(2)** _____ for one night. My parents have already made the hotel reservation. Then we **(3)** _____ a car to go to Calgary. Mom wanted to go to Toronto, but we **(4)** _____ time. It's too far. I **(5)** _____ home next week. Should I call you when I get home? I **(6)** _____ you my pictures. You won't believe how many bears we have seen.
See you soon.
Aila



SPEAKING

4 In pairs, imagine you are planning a trip from Vancouver to Toronto. Make dialogues. Use the words and phrases in the box below.

fly **go by train** **go by bus**
rent a car **take the ferry**
drive **slow** **expensive**
uncomfortable

A: How will we get there?
B: Should we go by train?
A: No, that's too slow. Let's fly.

5 Imagine you are going to India on vacation. Make some plans. Write down your answers to the following questions:

1 How will you travel to India?
2 How long will it take to get there?
3 What will you do there?
4 Will the weather be good?
5 What food will you eat?
6 What will you do when you get back?

6 In pairs, ask and answer the questions in Exercise 5.

A: How will you travel to India?
B: I'll go by plane.

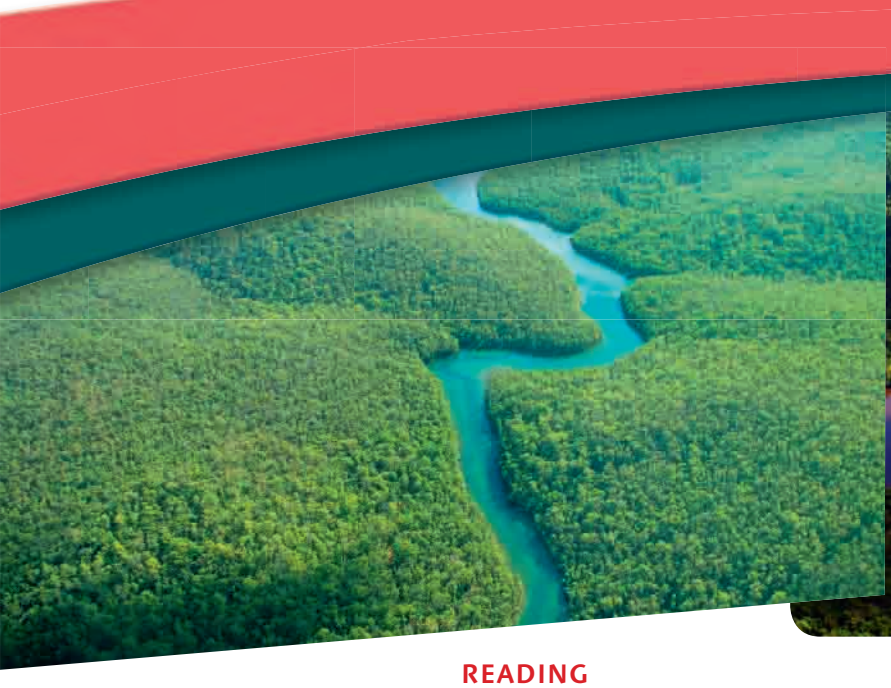


7 In pairs, decide what you will take on your trip. You can choose words from the box below and think of your own items, too. Use *Should we …*, *Let's …* and *How about …*

guidebook **towel** **swimsuit** **sunscreen**
money **passport** **skis** **insect repellent** **mosquito net** **warm jacket**
suitcase **bed** **sled** **raincoat** **map** **tent** **shorts**

A: Should we take a guidebook?
B: Yes, that sounds like a good idea.

> ***Travel teaches how to see.***
> **Proverb**





READING

1 What trip would you like to take? Work in pairs.

2 Read about this epic journey. Which rivers has Martin Strel swum?

A long way to swim



On April 7, 2007, the swimmer Martin Strel completed an incredible journey. He had just swum the entire length of the Amazon River. At 5,268 kilometers he had just completed the longest swim ever.

Martin set off from Peru on February 1 and arrived in Brazil sixty-six days later. This was an incredible achievement. The Amazon River in South America is a highly dangerous place. It is home to the bull shark, which is the most dangerous shark to humans. There are also many other dangerous wild creatures, like piranhas, stingrays, and anacondas hidden in the perilous waters. While Martin swam, he wore just a wetsuit and flippers. He said that his best protection from predators was a group of pink dolphins. These friendly creatures accompanied him every day, swimming alongside him. Martin had to face other hardships as well – he battled with the fierce sun, disease, and lack of sleep.



Martin kept up a strict routine during the Amazon swim. He stopped for a short break each day for lunch. He slept for a few hours each night on a boat. Every day he swam around eighty-four kilometers.

Before he completed this epic journey, Martin had already broken other records. He swam across the English Channel in 1997, and then became the first man to swim across the Mediterranean, from Tunisia to Italy, in the same year. Then, between 2000 and 2004, he swam the River Danube in Europe, the Mississippi in the U.S.A., the Paran in Argentina, and the Yangtze in China. He also broke the record for the longest continuous swim when he swam 504 kilometers non-stop down the Danube.



COMPREHENSION

3 Read the text again. Are the sentences true or false? Correct any sentences that are false.

1 In 2007, Martin Strel swam the Colorado River. False. He swam the Amazon River.
2 It took Martin Strel 66 days to swim the length of the river.
3 The Amazon River is in Africa.
4 There are dangerous sharks in the Amazon River.
5 On Martin's journey down the Amazon River, he stopped every day for lunch.
6 He became the first man to sail across the Mediterranean in 1997.

WRITING

4 Write a short description of the Amazon River. Use the text in Exercise 2 and your answers to Exercise 3 to help you.

Writing strategies

Writing a description

- What can you see in and around the Amazon River? Take notes.
- How can you describe these features? What adjectives can you use?
- Use your notes to write your description.

Talk together

5 What is the longest journey you have been on? Discuss with your partner.

VOCABULARY: Tours

6 These words are all related to tours. Which words describe geographical features? Check the meaning of any words you don't know in a dictionary.

jeep cliff dune rock formation carving awe-inspiring



LISTENING

7 12.2 Listen to a description of a tour. Which ways of traveling are mentioned?

COMPREHENSION

8 12.2 Listen again and choose the correct answers.

1 Uluru is in
a the south of the Australian desert. **b** the middle of the Australian desert. **c** the south of Austria.
2 The landscape around Uluru is
a very hilly. **b** completely flat. **c** full of water.
3 Camels are well adapted to the desert because
a they can walk on sand. **b** they can find water.
c they can go a long time without drinking.
4 The trip lasts
a two days. **b** three days. **c** two weeks.
5 When they walk around Uluru, visitors
a can see caves with carvings and paintings. **b** can see stores with paintings. **c** can stay at a luxurious hotel.

WRITING

9 Write an account of a memorable journey that you have been on.

Project

Write about a country.

Your task

- Choose a country that interests you. Do some research. Take notes on some of the following:
  - climate
  - landscape
  - wildlife
  - food and culture
  - what you can visit there
  - how you can travel around
- Write a short text about the country that you have chosen using your notes from above. Answer the questions.
- Prepare some questions to ask your classmates about the countries they have chosen.
- Read your text to the class. Answer questions about the country.

Questions

- Why would you like to visit this country?
- What would you like to see there?
- How would you travel around?



Review C





VOCABULARY

1 Which word doesn't refer to a science?

a botany **b** zoology **c** biologist **d** chemistry **e** physics

2 Which word doesn't refer to an animal?

a seal **b** fox **c** camel **d** reindeer **e** iceberg

3 Which word doesn't describe a feature of a penguin?

a floes **b** flippers **c** webbed feet **d** thick skin **e** feathers

4 Which word doesn't refer to a geographical feature?

a canyon **b** waterfall **c** hemisphere **d** glacier **e** desert

5 Which animal isn't a marine predator?

a polar bear **b** bull shark **c** piranha **d** stingray **e** anaconda

6 Which feature isn't found in a desert?

a dune **b** canyon **c** sand **d** plain **e** waterfall

7 Which object don't you take on a summer vacation to a foreign country?

a passport **b** skis **c** swimsuit **d** sunscreen **e** suitcase

8 Write the words for people who work in these areas.

1 geology **2** science **3** astronomy **4** botany **5** chemistry

9 Match words with similar meanings.

1 perilous	**a** investigate
2 non-stop	**b** dangerous
3 experiment	**c** prize
4 research	**d** explosive
5 award	**e** continuous
6 dynamite	**f** test



10 Exchange the incorrect words in the pairs of sentences. There is one incorrect word in each sentence.

1 a I'm interested in hearing about the equipment of the latest scientific research.
b A microscope is one of the most important pieces of findings in a laboratory.

2 a It's fun going down a snowy mountain slope on a tent.
b I don't like camping. I prefer sleeping in a hotel to a sled.

GRAMMAR

11 **Think of someone you know. What good/bad habits do they have? Tell each other in pairs, using the present progressive.**

My brother is always borrowing my camera without asking me!

12 **Work in pairs. Take turns miming an action, and guess what your partner is doing.**

A: Are you swimming?
B: No, I'm not. I'm paddling a kayak!

13 **Choose a famous person and imagine you are that person. Describe yourself so that your partner can try to guess who you are. Use any of these verbs.**

like know hate enjoy think hope go work speak want wear have

A: I like playing tennis. I'm training for the U.S. Open now. I hope to win. I speak Spanish and English, but right now I'm practicing English because I'm going to the U.S.A. soon.
B: You're Rafael Nadal.
A: Yes, I am.

14 **Work in pairs. Ask and answer the questions, using the phrases below and the second conditional.**



1 you lose your passport on vacation
2 your boat starts sinking in the ocean
3 there is a fire in your building
4 your tent blows away in a storm
5 someone takes your suitcase by mistake at a foreign airport
6 you see an accident on the way to school

A: What would you do if you lost your passport on vacation?
B: I'd go to the police, then ...

15 **Work in pairs. Make and respond to suggestions about something interesting to do together this weekend (for example, going somewhere, playing a sport, watching a show). See how long you can keep the conversation going! Use the pictures below to help you.**

A: How about visiting the museum this weekend?







MODULE 7

What is happening in this picture?



What type of climate is this? What other types of climates are there?

Climate and the Earth



What has happened here? Where did this occur?

Outcomes

- To read about climates, monsoon floods in India, the Earth's story, and volcanoes
- To listen to a radio show about weather and climate, and a news report about the Sahara Desert
- To use vocabulary related to climates, climate change, disasters, geographical features, and volcanoes
- To talk about the climate where you live, a drought in Australia, and climate change
- To use defining and non-defining relative clauses
- To write a summary of a radio show, a newspaper report about a drought in Australia, a town, causes of climate change, and an account of a volcanic eruption

Project

Write a report about climate change.



Unit 13

Weather and climate

Grammar
defining relative clauses

BEFORE YOU BEGIN

1 What is the climate like at the North and South Poles? What is it like on the Equator? Why do you think these places have different climates?

2 Read the words in the box. Where in the world can you see these types of climates? Check the meaning of any words you don't know in a dictionary.

polar tundra mountain temperate desert monsoon tropical

3 13.1 Which things affect climates in different parts of the world? Read and listen to the text to find out.

Reading strategies

Reading for main idea

- Read the text quickly.
- Don't worry about the words you don't know. You want to get a general idea of what the text is about.

One world, many climates

Climates vary a great deal in different parts of the world. They determine what an area is like, and they affect the people who inhabit the region as well as the plants and animals that live there. There are eight main types of climates:

1 **Polar** areas are very cold, with strong, dry winds. The temperature in the summer is never higher than 10°C, and ice and snow cover the ground.

2 Areas that have a **tundra** climate include Russia and northern America. They are usually cold, with very short summers. There is very little rain. This means that not many trees can grow.

3 In **mountain** areas, the height of the mountains determines the climate. The summits have a lot of snow, rain, and ice, so it is always colder there than in the lowlands.

4 Areas that have a **cool temperate** climate include Northern Europe and coastal North America. There is rain almost all year. The summers are usually warm, and the winters are not very cold.

5 Places that have a **warm temperate** climate, such as southern Europe and South America, have hot, dry summers. Winters are not usually very cold.

6 Areas where there is less than twenty-five centimeters of rain each year have **desert** climates. North Africa and central Australia are examples. During the day it is very hot, but at night it becomes very cold.

7 In India and Southeast Asia, there is a **monsoon** climate, so the weather changes suddenly. The months when heavy rain falls follow months of dry weather.

8 Places where there is a **tropical** climate are close to the Equator. It is always hot and wet in these areas, and rainforests grow there.

COMPREHENSION

4 13.1 **Read and listen to the article again. Are the sentences true or false? Correct any sentences that are false.**

1 There is only one climate in the world.
False. Climates vary in different parts of the world.
2 Plants are the most important influence on climate.
3 Without rain, plants can't grow.
4 Height above sea level is also an important factor that determines climate.
5 There are ten main types of climates.

5 **What type of climate does each of these sentences describe? Refer to the information in the article to help you decide.**

1 There is a sudden change from wet to dry weather. monsoon
2 The weather is often wet and it isn't usually very cold.
3 Summers are very short and there aren't many trees.
4 It's always hot and wet.
5 It's very hot during the day but very cold at night.

Reading strategies

Reading for detail

- Read the sentences and underline the keywords.
- Find the corresponding information in the text. Find out why the sentence is true or false.

GRAMMAR: Defining relative clauses

Student grammar review page W96

6 **Choose the correct word in the sentences.**

1 Climates affect the people (who) / *that* / *whose* inhabit the region.
2 Climates affect the plants and animals *where* / *who* / *that* live there.
3 Areas *who* / *whose* / *that* have a tundra climate include Russia and North America.
4 Areas *that* / *when* / *where* there is less than twenty-five centimeters of rain each year have desert climates.
5 The months *who* / *when* / *whose* heavy rain falls follow months of dry weather.

7 **Complete the sentences with *who*, *whose*, *when*, *where*, or *that*. More than one answer might be possible.**

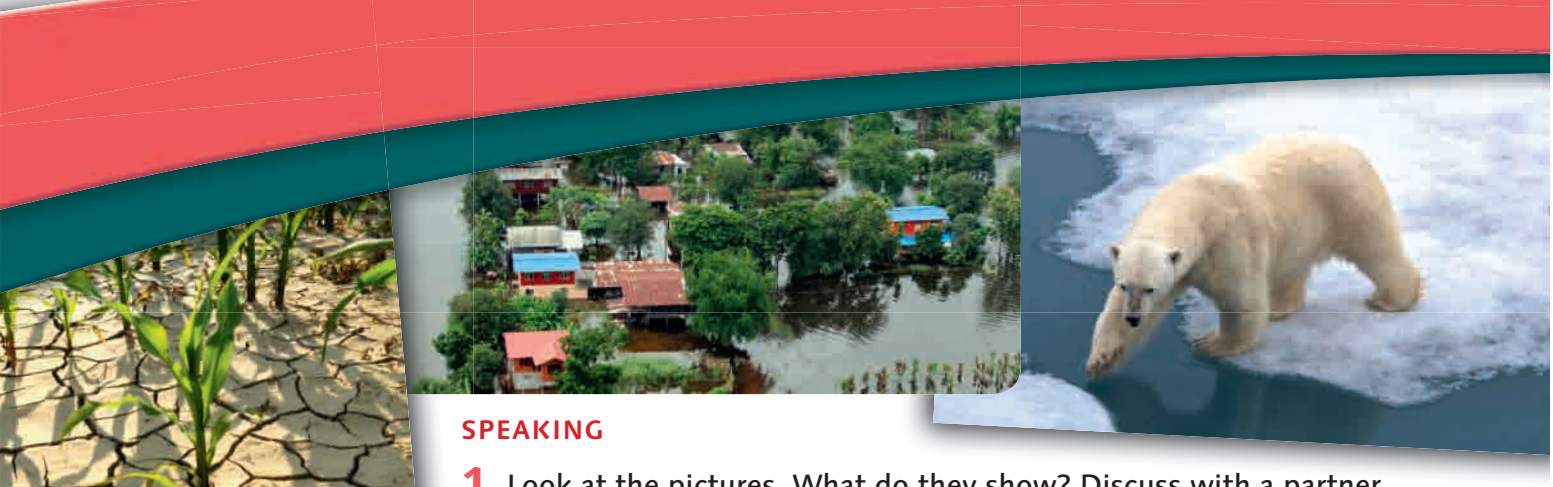
1 An iceberg is a huge piece of ice ___that___ floats in the ocean.
2 The Equator is an imaginary line _____ goes around the Earth.
3 A judge is someone _____ makes important decisions.
4 He's the man _____ daughter I met in Argentina.
5 An art gallery is a place _____ paintings are hung.
6 Summer is the time of year _____ we go on vacation.

SPEAKING

8 **Work in pairs, Student A and Student B. Give your partner definitions of the words in your list using defining relative clauses. Your partner guesses the word.**

A: This is a country that is located in North America.
B: Is it Canada?
A: Yes, it is!

Student A	Student B
Canada	South Korea
supermarket	pharmacy
stapler	hole punch
cabin crew	builder
1990	2005



SPEAKING

1 Look at the pictures. What do they show? Discuss with a partner.

VOCABULARY: Climate change

2 Which of these words and phrases are related to climate change? Check the meaning of any words you don't know in a dictionary.

global warming | greenhouse gases | drought | flood
rise in temperature | rise in sea levels | melting ice
damage to crops | atmosphere

LISTENING

3 13.2 Listen to a radio show about weather and climate. What is the difference between the two terms?

COMPREHENSION

4 13.2 Listen again and answer the questions.

1 Why do polar bears have thick fur? to protect them from the cold
2 What is described as a "giant blanket of air"?
3 What happens to crops when there is a drought?
4 Is there just one climate in the world?
5 What causes global warming?
6 What do you think will happen to the world's climates in the future?

WRITING

5 13.2 Listen to the radio show again. Then write a summary of the program using the words in the box in Exercise 2.

SPEAKING

6 What's the climate like where you live? How does it affect life in your country? Think about these things:

- the food you eat
- the clothes you wear
- the building that you live in

Write down your ideas and discuss them with your partner.

In my country, we have a desert climate. In the summer ...

Listening strategies

Pre-listening

- Read the question. What do you think you will hear?
- What do you think the answer to the question will be? Discuss in pairs.
- Listen for the first time to check your predictions.

Writing strategies

Taking notes and writing a summary

- Listen again and take notes on the most important information. Don't write in complete sentences. Write in English!
- Read your notes and organize them into paragraphs. Write a plan for your work.
- Check your work after you have finished. Check your spelling and grammar.

VOCABULARY: Climates

7 Write the descriptions under the correct types of climates.

~~very cold~~ ice and snow very short summers
very little rain rain most of the year not very cold winters
hot in the day, cold at night very heavy rain hot and wet

Polar	Tropical	Desert	Monsoon	Cool temperate	Tundra
very cold					





8 Complete this report about desert climates with the words in the box.

cool winters heat ~~surface~~ survive
drinking dates cold night nomads

Desert climates

Around 20% of the **(1)** surface of the Earth is desert. Climates in the desert are either hot or **(2)** _____. Hot desert climates include the Sahara Desert. Temperatures are very hot, but it can be cold at **(3)** _____. Cold desert climates, such as the Gobi Desert in Asia, have very cold **(4)** _____.

Many plants and animals **(5)** _____ in the desert by adapting to the extreme temperatures. The Dorcas gazelle lives in North Africa and can survive for a long time without **(6)** _____.

Most of the people who live in the Sahara Desert are **(7)** _____. They eat food such as rice and **(8)** _____ that can travel around with them. People also dress in **(9)** _____ materials and cover their heads to protect themselves from the **(10)** _____ of the sun.



? Global warming is due to greenhouse gases. How is the Earth like a greenhouse?



SPEAKING

1 Look at the pictures. What has happened? What do you think caused this disaster? Discuss with a partner.

VOCABULARY: Disasters

2 Which word in the box means:

downpour **flood** **flood water** **landslide** **despair**
devastate **strand** **suffer** **trigger** **torrential**

1 to destroy or seriously damage something?
2 to leave something or someone where they can't move away?
3 to fill or cover with water?
4 to cause something to happen?

READING

3 Read this newspaper report about devastating floods in India. How has the country been affected?

Monsoon floods in India bring devastation

Floods in India have devastated large areas of the country this year. The torrential downpours of the annual monsoon rains caused the flooding that has killed hundreds of people and stranded thousands of others. The southern regions of Bihar and Tamil Nadu are suffering the most right now.

The flood waters have washed away huge areas of crops, submerged villages, and destroyed roads and rail links. The airport at Chennai was closed for a few days because the runways were under water, and bridges in the area have been washed away. The heavy rains also triggered landslides. "We have lost everything," one woman said. "Our houses, our family, our cattle, and our crops." For the people whose homes have disappeared, there is now the very real danger of disease.

The authorities who are dealing with the rescue operation are using helicopters and boats to reach thousands of people who are trying to escape the rising waters.

The monsoon season in India usually runs from June through September. The weather forecast for the next few days is mixed. In some areas, the rainfall will decrease. This will help the rescue effort. In other areas there will probably be more of the heavy downpours that have already brought such destruction.





COMPREHENSION

4 Read the text again and answer the questions.

1 What caused the flooding? *The torrential downpours of the annual monsoon rains caused the flooding.*
2 Which area of the country is having the worst flooding right now?
3 What was closed for a few days, and why?
4 What caused the landslides?
5 What is the danger that the flood victims are now facing?
6 Who are the helicopters and boats rescuing?
7 When does the monsoon season occur in India?
8 Will there be heavy rain everywhere in the next few days?

Talk together

5 What do you think of when you hear or see these words? Discuss your ideas with a partner.

sun rain wind cloud ice floods drought

When I hear or see the word "ice," I think of white snow and polar bears.

SPEAKING

6 Imagine you are living in Australia. There is a very bad drought, and no rain has fallen for many weeks. The earth is turning to dust, and crops are dying. What can you do? Discuss your ideas with a partner and write notes.

7 Read these sentences about the drought in Australia. With your partner, think of more sentences to add to the list.

- It's the worst drought in one hundred years. There isn't much water available.
- Crops can't grow. Farmers have lost a lot of money.
- There was some rain last week. It hasn't had a big effect.
- Two million people live in the area. Luckily, they have enough to drink.
- Forests are becoming very dry.

WRITING

8 Refer to your ideas in Exercises 6 and 7 to write a newspaper report about the drought in Australia. Use the newspaper report on page 100 as a model and include defining relative clauses in your work. Then share your work with the class.

> ***I think we are bound to, and by, nature. We may want to deny this connection and try to believe we control the external world, but every time there's a snowstorm or drought, we know our fate is tied to the world around us.***
> **Alice Hoffman, author (1952–)**

Writing strategies

Writing a newspaper report

- Look at the newspaper report in Exercise 3. Which tenses are used?
- Remember just to include facts.
- Organize your work into paragraphs.



Unit 14

The Earth

Grammar

non-defining relative clauses

BEFORE YOU BEGIN

1 What do the pictures show? Do you know what subject they all have in common? Discuss with a partner.

2 Read the words in the box. Which are related to geographical features of the Earth? Check the meaning of any words you don't know in a dictionary.

rock crust geology dinosaur fossil ice age
asteroid glaciers bones volcano

3 14.1 Read and listen to this magazine article. Who or what can tell us about climate changes in the past?

The Earth's story

The Earth's climate is changing, but this is not new. Over millions of years, the Earth has experienced many dramatic climate changes. For example, there have been several ice ages, when glaciers covered much of the Earth's surface.

In the past, the Earth's climate was affected by sudden disasters, such as huge volcanic eruptions, or collisions with asteroids. These events filled the atmosphere with smoke and dust, which blocked out the Sun, causing the climate to become cold and dark. Many plants and animals probably died on these occasions, including dinosaurs.

To see how the Earth's climate has changed, we need to look carefully at rocks and fossils, which give us a lot of information. Geologists, who study the Earth's rocks and how they formed, can "read" layers of rock. These layers provide a record of what happened in the past. In warm periods of the Earth's history, there were many plants and animals that eventually died and were fossilized in layers of rock.

Archeologists have also discovered evidence that shows how the Earth's climate has changed over millions of years. For example, they have found fossils of small dinosaurs and trees in parts of Antarctica, which prove that this area was much warmer 110 million years ago than it is today. And in the southern Sahara, where plants and animals face a harsh desert environment, the surprising discovery of bones from 10,000 years ago is archeological evidence that this part of the desert was once a fertile valley.

Climate changes in the past have had natural causes. However, humans, whose activities might be causing global warming today, need to take action. Otherwise there will probably be more extreme climate changes in the future. Nobody knows for sure what to expect. But the Earth, which has already survived some dramatic changes in its long history, may have to face more challenges in the future!



COMPREHENSION

4 14.1 **Read and listen to the text again and answer these questions.**

1 When did glaciers cover much of the Earth's surface?
Glaciers covered much of the Earth's surface during several ice ages.
2 Which disasters caused the climate to become cold and dark?
3 Which animals probably died when the climate changed?
4 What can geologists discover from the number of fossils in rocks?
5 What have archeologists found in Antarctica and what does this prove?
6 What did the discovery of bones in the southern Sahara prove?
7 What will probably cause more extreme climate changes in the future?
8 What do you think the climate will be like in the future?

GRAMMAR: Non-defining relative clauses

Student grammar review pages W96 and W97

5 **Choose the correct answers in the sentences based on the text on page 102.**

1 Sudden disasters filled the atmosphere with smoke and dust, *who* / *which* / *whose* blocked out the Sun, causing the climate to become cold and dark.
2 There have been several ice ages, *which* / *when* / *who* glaciers covered much of the Earth's surface.
3 Geologists, *which* / *whose* / *who* study the Earth's formation and its rocks, find out what happened in the past by looking at layers of rock.
4 In the southern Sahara, *who* / *which* / *where* plants and animals face a harsh desert environment, archeologists have found evidence that this was once a fertile valley.
5 Humans, *who* / *whose* / *which* activities cause global warming, need to take action.

SPEAKING

6 **Work in pairs. Make a sentence about one of the topics below. Your partner then adds more information to the sentence using a non-defining relative clause.**

the Sahara Desert **dinosaurs** **the Taj Mahal** **the Equator** **the Amazon River** **Oman**

A: The Sahara Desert is in Africa.
B: The Sahara Desert, which is very hot, is in Africa.

WRITING

7 **Read the following sentences from a London guidebook. Write similar sentences about a town you know well. Include a non-defining relative clause in each. Then share your work with the class.**

Sir Christopher Wren, who designed one of the Royal Palaces, is also well-known for rebuilding London after the Great Fire in 1666.

The Post Office Tower, which was built in 1964, is 189 meters high.

Charles Dickens, whose house in Bloomsbury you can visit, was a famous writer.



VOCABULARY: Climate change

1 Complete these sentences about climate changes in the past using the words in the box.

~~blocked~~ causes provide dramatic

1 Volcanic eruptions blocked out the Sun.
2 Rocks can _____ a record of what happened in the past.
3 Over millions of years, the Earth has experienced many _____ climate changes.
4 Climate changes in the past have had natural _____.

VOCABULARY: Adjectives

2 Complete the sentences about changes to the Earth using the words in the box.

warm fertile dark ~~frozen~~ small

1 In past ice ages, much of the Earth's water was frozen.
2 Volcanic eruptions made the climate cold and _____.
3 In _____ periods, there were many plants and animals.
4 _____ dinosaurs once lived in Antarctica.
5 The southern Sahara was once a _____ valley.

Listening strategies

Listening for main idea

- Listen to get a general idea of what the report is about. Don't worry about understanding every word at this stage.

LISTENING

3 14.2 Listen to this news report. What have the archeologists found and where?



> *All good things must come to an end.*
> **Proverb**

GRAMMAR: Non-defining relative clauses

Student grammar review pages W96 and W97

4 Complete the news report using the phrases in the box.

~~who were searching for fossils in the Sahara Desert~~
who made the discovery with a team of researchers
which is treeless today
where they hunted fish and animals next to a lake
when the valley dried up

A green Sahara

An international team of archeologists, **(1)** who were searching for fossils in the Sahara Desert, have made a dramatic discovery.

In the Gobero area of Niger, **(2)** _____, the archeologists have found evidence of a green, fertile valley. Scientists who have examined the evidence now think that the climate in the area was good until almost 4,500 years ago, **(3)** _____.

What did the archeologists discover? Well, they found evidence that people lived at the site between 4,500 and 10,000 years ago, **(4)** _____. Paul Sereno, **(5)** _____, described how he saw bones belonging to animals that didn't live in the desert.

It is amazing that these people once lived in an area that is now largely dust.



Talk together

5 Why do you think the Gobero area of Niger dried up about 4,500 years ago? Discuss the possible reasons for this change in climate with your partner. Then share your ideas with the class.

6 What causes climate change? Do you think climate change is important? Share your ideas with the class.

WRITING

7 Write a paragraph about what causes climate change and if you think it is important to the future of the Earth. Use your ideas and those of the class from Exercise 6.

Writing strategies

Post-writing

- After you have written your first draft, read your work carefully.
- Pay special attention to your spelling and use of grammar.
- If you like, you can switch pieces of work with a classmate. Give each other useful feedback.





VOCABULARY: Volcanoes

1 These words are all related to volcanoes. Which refer to kinds of rocks? Check the meaning of any words you don't know in a dictionary.

crack quartz magma pressure pumice lava granite
basalt molten bubble obsidian wear down erupt

Reading strategies

Reading for main idea

- Look at the title and the question to predict what you will read about.
- When you read for the first time, don't worry about not understanding every word. In your first reading of the text, you want to get a general idea of what the text is about.

READING

2 Read the article about volcanoes. What role did volcanoes possibly have in the formation of land on the Earth?

Volcanoes

a _____

Volcanoes occur where the plates in the Earth's crust have cracks or weak spots in them. The very hot melted rocks, which lie deep beneath the Earth's surface, are under a lot of pressure, and they bubble up and try to squeeze out of any holes. The hot melted rocks are called magma. When a volcano erupts, the magma forces its way up through the surface and spills out as lava. Pieces of rock and ash are often thrown out with the lava.

b _____

About four and a half billion years ago, which was just after our planet was formed, there were probably many more volcanoes than there are now, and they erupted more often. Volcanoes may have contributed toward the way the Earth looks now. When volcanoes erupted and rocks appeared, these rocks covered previous ones from earlier eruptions, and the rocks then formed the islands that we see today.

c _____

Volcanoes can be very dangerous to people when they are in the process of erupting. The hot lava can destroy towns and kill people. The ash can crush houses and plants. However, after the eruption, volcanoes bring many useful things. The ash and lava make the ground very good for farming. The magma that shoots out of the volcanoes cools into different kinds of solid rocks like lava, quartz, pumice, granite, and basalt. When these rocks wear down and become earth, they are very good for growing plants. A long time ago, farmers used the obsidian (volcanic glass) for their tools. Even today, obsidian is still used to make knives for medical operations.

COMPREHENSION

3 Match the headings to the paragraphs.

1 Volcanoes and their rocks
2 How do volcanoes form?
3 Volcanoes before life began

4 Read the article again and answer the questions.

1 Where do volcanoes occur? Volcanoes occur where the plates in the Earth's crust have cracks or weak spots in them.
2 What are the hot melted rocks called?
3 How were islands formed billions of years ago?
4 Why is the ash dangerous?
5 How are volcanoes useful after they have erupted?
6 What is obsidian used for today?

? The deepest mines on Earth are only about four kilometers deep. How far is the center of the Earth from the surface?

Reading strategies

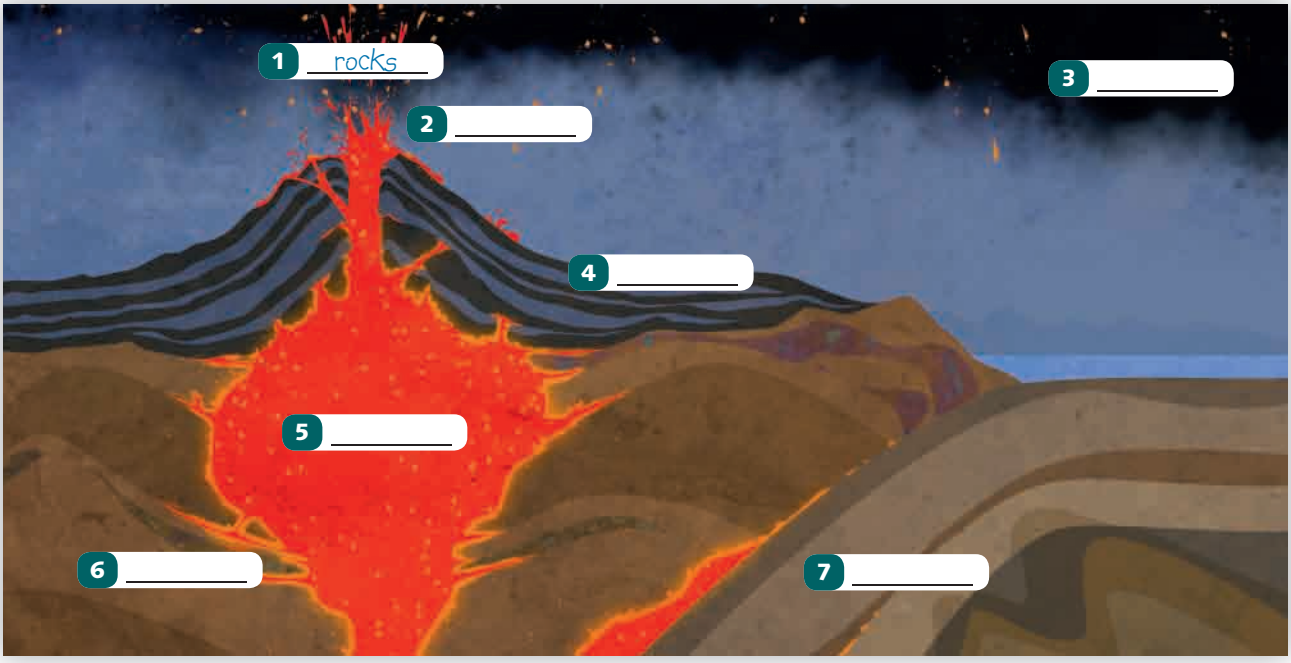
Matching headings to paragraphs

- After the first reading of the text, you will get a general idea of the content. Now, read the headings. What content would you expect for each heading? Underline the keywords.
- Now, read the text again more carefully. After you read each paragraph, consider which heading is the most appropriate. Check that all three are correct when you finish.
- Consider why your headings are correct. What information in the paragraph helped you choose the correct heading?

VOCABULARY: The structure of a volcano

5 Complete the labels on the diagram of the volcano with the words from the box.

crust lava cracks plates ~~rocks~~ ash magma



WRITING

6 Imagine that you have just witnessed the eruption of a volcano. Write an account of what happened and what you saw.

Project

Write a report about climate change.

Your task

If climate change causes the world to become warmer in the future, the effects will be different around the world. Choose a country. Then research the effects of climate change in this country and write a short report about it.

- Read the descriptions of world climates on page 96. Which climate does your chosen country have? Compare your ideas with a partner.
- ☒ Research climate change in your chosen country. Answer the questions.
- ☒ Write your report. Use your research and refer to the report below as a model. Then share your work with the class.



Questions

- Is climate change already affecting the country? If so, how?
- Are the people who live in your chosen country worried about climate change? If so, are they doing anything about it?
- If the world becomes warmer in the future, how will it affect this country and its climate?

Climate change in Canada

Northern Canada, where the climate is polar, is already seeing the effects of climate change.

As global warming is worsening and more ice in the Arctic is melting, polar bears have fewer places to live. It is becoming harder for them to find food on the ice, which means that the number of hungry polar bears is increasing.

People who live in **Churchill**, a town at Hudson Bay (which is called the "polar bear capital of the world") are very worried. They have noticed polar bears outside their homes more often recently. The "problem" bears are looking for food, but they also attack people in the town.

In conclusion, sea ice in Hudson Bay is melting faster now than ever before. If this continues, the people in **Churchill** will have many more visits from polar bears. This will make it hard to live in the town in the future.

MODULE 8



Who is this artist and inventor? What did he paint? What did he invent?



What is this place called? Would you like to visit it? Why?

Design past and present

Who is this inventor? What did he invent?

Outcomes

- To read about the Alhambra, a vacation in Venice, birds in Iran, Leonardo da Vinci, and famous inventors
- To listen to a description of Burj Khalifa and a description of da Vinci's flying machine
- To use vocabulary related to architectural features, materials, wildlife, and art and artists
- To talk about buildings in your country, an object, a good place to visit, a painting, geniuses, artists and inventors, and inventions
- To use the simple present passive and the simple past passive
- To write facts and opinions about your country, a description of an object, a postcard about a wildlife sanctuary, artists and inventors, and a description of an invention

Project

Write a description of a building.





Unit 15

Tourist attractions

Grammar
the simple present passive

BEFORE YOU BEGIN

1 Can you think of an example of Islamic architecture in Iran? Tell your partner what you like about it.

2 Read the words in the box. Which of these words do you think are related to architectural features? Check the meaning of any words you don't know in a dictionary.

courtyard overlook spectacular marble arcade
fountain arch dome calligraphy plasterwork

3 15.1 Read and listen to the article. How objective is the speaker? Explain.

The Alhambra

The Alhambra in Granada is part of the impressive heritage of the long-lasting Islamic empire in Spain. Its name in Arabic (*Qasr al-Hamra*) means "The Red Castle." This refers to the red coloring of the bricks from the original palace. It has become an important tourist attraction in Spain because of its rich Islamic history. It has also had a lot of influence on worldwide art and architecture.

The palace, which is situated on a hill overlooking Granada, has beautiful views. The first king arrived in the thirteenth century and constructed a royal palace. After that, other kings added more parts to the palace. This is why it has so many different styles.

Many tourists come to visit the Alhambra today to see the Islamic architecture. This includes the spectacular Court of the Lions, which is probably the most famous part of the building. It is a square open-air courtyard with an impressive marble fountain in the center. The fountain's name comes from the twelve lions that support the fountain. The lion was a symbol of power in Islamic history and art. From this courtyard, you can walk under arches into the Hall of the Two Sisters, whose wooden doors are over 800 years old. This room attracts tourists because of the beautiful dome, shaped like a flower, and the detailed plasterwork on the walls. Islamic Spain was famous for its artwork and calligraphy, and there are many well-preserved examples in this room.

There is a great difference between the plain outside walls and the paintings and sculpture that cover the inside walls. It seems to be paradise on earth with the column arcades, fountains, and pools that are preserved there.



COMPREHENSION

4 15.1 **Read and listen to the text again and answer the questions.**

1 What is an alternative title to the text?
2 What are the most important elements of Islamic style of the Alhambra?
3 The lion was a symbol of power in Islamic history and art. Name other symbols of Islam. What do they represent?
4 Would you like to visit the Alhambra? Why / Why not?

SPEAKING

5 **Are there any buildings in your country with similar architectural features? Discuss with a partner.**

GRAMMAR: The simple present passive

Student grammar review page W97

6 **Write sentences in the simple present passive. Use *by* only if necessary.**

1 The Alhambra / locate / in Granada, Spain.
The Alhambra is located in Granada, Spain.
2 The palace / situate / on a hill overlooking beautiful views.
3 It / visit / tourists from all over the world.
4 Islamic style / represent / through arches, calligraphy, and a dome.
5 Its walls / design / with detailed plasterwork.



SPEAKING

7 **In pairs, ask and answer the questions using the simple present passive.**

Student A

1 Where / rice / grow?
a Denmark **b** France **c** China
2 What / make / at a bakery?
a cars **b** bread **c** toys
3 Where / the *Mona Lisa* / display?
a Rome **b** Madrid **c** Paris

Student B

1 Where / paella / eat?
a Spain **b** China **c** India
2 Who / bury / in the pyramids?
a builders **b** pharaohs
c kings of England
3 Where / River Nile / find?
a Japan **b** Australia **c** Egypt

A: Where is rice grown? B: Rice is grown in China.

Answers
Student A: 1c, 2b, 3c
Student B: 1a, 2b, 3c

8 **Write three general knowledge questions. Then ask your partner your questions.**

WRITING

9 **Write three paragraphs about your country or region giving facts about it and your own opinion. Use the simple present passive.**





READING

1 Complete the postcard with the correct form of the verbs in parentheses.

Dear Soraya,

I **(1)** *am having (to have) a really awesome vacation here in the Belize Cayes. My parents and I* **(2)** _____ *(to stay) at the Paradise Cove Resort right now! Because the resort* **(3)** _____ *(to build) on an island, all visitors* **(4)** _____ *(to take) there by boat from the mainland. We have a beautiful suite, with stunning views over the ocean. Our rooms* **(5)** _____ *(to decorate) in marble and gold, and they* **(6)** _____ *(to equip) with everything we need. There's also a lot to do – I* **(7)** _____ *(to go) swimming four times, and I have played tennis too. In the evening, we* **(8)** _____ *even* _____ *(to entertain) by the fish in the aquariums of the hotel restaurant. This resort is really a perfect place to stay. We* **(9)** _____ *(to not want) to leave!*

See you soon.

Anita





VOCABULARY: Materials

2 The words in the box are all related to materials. What is each material used for? Check the meaning of any words you don't know in a dictionary.

steel **marble** **silk** **wood** **glass** **plastic** **metal**
diamond **bronze** **brass** **gold** **silver**

GRAMMAR: The simple present passive

Student grammar review page W97

3 Make sentences using terms from the three columns.

1 The scarf		from steel.
2 The statue	is designed	from marble.
3 The tower	is made	of silk.
4 The building	is sculpted	by an architect.
5 The ring	is built	with diamonds.
6 The furniture	is decorated	of wood.
7 The vase		of glass.

The scarf is made of silk.

WRITING

4 Choose one of the objects in the pictures and write about it using the simple present passive. You can use these verbs and words relating to materials.

made (of) use (for) construct (from) produce design
plastic glass wood metal steel



This object is made of plastic. It is used for writing.

Writing strategies

Writing a description

- Use the simple present passive.
- Describe what it looks like and what it is made from.

SPEAKING

5 Work in pairs. Take turns talking about your chosen object. Your partner guesses what it is.

6 Think of another object. Use the simple present passive to ask your partner questions about their object and answer questions about yours. Can you guess your partner's object?

A: Is it made of metal?
B: No, it isn't.

LISTENING

7 Look at the picture on the right. What do you think the design was inspired by? Discuss with a partner.

8 15.2 Listen to the description of this new building. How did nature inspire the design?



A picture is worth a thousand words.
Proverb

COMPREHENSION

9 15.2 Listen again and choose the correct answers.

1 Burj Khalifa is a skyscraper
a in New York City. **b** in Dubai.
c in Egypt.

2 It is
a 838 meters tall. **b** 888 meters tall.
c 828 meters tall.

3 Adrian Smith was
a the chief architect. **b** the chief engineer.
c the hotel manager.

4 The design is inspired by
a a tree. **b** a flower. **c** a rose.

5 The spire is built from
a gold. **b** steel. **c** brass.

6 The cymbals are made from
a bronze and brass. **b** gold and brass.
c bronze, brass and gold.



VOCABULARY: Wildlife

1 These words are all related to a wildlife sanctuary. Which words describe habitats? Which words refer to birds? Check the meaning of any words you don't know in a dictionary.

flamingo plover plain Siberian crane
swan wetland lapwing pelican

READING

2 Read the text about birds in Iran. Why is Iran such a good place to see a variety of birds?

Birds in Iran

Iran is a large country with an enormous range of different habitats – mountains, forests, deserts, plains, and wetlands. A wide variety of species are attracted by this varied landscape, and nearly 500 different species of birds can be seen in Iran in total. Many, including some very rare species like the Siberian crane and the white-headed duck, are only found there in the spring and summer, passing through the country on their migratory routes between central Asia and Europe. Iran's wetlands provide an important place for them to rest and drink. Others live in Iran all year round.

One important nature reserve in Iran is Miankaleh Wildlife Sanctuary in the northern part of the country. This wetland site is famed for its flamingos, pelicans, plovers, geese, swans, and ducks. It is located on the southeastern coast of the Caspian Sea, and most of it is a long and narrow peninsula.

Mountains like those in Nayband Wildlife Sanctuary in South Khorasan Province are also considered to be wonderful places for bird watching. Exciting species of birds like the golden eagle and the bearded vulture can be seen soaring in the sky.

Recently, there have been concerns that many migratory birds, which are often rare and beautiful, like the sociable lapwing, are under threat from illegal hunting. Hundreds of thousands of birds are killed every year. It is clear that more protection is needed to save them from extinction.

COMPREHENSION

3 Read the article again. Are the sentences true or false? Correct any sentences that are false.

1 Very few birds can be seen in Iran. False. Nearly 500 different species of birds can be seen in Iran.
2 Iran has several different habitats.
3 Only a few species of birds are found in Iran.
4 Miankaleh Wildlife Sanctuary is an important nature reserve in Iran.
5 The sanctuary is famous for its fish.
6 Miankaleh Wildlife Sanctuary is located in central Iran.
7 Nayband Wildlife Sanctuary is also a good place to observe birds.

Reading strategies

Reading for detail

- Read the sentences and underline the keywords.
- Find the corresponding information in the text. Find out why the sentence is true or false.

GRAMMAR: The simple present passive

Student grammar review page W97

4 Match to make sentences about Iran.

1 Nearly 500 different species of birds	is located	for its flamingos and other wetland birds.
2 Miankaleh Wildlife Sanctuary	are considered	in Iran in total.
3 The nature reserve	are killed	to be good places for bird watching.
4 Mountains	is famed	every year.
5 Hundreds of thousands of birds	can be seen	to save rare birds.
6 More protection	is needed	in northern Iran.

1 Nearly 500 different species of birds can be seen in Iran in total.

Talk together

5 Which country do you think is a good place to visit? Would you like to go on vacation there? Give your partner five reasons to visit the country you chose. Use non-defining relative clauses if you can.

6 Listen to your partner's choice of country and their reasons. Are your reasons the same?

WRITING

7 Imagine that you have visited Miankaleh Wildlife Sanctuary during the migratory season. Write a postcard to a friend, and describe what you have seen there. Use the postcard on page 112 as a model, and refer to the article in Exercise 2 on page 114 to help you. Then share your work with the class.

Writing strategies

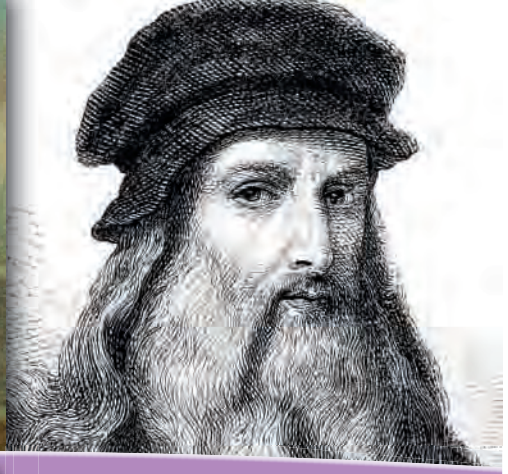
Writing a postcard

- Make a list of the information you want to mention in your postcard.
- Remember that a postcard is short – only about 50 words are needed.

Which is the only continent where pelicans are not found?







Unit 16

Inventors in the past

Grammar
the simple past passive

BEFORE YOU BEGIN

1 Look at the pictures. Do you know who the artist is? What do you know about him?

2 Read the words. They are all related to art. Which words refer to people? Check the meaning of any words you don't know in a dictionary.

sketch drawing sculpture painting sculptor artist painter

3 16.1 Read and listen to the text about Leonardo da Vinci. Check your answers to Exercise 1.

The power of imagination

Leonardo da Vinci was born in Italy in 1452. He is regarded as one of the world's greatest artists. He was also a talented musician, sculptor, scientist, and inventor. His notebooks were filled with sketches and drawings of many things: the human body, birds in flight, and designs for the different machines that he invented.

When he was fifteen years old, Leonardo began to work for an artist. He learned how to paint, sculpt, cast metal, and design jewelry. By the age of twenty, Leonardo was a great painter. He was also highly respected for his sculptures.

Leonardo began work on many large paintings, but very few of them were finished. He did, however, discover how to use light and dark to create effects. His painting known as the *Mona Lisa* is a masterpiece of light and dark. It is probably the most famous portrait in the world today.

Leonardo was greatly interested in science and nature. He wanted to know about everything he saw. He examined plants and trees to discover how they grow. He also studied rocks to see how they were formed, and he carried out tests to show what things can affect the wind and the oceans. His studies also included astronomy and architecture. In his lifetime he designed several large buildings.

Leonardo was also very interested in machines. He sketched many inventions. He studied how birds use their wings to fly, and he invented some "flying machines": a type of parachute, an early helicopter, and an airplane. Some of his inventions were built and tested, but most of his designs were hidden in his notebooks for centuries.

During his lifetime, Leonardo was admired and greatly respected. But when he died in 1519, he wasn't really understood. He was a true genius, far ahead of his time.

COMPREHENSION

4 16.1 **Read and listen to the text again. Are the sentences true or false? Correct any sentences that are false.**

1 Leonardo da Vinci was Spanish. False. Leonardo da Vinci was Italian.
2 He was a sculptor, an inventor, and a doctor.
3 He didn't make many sketches.
4 He was a great painter and inventor.
5 All of his large paintings were finished.
6 His most famous painting is the *Mona Lisa*.
7 He had no interest in science or nature.
8 He produced sketches of early computers.

Reading strategies

Reading for detail

- Read the sentences and underline the keywords.
- Find the corresponding information in the text. Find out why the sentence is true or false.

GRAMMAR: The simple past passive

Student grammar review page W97

5 **Complete the sentences based on the text on page 116 with the simple past passive form of the verbs in parentheses.**

1 Leonardo da Vinci was born (born) in 1452.
2 His notebooks _____ (fill) with drawings of many things.
3 Very few of Leonardo's large paintings _____ (finish).
4 He also studied rocks to see how they _____ (form).
5 Some of his inventions _____ (build) in his lifetime.
6 During his lifetime, Leonardo _____ (admire) and _____ (respect).
7 When he died in 1519, Leonardo _____ (not understand).

6 **Rewrite the sentences in the simple past passive. Start each sentence with the words in bold. Use *by* only if necessary.**

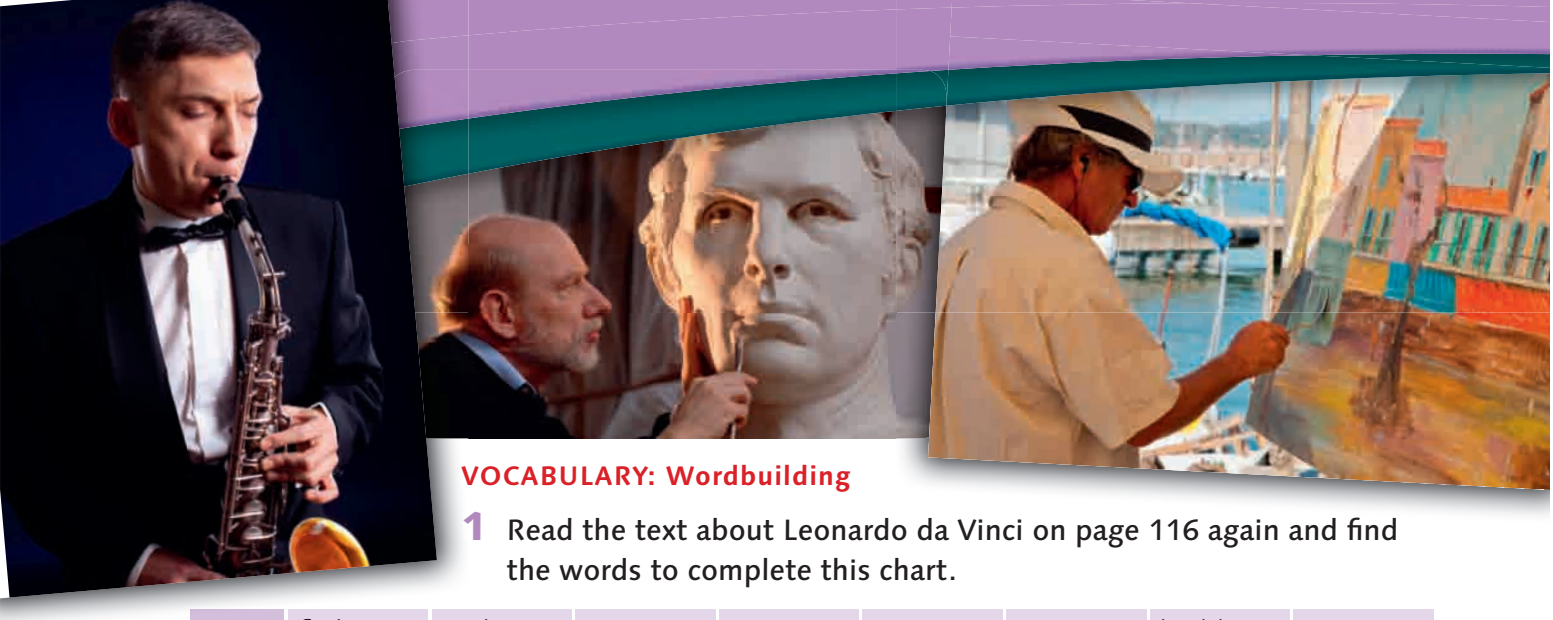
1 Vincent van Gogh created **a famous picture**.
A famous picture was created by Vincent van Gogh.
2 Some sunflowers inspired **van Gogh**.
3 He painted **the picture** in the south of France.
4 He finished **the painting** in 1888.
5 He used **lots of bright colors** in his painting.
6 He named **it** *Sunflowers*.
7 An art gallery bought **the painting**.



SPEAKING

7 **In pairs, ask and answer questions in the simple past passive about van Gogh's painting of *Sunflowers*. Use *by* when necessary.**

1 Who / *Sunflowers* / paint / ?
A: Who was *Sunflowers* painted by?
B: It was painted by Vincent van Gogh.
2 Where / *Sunflowers* / paint / ?
3 When / the painting / finish / ?
4 What colors / use / in the painting / ?
5 What / the painting / call / ?
6 Who / the painting / buy / ?



VOCABULARY: Wordbuilding

1 Read the text about Leonardo da Vinci on page 116 again and find the words to complete this chart.

Noun	flight	sculpture			invention		building	
Verb	fly		design	study		test		sketch

> ***Learning never exhausts the mind.***
> **Leonardo da Vinci, painter and inventor (1452–1519)**

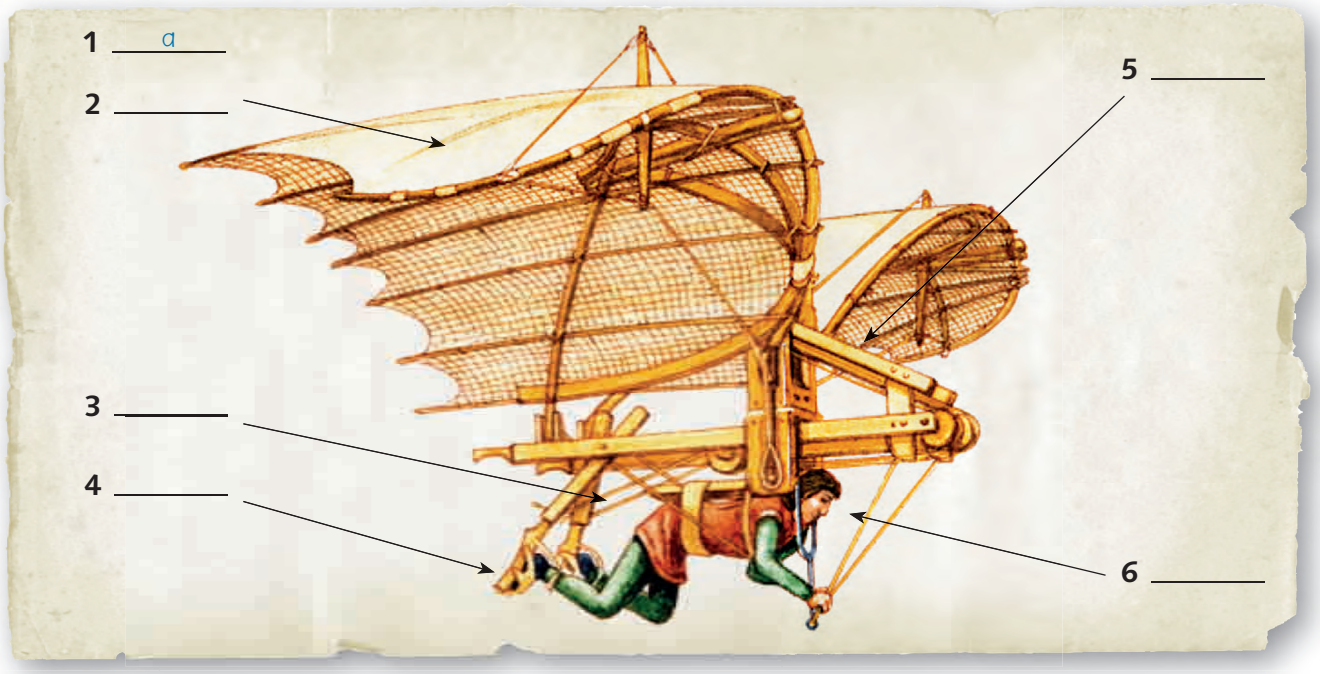
VOCABULARY: Art and artists

2 Match the beginning and the end of each sentence.

1 a musician	**a** sculpts or casts metal
2 a sculptor	**b** makes drawings and sketches
3 an engineer	**c** creates music
4 an artist	**d** invents and builds machines
5 a painter	**e** thinks of new inventions
6 a scientist	**f** expresses ideas in paintings
7 an inventor	**g** carries out experiments

LISTENING

3 16.2 This picture shows one of Leonardo's inventions. Listen and number the parts.



COMPREHENSION

4 16.2 **Listen again and choose the correct answers.**

1 The picture was taken from one of Leonardo da Vinci's
a paintings. **b** notebooks. **c** portraits.

2 The flying machine was invented by Leonardo in
a 1600. **b** 1700. **c** 1500.

3 The flying machine was designed to look like
a a giant bird. **b** a giant helicopter.
c a giant wing.

4 A rope was used to
a lift the machine. **b** change direction.
c change the pedals.

5 The frame was constructed from
a rope. **b** wood. **c** steel.

6 The wings were made of
a heavy material. **b** heavy metal.
c heavy wood.

SPEAKING

5 Study Leonardo's flying machine in Exercise 3. If it was built, do you think it would work? Discuss with a partner.

6 Most people agree that Leonardo was a genius. Think of some other people who are often described as geniuses. Make a list with your partner. Try to include some artists and inventors.

7 What makes a genius? Look at the names on your list to find answers. Discuss your ideas with your partner and share them with the class.


Mozart

Talk together

8 Work in pairs. Ask and answer the questions below. Choose your answers from the box. Use the simple past passive in your answers.

~~Leonardo da Vinci~~ John Logie Baird Emperor Shah Jahan William Shakespeare
The Chinese Alexander Graham Bell Mozart Gustave Eiffel
Thomas Edison Charlotte Brontë Tim Berners-Lee Vincent van Gogh

Student A

1 Who painted the *Mona Lisa*?
2 Who wrote the play *Macbeth*?
3 Who invented the telephone?
4 Who painted *Sunflowers?*
5 Who invented the television?
6 Who built the Taj Mahal?

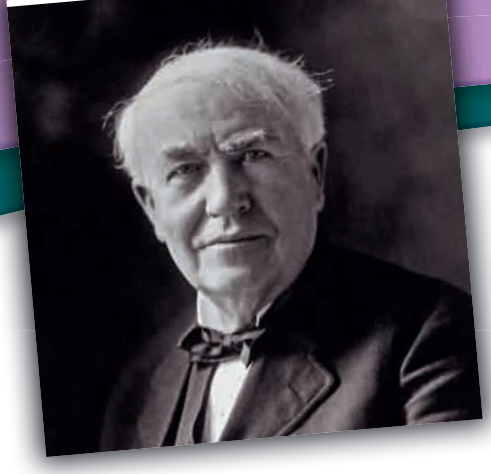
Student B

1 Who composed the opera *Don Giovanni*?
2 Who wrote the novel *Jane Eyre*?
3 Who invented gunpowder?
4 Who invented the electric lamp?
5 Who invented the World Wide Web?
6 Who designed the Eiffel Tower?

A: Who painted the *Mona Lisa*?
B: The *Mona Lisa* was painted by Leonardo da Vinci.

WRITING

9 Now write six questions of your own similar to the ones in Exercise 8. Ask your partner the questions. Can your partner answer them?





READING

1 Read the article about two famous inventors from the past. What did they invent?

Famous inventors

The American **Thomas Alva Edison** is considered one of the greatest inventors in history. Many of his inventions are in use today and have changed the world forever. His most famous inventions were the phonograph and the incandescent lightbulb.

Thomas Edison was born in 1847. He was taught reading, writing, and arithmetic by his mother. He was a curious child, and his mother encouraged his interest in science. By the time he was ten, he had set up his own laboratory.

The first great invention that was developed by Edison was the phonograph. This was a machine that could record and reproduce sound. It made Edison famous all over the world.Our entire modern recording industry developed from this invention.

Edison also invented the incandescent lightbulb. This allowed a safe and inexpensive electric light to replace gaslight. The bulb consisted of a wire inside a glass bulb. All the air was taken out of the bulb to create a vacuum. This invention by Edison was his most famous and is still commonly used today.

The Scotsman **John Logie Baird** was the first person to build a working television. He was born in 1888. He was the youngest of four children. His interest in inventions was clear from an early age – he once set up a telephone system between his bedroom and his friend's bedroom in a house across the street so they could talk after school.

He studied engineering in Glasgow from 1914 to 1915. After he had spent several years working on other projects, he decided to focus on trying to invent a system that could transmit moving images, or send them along a wire to a machine that could reproduce them.

The first moving images were transmitted in 1924, when Baird had completed his first working television. It showed very simple black shapes on a white background, and they were only transmitted a short distance, from one room to another. Some parts of the machine were made out of a pair of scissors, some needles, and an old box – but it worked!

By 1927, Baird had made his invention much better. He could transmit images between London and Glasgow – a distance of 700 kilometers. In 1928, the first images in color were transmitted. At the time, many people thought that television, or as Baird called it, "the televisor," would never become popular. Of course, it did become popular, and Baird became famous.



COMPREHENSION

2 **Read the article again and answer the questions.**

1 What were Edison's most famous inventions?
Edison's most famous inventions were the phonograph and the lightbulb.
2 What did a phonograph do?
3 Why was this invention so important?
4 What kind of light was used before electric light?
5 What did John Logie Baird invent?
6 What materials did Baird use in the first working television?
7 What was television called at first?
8 Do you think that Edison and Baird were geniuses? Why / Why not?

SPEAKING

3 **Which of the inventions in the article on page 120 do you think is the most important? Why? Discuss with your partner.**

4 **Many people say that the Internet is the most important invention ever. Do you agree or disagree with this? If you disagree, what do you believe is more important?**

Writing strategies

Pre-writing

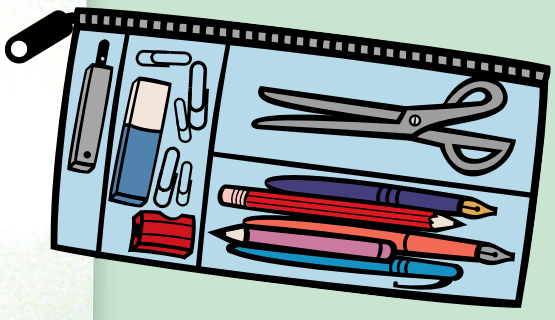
- First, consider the questions. What could your new invention be?
- Consider your daily life. What could make your daily life easier?

WRITING

5 **Can you design a new invention? Draw your invention and add labels. Then describe it. Include answers to the following questions.**

1 What is the invention used for?
2 What is it made of?
3 How is it constructed?
4 What does each part do?

My invention is a pencil case with compartments for all of my school supplies. One of the compartments is a section where scissors and other sharp items are kept. Another part is where pens and pencils are kept. Other smaller compartments store erasers, paper clips, and my USB stick. This invention will help me keep my school supplies organized. I like it very much!



SPEAKING

6 **Show your invention to the class and explain what it is for and how it is used.**

? Who invented the ballpoint pen and when?



Project



Write a description of a building.

Your task

- Choose a famous building. Research some facts about it. Answer the questions.
- Imagine you have visited your chosen building. Write a postcard to a friend and describe the building.
- Share your work with the class. Ask questions about the other buildings and answer questions about your chosen building. Try to use the passive tense when you reply.

Taj Mahal

FACTS

- The Taj Mahal was built by the Emperor Shah Jahan to remember his wife, Mumtaz Mahal.
- Work was begun on the Taj Mahal in 1631.
- The building was completed after twenty-two years, in 1653.
- 20,000 workers were paid to construct the building.
- It was built out of the most expensive white marble.
- It was designed to have five main parts, including a mosque.
- Sculptors, builders, and other workers were brought from Persia, the Middle East, and Europe to construct it.
- It was decorated with thousands of gemstones.
- Today it is regarded as a masterpiece, a symbol of India, and one of the Seven Wonders of the World.
- It is visited by about three million tourists every year.

Questions

- Where is the building?
- When was it built?
- Who was it built by?
- Who was the architect?
- How was it built?
- What materials were used to build it?
- How was it decorated?
- Does anyone live in the building?
- What is it used for today?



Review D





VOCABULARY

1 Which word doesn't refer to a type of climate?

a monsoon **b** tundra **c** temperate **d** polar **e** drought

2 Which word has nothing to do with rainfall?

a downpour **b** torrential **c** flood **d** bronze **e** monsoon

3 Which word is not related to the Earth?

a crust **b** geology **c** ice age **d** fossil **e** asteroid

4 Which word doesn't refer to part of a volcano?

a crust **b** magma **c** lava **d** obsidian **e** ash

5 Which word doesn't refer to a type of rock?

a quartz **b** pumice **c** granite **d** flamingo **e** basalt

6 Which word doesn't refer to a type of metal?

a wood **b** steel **c** bronze **d** silver **e** gold

7 Which one isn't a bird?

a lapwing **b** wetland **c** plover **d** flamingo **e** pelican

8 Write the words for people who do these things.

1 create sculptures
2 design buildings
3 invent things
4 study the Earth's formation
5 do research



9 Match words with similar meanings.

1 sketch	**a** destroy
2 devastate	**b** drawing
3 forecast	**c** giving light
4 trigger	**d** picture of a person
5 sculpt	**e** predict
6 wetland	**f** record player
7 copy	**g** reproduce
8 incandescent	**h** shape
9 phonograph	**i** start
10 portrait	**j** swamp

GRAMMAR

10 **Write down a word or name in each box. Then work in pairs. Talk about what you have written and explain why you wrote it.**

a person who you like	
a building that inspires you	
an object that is valuable to you	
something that you carry with you every day	
an object that you'd like to buy	
a place where you'd like to live	
a place where you were very happy as a child	

Ali is a person who I like very much. He is a kind and generous person.

11 **Work in pairs. Make the sentences below longer by adding one or more non-defining relative clauses. Compare your sentences with another pair. Who has the longest sentence?**

1 The rescue workers saved the villagers.
The rescue workers, who were very brave, saved the villagers.
2 The architect designed a luxurious house.
3 The archeologist made an amazing discovery.
4 The teacher gave the student an award.
5 The tourists visited the skyscraper.
6 The volcano destroyed the island.



12 **Think of a famous invention. You can choose one of the inventions in the pictures. Use the simple present and simple past passive to ask and answer your partner's questions about it. Can you guess your partner's invention? Choose from the verbs in the box.**

invent **made (of)** **use (for)** **design (by)** **construct (from)** **produce**







Gulliver's Travels

Jonathan Swift



Lemuel Gulliver loved to travel, and he loved adventures. This is the story of one of his strangest adventures.

It all began when Gulliver boarded a ship for India. The journey was a difficult and dangerous one. Winds blew, storms raged, and the ship was pushed off course. Finally, it hit some rocks and sank.

The passengers were terrified. Some tried to escape in a small boat, but it capsized, and only Gulliver survived.

Gulliver swam for his life. Just as he was about to give up hope, he saw land. He pulled himself out of the ocean and fell down on the sand. Soon he was asleep.

When he woke up, he couldn't move at all. He was tied to the ground. Slowly, he pulled his hair free and lifted his head. An amazing sight met his eyes. There were tiny men all over him! "Hey!" Gulliver shouted. The tiny men were scared, and they jumped away from him. Then they brought a small ladder to

Gulliver, and a tiny man climbed up and shouted at him. But Gulliver didn't understand a word. He was hungry, so he pointed to his mouth. "Hungry," he said. The tiny men seemed to understand him, because a crowd of tiny people soon appeared. Each person carried huge amounts of very small food. Gulliver ate it all. Then the tiny people brought him water, which he drank quickly. After a few seconds, he fell asleep again, and the people began to do their work.

They quickly built a wooden cart and pulled Gulliver onto it. Then they took him away to their capital city, Milando. When Gulliver woke up, he found that he was outside an old palace. He soon realized that the tiny people wanted him to live in the old palace because it was large enough for him, but he still couldn't understand them. Then he noticed that he was a prisoner – his arms were tied to the doors of the palace! As he stood there, hundreds of tiny people came to look at him. Gulliver was amazed. It was like a toy town.

Soon the emperor came to see Gulliver. But they couldn't understand each other. "I need to think about this," said the emperor. So he left some of his people to guard Gulliver and went away to his new palace.

The emperor asked his friends what to do with Gulliver, and after much thought, he finally made a decision. "He can stay in my kingdom," he said. "We will give the giant food and clothes, and teach him our language." Soon Gulliver had everything he needed. But he was still tied up in the old palace, like a prisoner.

Freedom

Gulliver learned the people's language as quickly as possible. Then he asked to see the emperor. "Please set me free!" he said. But the emperor wasn't sure.

Gulliver had to wait. So he learned more about the country, which was named Lilliput. And every day, he begged to be allowed to leave the old palace. Finally, the emperor agreed. "Let him go," he said. "The giant can go where he likes. But he must ask first!" Gulliver agreed, and set off to explore the city. All the tiny people stayed inside their houses. They were scared of his enormous feet!

Lilliput seemed like a peaceful place, but Gulliver soon found out that it wasn't. One day, the emperor asked to see him. "I have some terrible problems," he said. "We're at war with a nearby island, Blefescu. And I've heard that ships are coming from Blefescu today, to attack us! You have to help us, Gulliver!" "I'll see what I can do," Gulliver replied. Then he went to the hills above Lilliput, and looked out to sea. It was easy for him to see the island of Blefescu in the distance. He could also see many tiny ships on the ocean. There were more than fifty of them! "I'll need some ropes to help you," he told the emperor. But the emperor's ropes were so small that Gulliver had to tie one hundred of them together to make one big rope. It took him a long time to make the big rope, but finally it was ready. Gulliver took his rope and walked into the ocean with it. Because he was so big, it only took him a few minutes to reach the tiny ships, which were still close to the island of Blefescu.

When the sailors saw Gulliver, they screamed with fright. He was huge and terrifying to them. Many of the sailors dove into the ocean, to try to escape from him.

Gulliver used his rope to tie all the tiny ships together. Then he pulled all fifty of them over the ocean, back to Lilliput with him. Although the people of Lilliput were delighted that Gulliver had saved them from an attack, the emperor still wasn't satisfied. He wanted to fight the people of Blefescu, but when Gulliver refused to help him, there was nothing the emperor could do.

The emperor was angry with Gulliver for several weeks. Then, one night, there was a terrible fire at the new palace. Huge flames came out of the windows, and nobody was able to stop them. The people ran to get Gulliver to help them. He was easily able to throw water over the whole palace because he was so large. After Gulliver saved the palace, the emperor was very happy with him.

Escape

Gulliver began to enjoy life in Lilliput, although he often thought of home. The tiny people were very kind to him. They brought him three hundred meals every day and made him some new clothes. But there was a problem. Because Gulliver was so large, he was very expensive to keep. Flimnap, who worked for the emperor and looked after his money, didn't like Gulliver. He told the emperor that Gulliver cost too much, and the emperor agreed with him. Then Flimnap told everyone that Gulliver wanted to rule Lilliput, and he and some others decided to kill Gulliver.

Gulliver discovered that his life was in danger, but only just in time. He hurried to the ocean, and found a small ship there. He put everything he had on the ship, tied the ship to his rope, and pulled it behind him. Then he walked through the waves to the island of Blefescu.

When Gulliver arrived at the island, the king came to meet him. To his surprise, the king told him to stay for as long as he wanted. Gulliver was very grateful to be safe.

One day, a week later, Gulliver saw a boat on the ocean, not far from Blefescu. It was capsized, but Gulliver could see that it was big enough for him. He rushed to the king. "This is my chance to go home!" he said. "Can you help me rescue the boat?" "Of course," said the king. "Take some of my ships to help you."

So Gulliver took the king's ships with him, and used them to pull the capsized boat out of the sea. On the beach, Gulliver made a mast out of a tree trunk.

While he worked, some of the king's men made a new sail for the boat. It was constructed from thirteen layers of the strongest material in the land.

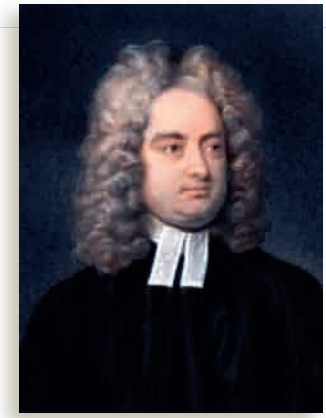
Finally, the boat was ready. "I'm leaving now," Gulliver told the king, "but nobody at home will believe my story. Can I take some of your people with me?" "I don't think that's a good idea, Gulliver," said the king. "But you can take these gold coins with you." Then he gave Gulliver some tiny bags of money.

Gulliver thanked the king and promised never to forget the people of Blefescu. Then he sailed away in his boat.

After a few days at sea, Gulliver saw a large ship. He shouted and waved wildly at it. The ship's crew saw him and sailed over to find out what the problem was. They soon realized that Gulliver was alone in a small boat. "Where have you come from?" asked the captain. "From Lilliput and Blefescu," Gulliver replied, and he showed the captain the tiny bags of gold coins that he had with him. The captain was amazed. For a few gold coins, he agreed to take Gulliver home on his ship.



Jonathan Swift, 1667–1745



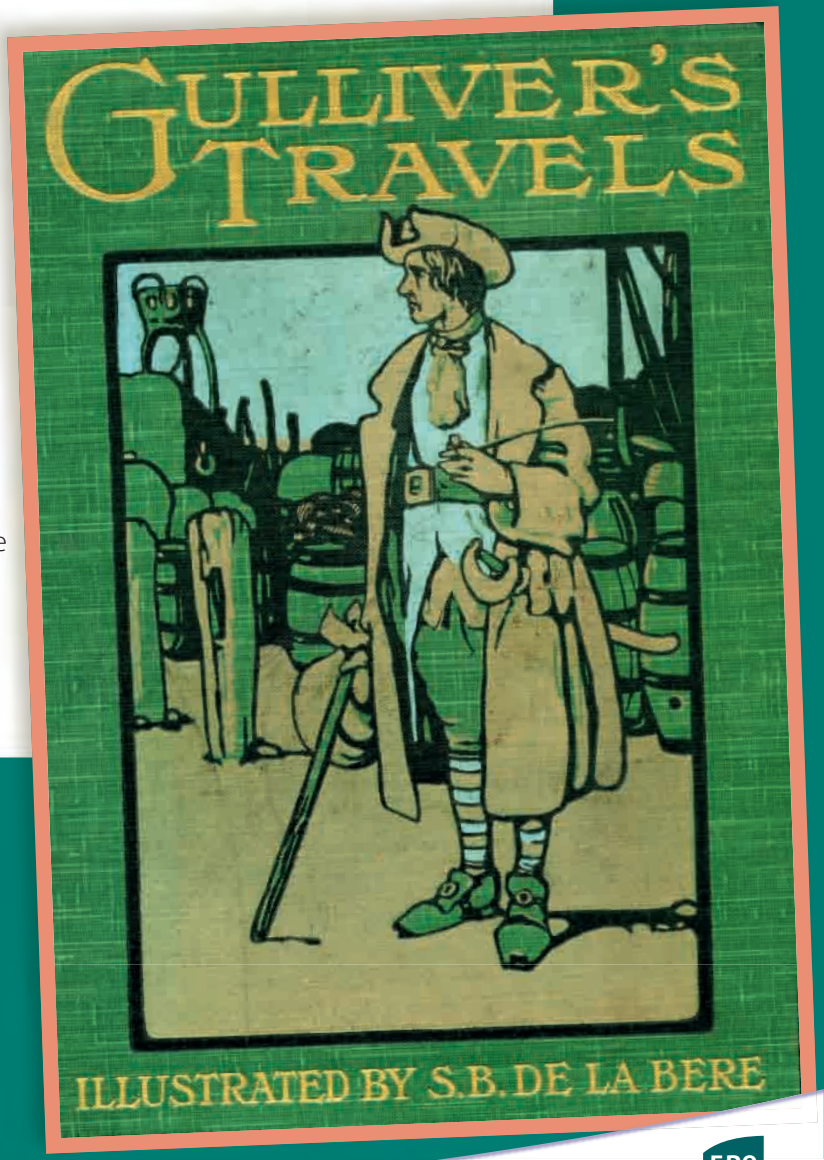
Jonathan Swift was a satirist, poet, and essayist. He is best known for his satirical works, of which *Gulliver's Travels* is one.

Swift was born in Dublin, Ireland, on November 30, 1667. His father died before he was born, and his mother traveled to England. He was brought up by his uncle. Swift's family had many literary connections, and he was a distant relative of William Shakespeare.

Swift went to college in both Dublin and Oxford, and then turned his attention to writing. He wrote his first books between 1702 and 1704, and then he became well known as a writer. He also became involved in politics.

He returned to Ireland in the 1720s and became involved in politics also in his home country. There he wrote more books, including *Gulliver's Travels*. Experts believe that the story satirizes many of Swift's experiences in politics. Swift published the novel using a pseudonym, Lemuel Gulliver, who was of course the main character of the novel. The novel was published in 1726 and was very successful both in England and elsewhere.

When Swift's wife died in 1728, followed by several of his good friends, he became sick. He died on October 19, 1745, in Dublin. Many local people went to the funeral to remember this great writer.



Gulliver's Travels
Jonathan Swift

VOCABULARY

1 **Write the opposites of these words from the text. Use the line numbers to help you, and refer to a dictionary if necessary.**

1 pushed (line 6)
2 woke up (line 15)
3 tiny (line 19)
4 a few (line 28)
5 refused (line 92)
6 angry (line 94)

COMPREHENSION

2 **Read the story again and decide if these sentences are true or false. Correct the sentences that are false.**

1 When Gulliver's ship sank, he reached Lilliput in a boat.
False. He swam to Lilliput.
2 When Gulliver woke up, he could stand up very easily.
3 At first, Gulliver understood the emperor, but the emperor didn't understand Gulliver.
4 The emperor of Lilliput and the king of Blefescu were friends.
5 Gulliver scared the sailors from Blefescu.
6 The emperor was angry with Gulliver because he saved the palace.
7 Gulliver wanted to be the emperor of Lilliput.
8 The king of Blefescu welcomed Gulliver when he arrived.
9 Gulliver gave gold coins to the captain of the ship that took him home.
10 The king of Blefescu took Gulliver home.

SPEAKING

3 **Work in pairs. Student A is Gulliver. Student B is the king of Blefescu. Imagine that Gulliver has just arrived on the island of Blefescu. The king of Blefescu has come to meet him. Act out a conversation between the two men.**

B: Where have you traveled from?
A: I have traveled from Lilliput.

4 **Work in pairs. What do you think happened next in the story?**

WRITING

5 **Gulliver has to leave Lilliput because Flimnap and the emperor want to kill him. Write an alternative ending to the story from this point. Tell others your alternative ending. How different are they?**

York MISSION POSSIBLE

Mastery 1 B

Workbook

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Unit 9 The Nobel Prize

VOCABULARY

1 Complete the sentences with the words in the box.

Chemistry Economics Literature Medicine Peace ~~Physics~~

1 In 1901, Wilhelm Conrad Röntgen won the Nobel Prize in Physics for his discovery of the X-ray.
2 In 1981, the Nobel Prize for _____ was awarded to two people, Kenichi Fukui and Roald Hoffmann, for their study of chemical reactions.
3 In 1902, the Nobel Prize in _____ was awarded to Sir Ronald Ross for his work on the treatment of malaria.
4 The first Nobel Prize in _____ was awarded in 1901 to the French poet and philosopher Sully Prudhomme.
5 The Prize in _____, in memory of Alfred Nobel, was awarded to Paul Krugman in 2008. His work focused on the analysis of trade patterns.
6 The 1993 Nobel _____ Prize was awarded to Nelson Mandela and F.W. de Klerk for their efforts to end inequality in South Africa.

GRAMMAR

2 Complete the sentences with the present progressive form of the verbs in parentheses.

1 We are learning about Alfred Nobel this week. (learn)
2 I _____ (not think) about anything else right now. I _____ (concentrate) on my work.
3 **A:** What _____ (you do)? _____ (you look up) information for your project?
B: No, I _____ (send) an e-mail to someone.
4 What book _____ (you read) right now?
5 My dad _____ (repair) my bike, but it _____ (take) so long! He's been working on it for weeks already.

3 Complete the sentences using the present progressive form of the verbs in the box with *always*.

cry take ~~make~~ rain sit complain

1 My brother is so annoying! He is always making noise when I'm trying to study.
2 Sometimes Lisa can be a very negative person. She _____ about things.
3 You _____ my things without my permission! You really should ask me first.
4 Tina is very lazy. She _____ on the couch, watching TV!
5 I don't think I'd like to live in England. People say it _____ there.
6 Elsie's baby brother isn't very cheerful. He _____.

4 What annoying things are these people always doing? Write sentences.



1 He / listen to loud music.
He's always listening to loud music.
2 She / forget where she has put things.
_____

3 Silvia / eat candy.

_____

4 The children / tell / jokes.

_____

5 The dog / bark.

_____

6 You / talk / on the phone!

_____

VOCABULARY

5 **Complete the text with the words in the box.**

~~Peace~~	Chemistry	annual	explosive
award	experiments	laboratory	

A The Nobel **1** Peace Center is in Sweden. It is near the building where the ceremony for winners of the famous **2** _____, the Nobel Peace Prize, takes place. This **3** _____ event takes place on December 10, in memory of Alfred Nobel's death.

B **4** _____ is interesting and fun, but you have to be very careful when you are doing **5** _____ in a science **6** _____. Mixing the wrong chemicals together can be **7** _____, so you must not do anything without asking your teacher first.

READING

6 **Read about Ahmad Hassan Zewail. Complete the text with the words in the box.**



Nobel Prize	winner	win	scientists
Physics	become	~~developed~~	

Ahmad Hassan Zewail was born on February 26, 1946, in a town named Damanhur, Egypt. He lived with his parents and three sisters. He was the only son.

His family always dreamed that he would study to become a college professor. They even put a sign on his door that said "Dr. Ahmad"! In school, Ahmad **1** developed a love for Mathematics and Chemistry. He often carried out chemical experiments at home, for example, to see how wood could **2** _____ a gas and a liquid.

After he finished school, Ahmad went to Alexandria University. He studied Mathematics, **3** _____, Chemistry, and Geology, and earned excellent grades, particularly in Chemistry. He went on to study further and to teach students about science. At that time, he and his friends used to read reports about famous Egyptian **4** _____ and writers, and he had no idea that one day he would **5** _____ one of the most famous science prizes in the world.

Professor Zewail felt proud to be the **6** _____ of the **7** _____ for Chemistry in 1999. His country was very proud of him, too. His portrait was on an Egyptian postage stamp to celebrate his achievements – and his old school was named after him!

VOCABULARY

7 **Find words in the text with the following meanings.**

1 the study of numbers _____
2 tests _____
3 performed _____
4 continued _____
5 people who work in the field of science _____
6 awards _____
7 picture of a face _____

GRAMMAR

8 **Complete the sentences with the present progressive form of the verbs in the box.**

change	discover	~~happen~~	make	try

1 Scientists first ask a question about why something is happening, and then they try to explain it with a theory.
2 All around the world, scientists _____ new cures for diseases.
3 Scientists _____ progress in many different fields.
4 Science today _____ our lives, and it has the answer to many of the world's problems.
5 The work of scientists is very important today, because they _____ to solve some of the world's biggest problems.

READING AND VOCABULARY

9 **Read the text and complete it with the words in the box.**

equipment	findings	~~laboratory~~
microscope	report	research	theories



I chose to become a medical technologist because I always knew I wanted a career in health care. After completing my Science degree, I got my first job in a **1** laboratory. I'll never forget the first time I put on my white coat. It was really exciting! A typical work day for me starts at 7:00 a.m. and ends at 3:30 p.m. I am responsible for performing tests on blood samples from hospital patients. Scientists are always coming up with new **2** _____ about how diseases are caused, and they then carry out **3** _____ to test whether these ideas should be explored further. Our laboratory has a lot of the most up-to-date technological **4** _____ to help us do this, for example, this very expensive scientific **5** _____ that I am using to analyze a blood sample. I am still working on something now, but when I finish it, I'll write up my **6** _____ in a **7** _____, and other scientists will study it.

10 **Match the verbs and the nouns to make phrases.**

1 choose	**a** a report
2 report	**b** an experiment
3 carry out	**c** a microscope
4 look through	**d** a theory
5 investigate	**e** a subject to investigate
6 write	**f** the findings

WRITING

11 **Answer the following questions.**

1 What kind of equipment do you use in your Science laboratory at school?

_____

2 What experiments have you carried out in the laboratory?

_____

3 What were the findings?

_____

4 How did you present your findings to the teacher or the class?

_____

12 **Prepare a survey for some of your classmates or family members.**

First, choose a subject to investigate. Choose something that most people will have an opinion about or experience of, for example, TV shows/school subjects/sports/ hobbies, etc. Write a list of five *yes/no* questions to ask about the subject.

Fill in the survey chart with your questions and choose five people to interview.

Questions	Interviewees				
	1	2	3	4	5
1					
2					
3					
4					
5					

13 **Now carry out your survey. Write your interviewees' answers to the questions.**

14 **When you have finished, write your findings in a short report.**

Unit 10 Science and scientists

VOCABULARY

1 **Match these areas of science and their definitions.**

1 ecology h
2 botany ____
3 environmental science ____
4 zoology ____
5 astronomy ____
6 geology ____
7 biology ____
8 chemistry ____
9 physics ____
10 mathematics ____

a the study of the relationship between numbers
b the study of the stars and planets
c the study of plants
d the study of the physical properties of matter
e working for the protection of the natural world
f the study of rocks and stones
g the study of animals
h the study of the relationships between living organisms and the world they live in
i the study of all living things
j the study of the chemical structure of substances

GRAMMAR

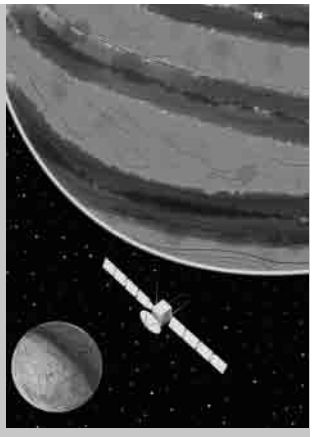
2 **Choose the correct answer.**

1 John didn't like his new school at first, but he *enjoys / is enjoying* it more now.
2 *Do you think / Are you thinking* of studying Biology in college?
3 I *want / am wanting* to study Astronomy.
4 My brother *is / is being* so annoying right now. He *taps / is tapping* his fingers on the desk, and I *have / am having* a headache.
5 What *do you look / are you looking* at under the microscope? Oh, I *see / am seeing* – it's a hair!
6 Do you *remember / am remembering* your first day of school?
7 Today I *am / am being* happy because my uncle and aunt *come / are coming* to visit us!

3 **Complete the sentences with the correct form of the verbs in parentheses.**

1 I am hoping for a good grade on my Science test. (hope)
2 _____ Physics or Chemistry best? (you like)
3 What _____ of the latest theory? (you think) _____ it? (you believe)
4 My sister _____ to study Biochemistry in college next year. (plan)
5 Can you help me, please? I _____ how to do this. (not know)
6 I _____ my classes a lot this year. (enjoy)
7 I can't come with you to the library today; I _____ the optometrist about getting new glasses. (see)
8 I _____ of studying Medicine someday. (think)
9 Scientists _____ for new treatments for diseases all the time. (look)
10 You _____ sad today. Is anything wrong? (seem)

4 **Complete the text with the correct form of the verbs in parentheses.**



Europa is the name of one of the moons of the planet Jupiter. Scientists **1** are studying (study) this moon right now because they **2** _____ (want) to find out more about it. Scientists **3** _____ (have) a theory that Europa **4** _____ (consist) of an icy outer layer with water under it. Now they have found evidence of warm water just under the icy outer layer. The warm water **5** _____ (melt) Europa's icy outer layer. The same thing **6** _____ (happen) in frozen parts of the Earth, in Antarctica. Scientists **7** _____ (believe) this is a very important discovery because it means that microorganisms may **8** _____ (live) on Europa. Space experts **9** _____ (plan) missions to Europa now, to carry out more investigation. They **10** _____ (think) it is possible to send a mission in the next decade.

VOCABULARY

5 **Write the people who do the following work.**

1 studying the stars astronomer
2 preparing the weather forecast for the next three days _____
3 studying the outer layer of the Earth _____
4 looking at the organs of an animal through a microscope _____
5 investigating the way plants breathe _____
6 writing a report about the way plants, humans, and animals all live together _____
7 doing some research into the way animals communicate _____
8 studying the periodic table _____

READING AND VOCABULARY

6 **Read the text and list all the words for people related to science. Then complete the chart.**

Muhammad ibn Zakariya Al-Razi (865–925) was a Persian physician, chemist, musician, and mathematician.

Al-Razi was also a writer of many books on medical and scientific subjects. The *Al-Mansuri* and *Al-Hawi*, his reviews of medicine, were translated into several languages.

He always enjoyed experimenting and observing the results of his experiments. His theory that measles and smallpox were two different diseases and not the same one, as many scientists believed at the time, was proven correct after he recorded his findings from extensive observation.

Al-Razi was also a researcher. In chemistry, he was the first to produce sulfuric acid. As a biologist, Al-Razi developed an early system of classifying substances into plants, animals, and minerals.

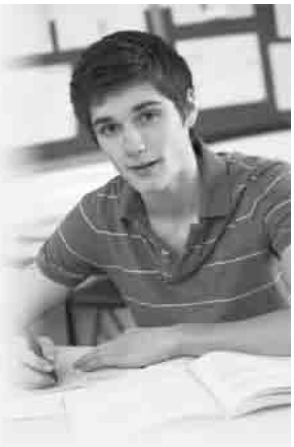
For all these reasons, Al-Razi is known as a very important scientist in history.

Noun (person)	Noun (subject)	Adjective or participle
1 physician	medicine	medical
2		
3		
4		
5		

READING

7 **Look at the first paragraph of the text. What theory do you think the text is going to explore?**

8 **Read the text and check your answers.**



Do you want to improve your study skills or write a book? Surrounding yourself with the right color might help!

The question of the effect color has on the brain has always fascinated scientists. It has already been found that red makes people feel stronger and more powerful.

In a study, researchers in a top college carried out tests on 600 people. They were trying to test their theory that the color red or blue affects us in different ways. The findings showed that people could remember details better when they looked at images against a red background, e.g., a computer screen. On the other hand, they were able to be more creative when the background color was blue.

The theory is that red, which is connected with emergency and warning (fire engines, traffic lights, etc.) makes people feel more alert, and so they are able to pay attention to detail. Blue is a relaxing color, which helps bring out people's creativity.

In the study, the brightness of the color was also important – a very pale blue might not have such a relaxing effect as a deep blue.

9 **Answer the questions.**

1 Why did scientists carry out their research?

_____

_____

2 How many people did they carry out research on?

_____

_____

3 According to the report's findings, which would be a better background color for someone studying for a History test? Why?

_____

_____

4 According to the report's findings, which would be a better background for someone writing a poem? Why?

_____

_____

5 Why do people respond to red with more focus and attention to detail?

_____

_____

6 What shade of red is likely to make people feel stronger and more powerful?

_____

_____

VOCABULARY

10 **Find words in the text with the following meanings.**

1 a very light shade of a color
pale

2 a dark, intense shade of a color
_____

3 peaceful _____

4 very aware _____

5 artistic _____

6 conclusions of research _____

7 an idea that hasn't been proven yet
_____

WRITING

11 **Answer the questions.**

1 Do you agree with the research you have read about red and blue?

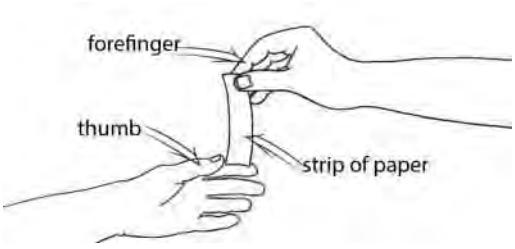
2 What colors do you like to wear? When, and why?

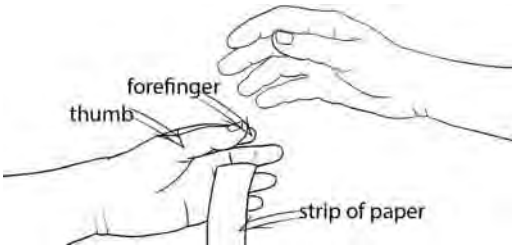
3 What colors are in your room? How do you think they help you study or relax?

WRITING: A report about your observations from an experiment

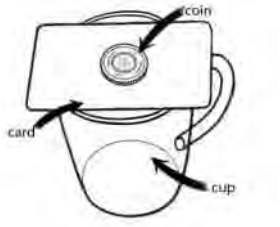
12 **Work in pairs. Carry out the following experiments with paper. Use the pictures and the words to describe the experiments.**

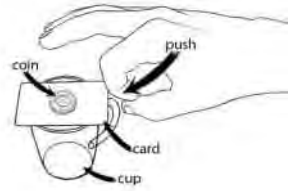
1 PAPER DROP

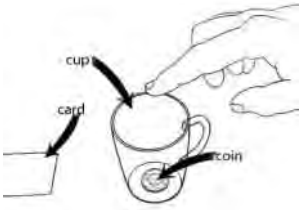




2 COIN DROP INTO CUP







13 **Now write the findings (explanation) of both experiments. What happened, and why?**

a

b

Unit 11 Polar regions

VOCABULARY

1 Join the words in each box to make words related to polar regions. Use each word only once.

~~polar~~	ice	musk	rein	snow
wild	Arctic	tree		

less	deer	oxen		
storm	life	berg	fox	~~bear~~

1 polar bear
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____

2 Answer the questions using the words in Exercise 1.

1 Which four are animals? polar bear, _____, _____, _____

2 Which word refers to these four animals, and all other living creatures in the region? _____

3 Which word means a serious weather condition? _____

4 Which word describes a flat place without any forests? _____

5 Which word means a frozen, floating "hill"? _____

GRAMMAR

3 Join the sentence parts 1–7 and a–g. Are they first or second conditional sentences? Write 1 or 2.

1 If I finish the race first, a 1
2 I wouldn't enjoy a trip to Antarctica
3 If I studied more,
4 I'll miss the concert
5 If I had a lot of money,
6 If I don't feel better tomorrow,
7 If I found a wallet in the street,

a I will get a medal.
b I'd give it to the police.
c if I arrive late.
d I'd travel around the world.
e I'll go to the doctor.
f if I didn't have warm clothes.
g I would do very well on my exams.

4 Use the words to write questions in the second conditional.

1 What / you / do / if / find / a valuable old coin in the street?
What would you do if you found a valuable old coin in the street?

2 you / be happier / if / have / more brothers and sisters?
_____
_____

3 How / you / feel / if / win / a prize at school?
_____
_____

4 Where / you / go / if / have / a free plane ticket?
_____
_____

5 What / you / say / if / meet / a famous person?
_____
_____

6 Who / you / take with you / if / have / two free tickets / to a classical concert?

_____

_____

7 If / you / see / a penguin / you / want / to get close to it?

_____

_____

READING

5 **Look at the picture. What do you think you are going to read about?**



6 **Read the review and check your answers.**

If you decide to travel to the Arctic, you won't find many other travelers on your journey. It's a place that most people don't visit. It is very hard to get to, and if you want to go there you'll have to pay a lot of money for a hotel and food.

But if you do get the chance to go, you won't regret it. It will be the trip of a lifetime. I spent five months there in a village with the Inuit people, and it was one of the best experiences of my life. If the Inuit people respect you and accept you in their community, they will even give you an Inuktitut name. Mine was Tiriganiaq, which means "Arctic fox," because of my thick white beard and hair! One place I would recommend is Hudson Bay. If you go in the spring, you'll be able to see a lot of seals, penguins, and polar bears. In the winter, you'll be able to see the spectacular Northern Lights. If you are the kind of person who loves beautiful scenery and silence, then you won't want to leave this place. You won't hear anything except the noises of sled dogs and other wildlife on the frozen land. So if you have the time and money you should really try to visit the Arctic. And go soon – our polar regions are in danger. If we don't start taking care of our planet, the ice caps will continue to melt, and someday, polar travel will no longer be possible.

7 **Write *True* or *False*. Correct the false sentences.**

1 The Arctic is one of the most popular tourist destinations.
False. Most people don't visit it.

2 The review was written by an Inuit person.

_____

3 The Inuit people give all guests an Inuktitut name.

_____

4 The writer has a white beard and hair.

_____

5 Winter is the best time to see polar bears.

_____

6 The Arctic isn't the best place to go on vacation for people who like quiet places.

_____

7 If you don't visit a polar region soon, you might not get the chance in the future.

_____

VOCABULARY

8 **Find words in the text with the following meanings.**

1 living creatures in the area wildlife
2 turned to ice _____
3 large black and white sea birds _____
4 sea mammals _____
5 landscapes _____

WRITING

9 **Complete the second conditional sentences with your own words.**

1 If I went to the Arctic, I would take _____.

2 I wouldn't take _____ because _____.

3 One place I would like to visit is _____.

4 If I saw a polar bear close to me, I'd _____.

VOCABULARY

10 **Complete the text with the words in the box.**



adapted **environment** **fat** **flippers**
frozen ~~**pack ice**~~ **penguins**
powerfully **streamlined** **webbed**

Leopard seals are the largest of the true Antarctic seals. They are usually found on **1** pack ice, but they also spend a lot of their time around the breeding grounds of **2** _____, which are their main food. Their smooth, flat, **3** _____ bodies are well adapted to their natural **4** _____ in several ways:

- Like most other seals, they keep warm in the **5** _____ Antarctic with a thick layer of **6** _____ under their skins.
- They have wide, flat **7** _____ that they use like arms to help them swim more **8** _____.
  The bones on these body parts are very long, and the skin between them is **9** _____ like the feet of a bird.
- Their eyes are also specially **10** _____ for seeing above and below the water.

WRITING

11 **Imagine that you are thinking about going on a trip to the Antarctic. Complete the questions in the second conditional.**

1 who / take with you?
Who would you take with you?

2 when / go?

3 what / do there?

4 how long / stay?

5 how / prepare for the trip?

6 what / wear?

Now answer the questions using the second conditional.

1 If I went on a trip to the Antarctic, I would take my friends Alicia and Megan.

2 _____

3 _____

4 _____

5 _____

6 _____

GRAMMAR

12 **Write sentences using the second conditional.**

1 If I (read) more English books / my vocabulary (improve).

2 I (ask) for help / if I (can't) do my homework.

3 If you (have) more time / you (play) more sports?

4 You (feel) healthier / if you (get) more exercise.

5 If I (have) one wish / I (wish) for good health.

6 If I (go) to Persepolis / I definitely (take) my camera.

_____

7 What (you do) / if (be) a world leader in the future?

_____

8 If I (tell) you a secret / (you promise) not to tell anyone?

_____

WRITING: A letter of advice

13 **A friend wants to visit your country from another country. Write some advice for your friend. Complete the sentences in the second conditional.**

Should I come in the summer or winter?

_____
_____
_____
_____

If I were you, I'd …

_____
_____
_____
_____

If you came in the summer/winter, you'd see/be able to …

_____
_____
_____
_____

If I were you, I'd bring …

_____
_____
_____
_____

One place I'd definitely visit if I were you is …

_____
_____
_____
_____

14 **Write a letter to your friend. Use the second conditional where appropriate to give advice about things you would or wouldn't do if you were your friend. Remember to write your address and the date at the top of the letter.**

Unit 12 Planning a trip

VOCABULARY

1 **Look at these words.**

brochure ~~scenery~~ salmon glacier
highlight rail canyon waterfall

Which word means ...

1 beautiful landscapes? scenery
2 water flowing down a steep cliff? _____
3 a line for trains to travel on? _____
4 a kind of fish? _____
5 a magazine advertising something? _____
6 "the best thing?" _____
7 a deep valley in a mountainous area? _____
8 a frozen river of ice? _____

GRAMMAR

2 **Complete the questions with the correct form of the verbs in parentheses.**

1 Should we go (go) to the library this afternoon?
2 Why don't we _____ (have) something to eat?
3 How about _____ (watch) videos?
4 Let's _____ (play) ping-pong.
5 What should we _____ (order) from the menu?
6 How about _____ (travel) by train? It's cheaper.
7 Why don't we _____ (meet) at the station?
8 Let's _____ (plan) our vacation!

3 **Complete the dialogue with the words in the box.**

how about idea let's look up
love should sleep sounds ~~why don't~~

Dad: **1** Why don't we go on a trip this weekend?
Hassan: That's a great **2** _____! Where **3** _____ we go?
Dad: Well, **4** _____ trekking in the nature reserve?
Hassan: I'd **5** _____ to! Should we **6** _____ in tents?
Dad: Yes, that **7** _____ like fun. Why don't we **8** _____ some information about the nature reserve on the Internet.
Hassan: Yes, **9** _____ do that now.

4 **Complete the dialogue. Then number the lines in the correct order.**

☐ **A:** That / good idea. / What / we watch?

_____

☐ **A:** OK, how / look up / the TV schedule in the newspaper? Ah! My favorite show is on! we / watch it? It's a comedy.

_____

1 **A:** What / we do / tonight? What should we do tonight?

☐ **B:** Yes, I / love / to watch it.

_____

☐ **B:** Let / watch TV.

_____

☐ **B:** I don't know. Why / we see / what's on?

_____

5 **Complete the dialogues with *will*, *won't*, or *should*.**

A
Andrew: What **1** ___should___ we give Mom for Mother's Day?
Dad: How about buying her some flowers? I **2** _____ buy them at the market this weekend.

B
James: Oh, no. I think we're going to be late for the train.
Beth: **3** _____ we take a cab?
James: That's a good idea. I **4** _____ call one now.

C
Laura: **5** _____ we go to the park now?
Joe: Sorry, I **6** _____ be able to – I have too much homework to finish.

D
Nicky: Do you think you **7**_____ travel around the world when you finish school?
Ruby No, I **8** _____, because I **9** _____ be in college. I want to study to be a doctor!

E
Dad: **10** _____ we have a drink at this cafe? It looks nice.
Charlie: Yes, it does. I think I **11** _____ have a chocolate milkshake.



VOCABULARY

6 **Answer the questions in your own words.**

1 What is the difference between a waterfall and a glacier?
A waterfall is a river flowing down a steep cliff, and a glacier is a frozen river of ice.

2 Which one is flatter – a mountain or a plain?
_____

3 What's the difference between a mountain and a mountain range?
_____

4 What's the difference between a journey and a route?
_____

5 Which item would you take on a vacation to the snowy mountains – a sled or shorts?
_____

6 What's the difference between insect repellent and a mosquito net?
_____

7 Why would you use sunscreen?
_____

8 Which kind of transportation would you drive – a ferry or a car?
_____

7 **Complete the sentences with the words in the box.**

ferry guidebook passport skis suitcase ~~swimsuit~~ tent towel raincoat

1 If you want to swim in the ocean, you should bring your ___swimsuit___ and a _____ to dry off with after your swim.
2 It's a good idea to keep valuables like money and your _____ in a safe place when you travel.
3 If you go to England, you should take a _____ – it rains a lot.
4 At the mountain resort, you can rent _____ and a warm jacket for a skiing vacation.
5 Let's go camping. I'd love to sleep in a _____ under the stars.
6 It's useful to have a _____ when you travel in a foreign country.
7 What have you packed in your _____ for your trip? I hope you've packed lots of sunscreen!
8 How are you going to travel to the island? Are you going to take the _____ across the ocean?

READING

8 Look at the picture. What kind of epic journey do you think this person made?

9 Read the text and check your answer.



Sir Charles Blyth, or Chay Blyth, from Scotland, is an excellent sailor, yachtsman, and rower. He was the first person to sail around the world westward alone.

Born in Hawick in 1940, he decided at an early age that his dream was to lead a life of adventure. He started to prepare himself young – by the age of twelve, he was a good swimmer, and he represented southern Scotland in competitions.

Blyth joined the Parachute Regiment of the British Army at eighteen, and was promoted to the rank of sergeant when he was twenty-one. In 1966, he rowed across the Atlantic in a very small boat, *English Rose III*, with another soldier, Captain John Ridgeway. The journey took ninety-two days and involved many hardships, including lack of food. The boat also nearly sank in a hurricane. Both men were awarded the British Empire Medal for their achievement.

In 1971, Chay Blyth set off in the small yacht *British Steel* to try to sail around the world westward without stopping, alone. This was an extremely difficult challenge because the winds and currents of the world's oceans mainly go eastward, so he had to struggle against them. The circumnavigation took 292 days, and he had many problems along the way. He suffered a painful head injury, his yacht was damaged by a huge wave, and he experienced terrible storms. However, he always kept going, showing extraordinary courage and determination. As a result of the successful completion of the voyage, he was awarded the honor of becoming a Commander of the British Empire (CBE).

In 1989, Blyth founded Challenge Business, a company that gives people from everywhere the opportunity to have adventures and participate in sailing events. In 1997, he was knighted by the queen for his services to sailing, so he became Sir Charles Blyth.

Sir Charles once said: "Life is too short to spend it sitting in front of a TV set … All I know is that [my adventures have] made my life far more interesting than it would otherwise have been."

10 Read the text again and answer the questions.

1 What is Sir Charles Blyth famous for?

_____

2 What happened when he was eighteen?

_____

3 What did he do with Captain John Ridgeway?

_____

4 How long did his circumnavigation aboard the *British Steel* last?

_____

5 When did it happen?

_____

6 What is the purpose of Challenge Business?

_____

7 In your opinion, would Charles Blyth make the journey again if he had the chance to?

_____

VOCABULARY

11 Find words in the text with the following meanings.

1 a man who sails yachts yachtsman

2 a very strong storm _____

3 sailing all the way around the world _____

4 a metal disk with a design awarded as a distinction _____

5 a person in authority _____

6 problems _____

WRITING: A memorable trip

12 **If you could plan a memorable trip for you and your family, what would you do? List examples of different kinds of trips you could make.**

Now choose one. Write notes to answer these questions.

- Where would you stay? List examples of different kinds of places to stay. Choose one.
- How would you travel – on foot, or by train, car, bus, plane, or boat?
- How would you prepare yourself for the trip?

13 **Write about your memorable trip.**

Progress test 3

GRAMMAR

1 Choose the correct answer. (1 point each)

1 Right now, scientists *research / are researching* new cures for heart problems.
2 *Are you knowing / Do you know* the answer to this question?
3 Could you explain this to me again? *I'm not understanding / I don't understand* it.
4 *Should / Let's* we play chess or go for a walk?
5 He's so annoying. He *always talks / is always talking* about himself.
6 Should we *go / to go* home now? It's late.
7 When the sun shines, plants *absorb / are absorbing* light through their leaves.
8 We *need / are needing* to buy some more milk.
9 Can you help me? I *try / am trying* to solve this crossword puzzle.
10 Mana *wants / is wanting* to be a doctor one day.
11 What *do you think / are you thinking* of science?
12 *Do you / Are you* like kebab?

	12

2 Join the sentence parts 1–7 and a–g. (1 point each)

1 If I can reserve a tennis court for tomorrow,
2 If I could live anywhere in the world,
3 If I didn't have any friends,
4 I'll call you
5 If you do your homework every day,
6 I won't stay up late
7 I wouldn't buy that T-shirt

a you'll do well in school.
b I'd be very lonely.
c if I'm tired.
d will you come and play a game with me?
e if I hear any news.
f if I were him.
g I would stay right here!

	7

3 Write first conditional sentences. (1 point each)

1 If / you / go / to the North Pole, / you / see / some amazing scenery.

_____

_____

2 You / be / tired tomorrow / if / you / not go / to bed early tonight.

_____

_____

3 If / you / not turn off / the lights, / you / waste / electricity.

_____

_____

4 Helia / do / very well / if / she / continue / studying.

_____

_____

5 What / your parents / say / if / you / graduate / with honors?

_____

_____

	5

4 **Complete these second conditional sentences, using the verbs in parentheses. (1 point each)**

1 What _____ (you do) if you _____ (see) an accident in the street?
2 If someone _____ (ask) you to recommend a tourist attraction in your city, what _____ (you say)?
3 If I _____ (not like) Science, I _____ (not consider) studying Medicine someday.

	6

VOCABULARY

5 **Complete the sentences with the words in the box. (1 point each)**

annual findings frozen highlight ice caps map dunes route tent wildlife

1 After the snowstorm, the ground was _____.
2 If global warming continues, all the _____ will melt.
3 Mother's Day is an _____ event.
4 Researchers write up their _____ in a report.
5 If you have a _____ of the area you are traveling in, it will be easier to find the quickest _____ to your destination.
6 The polar bear and the musk ox are just two examples of Arctic _____.
7 What was the _____ of your trip?
8 When we went camping, we slept in a _____.
9 We took a jeep ride on the high sand _____.

	10

6 **Answer the questions. (1 point each)**

1 Which of these is a bird – a seal or a penguin? _____
2 Which type of science is the study of plants – botany or ecology? _____
3 Which type of science is the study of the Earth – zoology or geology? _____
4 Which of these areas is not a science – physics, chemistry, or math? _____
5 Which geographical feature consists of ice – a canyon or a glacier? _____
6 Which object is a vehicle – a jeep or a dune? _____
7 Which is an object you use in snow – a sled or a swimsuit? _____
8 In which place do scientists carry out experiments – a canyon or a laboratory? _____
9 Which of the following words means an award – a winner or a prize? _____
10 Which of the following words refers to an insect – a mosquito or a reindeer? _____

	10

Total | | 50 |
|---|---|

Unit 13 Weather and climate



VOCABULARY

1 **Match the types of climates and their descriptions. Which two can you see in the picture?**

1 polar	**a** very hot and dry during the day
2 tundra	**b** very cold, with ice and snow on the ground
3 mountain	**c** cold and dry, with short summers and little rain
4 desert	**d** hot and wet, with rainforests
5 monsoon	**e** colder at higher levels
6 tropical	**f** months of dry weather followed by months of heavy rain

GRAMMAR

2 **Join the sentence parts with relative pronouns from the box. Then write the complete sentences.**

who where ~~where~~ why when whose that

1 I've been to a country	**a** daughter is in my class.
2 Where's the book	**b** polar bears live.
3 That's the man	**c** Tim lent to me?
4 July is the month	**d** most people go on vacation.
5 The Arctic is the place	**e** carried my bag yesterday.
6 She never explained	**f** there's a monsoon climate.
7 That's the man	**g** our dinner was late.

1 I've been to a country where there's a monsoon climate.

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

3 **Join the sentences with a relative pronoun.**

1 This is the book. My teacher wants me to read it.
This is the book that my teacher wants me to read.

2 That's the boy. His mother is a teacher.
_____
_____

3 That's the elementary school. I spent five years there.
_____
_____

4 Ellen's the girl. She always gets the highest grades.
_____
_____

5 This is the pen. I always use it to take tests.
_____
_____

6 Is that the store? You bought your book there.
_____
_____

4 **Complete the sentences with your own ideas. Work in pairs and compare your sentences.**

1 Miss Taylor is the teacher who teaches us English.

2 _____ is a subject _____.

3 _____ is a person _____.

4 _____ is a country _____.

5 _____ is the city _____.

6 _____ is a sport _____.

7 _____ was the year _____.

8 _____ is the day _____.

VOCABULARY

5 Complete the paragraph with the words in the box.

climates cold crops ~~heat~~ hot surface survive

Like most deserts, the **1** heat increases during the day, when the **2** _____ of the desert becomes very **3** _____.
In the Arctic, the temperature is very low and it is extremely **4** _____.
Only animals that are able to adapt to extreme **5** _____ are able to **6** _____ in deserts or in polar regions.
Very few **7** _____ can grow in such cold climates.

6 Complete the text with the words in the box.

atmosphere climate crops droughts floods global greenhouse sea levels ~~temperature~~

How the world's climate is changing:

- The **1** temperature is rising all the time, and the Earth is becoming hotter.
- Melting ice causes a rise in **2** _____.
- **3** _____ gases in the world's **4** _____ lead to **5** _____ warming.
- Long periods without rain are called **6** _____. They can cause damage to **7** _____.
- On the other hand, **8** _____ change is also causing more **9** _____. Rivers and dams become too full and overflow, destroying everything with the force of the water.

7 Read Vahid's notes to find out what to eat if you want to help the environment. Complete the notes with words from the boxes in Exercises 5 and 6.

How what we eat affects our environment

Cows, sheep, and other animals produce 1 greenhouse *gases. This means that if there are more animals, more greenhouse gases are produced.*

Animals eat 2 _____, *which use a lot of land's* 3 _____ *to grow. But humans also need to grow crops for themselves, or they won't be able to* 4 _____.

Chemicals are used to protect crops from diseases. This pollutes the 5 _____.

Global 6 _____ *is causing the water* 7 _____ *of the oceans to rise too, so the sea is becoming warmer. Some species of fish are more common now. We can all eat more fish!*

WRITING

8 Do you agree with Vahid? Can you think of any more ways for people to eat healthily and save the environment at the same time? Write your ideas.



READING

9 **Read the text and answer the questions.**

The nine beautiful islands of Tuvalu in the Pacific Ocean have always been slightly above sea level. They are only just above the surface of the ocean now, but the sea is rising every year. World environment experts now despair that these tiny islands in the South Pacific will disappear completely unless we can stop the rising sea levels.

Tropical storms on the islands have been getting much worse since the 1980s. Rising sea waters cause floods. The floods are devastating – turning whole villages into lakes.

Over the last ten years, more than three meters of beach have disappeared already on the island of Vaitupu. One islander said, "The big waves and strong winds only came once a year, for about a month, but now they come at any time of year and can last for months at a time."

One of the problems is that the sea water is making the land too salty, so it is impossible to grow any crops.

Experts blame climate change, and they think the problem is going to get worse.

The Tuvaluans face a difficult choice. If they stay in Tuvalu, their lives will be in danger. But if they leave, they will suffer deeply: Tuvalu is the only home they have ever known.

1 Why are the islands of Tuvalu under threat?
Sea levels are rising.

2 What could happen to the islands if global warming continues?

_____

3 What causes huge waves on the islands?

_____

4 How much of the island of Vaitupu has already disappeared?

_____

5 What is the effect of flooding on people's food supply?

_____

6 What are the two things Tuvalan people can do?

_____

VOCABULARY

10 **Find words in the text with the following meanings.**

1 the height of the ocean sea level
2 to worry and feel very anxious about _____
3 the flat top layer of something _____
4 the sandy area where the land meets the sea _____
5 plants that are grown for food _____
6 to experience pain and unhappiness _____
7 a sudden, huge amount of water, covering land _____
8 very destructive and disastrous _____



WRITING: A description

11 Choose one of the following types of climates to research. Which country has this kind of climate?

tropical monsoon cool temperate
warm temperate desert
mountain tundra polar

Take notes about the weather in the country you are going to research.

- How many different seasons are there?
- What is the weather like in each season?
- What crops do people grow there?
- How have people and animals adapted to the climate?

12 Now write a description of the country's climate and conditions.

Unit 14 The Earth

GRAMMAR

1 Complete the sentences with the correct relative pronoun.

1 This cell phone, ___which___ I bought second-hand, is just as good as any new model.
2 That girl, _____ name I've forgotten, goes to my school.
3 Al-Zahrawi, _____ was a surgeon, developed many medical instruments still in use today.
4 People say the author's latest book, _____ I haven't read yet, is pretty good.
5 Burj Khalifa, _____ is made of glass, steel, and aluminum, is the world's tallest skyscraper.
6 Global warming, _____ is a subject I'm very interested in, is the topic of the convention.

2 Add the correct non-defining relative clauses to these sentences.



1 Lagos, ___which is a megacity___, has a population of about twelve million.
2 Jill, _____, is a part-time waitress at a restaurant.
3 The Swiss Re building, _____, is one of London's tallest skyscrapers.
4 The original Globe Theater, _____, burned down.
5 My English teacher, _____, comes from New Zealand.
6 The book, _____, has become a bestseller once again.
7 My cousin, _____, is coming to visit us.

a where actors first performed Shakespeare's plays
b which people call "the Gherkin"
c which the author wrote in 1920
d ~~which is a megacity~~
e who is still a student
f whose name is Miss Castle
g who lives in Canada



3 Make each sentence longer by adding a non-defining relative clause.

1 The ice caps are melting.
___The ice caps, which are in the Arctic and Antarctic, are melting.___
2 The volcano erupted at 3 a.m. on Friday.
_____
3 Some astronomers have found a new star.
_____
4 The tourists visited the city.
_____
5 The earthquake destroyed the entire town.
_____

VOCABULARY

4 Match the words and their definitions.

1 geology ___c___
2 rock _____
3 crust _____
4 dinosaur _____
5 fossil _____
6 ice age _____
7 volcano _____
8 glacier _____
9 skeleton _____
10 asteroid _____

a the remains of an animal or plant preserved inside a rock
b a rock that moves around the Sun
c ~~the study of rocks and stones~~
d the outer layer of the Earth
e a reptile from a prehistoric era
f an opening in the Earth through which material from inside the Earth erupts
g the bones of a human or animal
h the material that the outer layer of the Earth is made of
i a large amount of ice that moves slowly down a slope
j the period of time when the northern hemisphere was covered with ice

5 **Complete the text with the words in the box.**

blocked caused dark ~~dramatic~~ fertile froze provide small warm

The Mount Tambora volcano

The eruption of Indonesia's Mount Tambora on April 5, 1815, was one of the most **1** dramatic eruptions in history. Signs of the eruption began when a **2** _____ cloud of ash formed over the mountain. Several **3** _____ eruptions occurred over several days before a huge eruption took place.

The eruption **4** _____ out part of the Sun's light for months afterward. This **5** _____ 1816 to be called *The Year Without a Summer*. June, July, and August, which were usually **6** _____ months, were extremely cold across Europe and North America that year.

All over the world, crops failed and farmers had to kill their cattle to **7** _____ food. At least 300,000 people starved or **8** _____.

In Indonesia, it took five years before the ground became **9** _____ enough for plants to grow again.

GRAMMAR

6 **Join the sentences using relative pronouns to make non-defining clauses.**



1 In 2003, a new species of Pterosaur was discovered. It had a sixteen-foot wingspan. (which)

_____

_____

2 The research team discovered it in the southern Sahara. The leader of the team was Paul Sereno. (whose)

_____

_____

3 Ancient rivers brought rocks to Niger long ago. The rocks contained the bones and teeth of the Pterosaur. (which)

_____

_____

4 The bones of an enormous crocodile were also found. The crocodile is known as "SuperCroc." (which)

_____

_____

5 An exhibition was held in Chicago. People could view the life-size skeleton of the new Pterosaur there. (where)

_____

_____

WRITING

7 **Think about the things you can do today to help the environment. Add your ideas to this list.**

How I can help the environment

1 I can walk where possible, instead of going by car.
2 I can offer rides to neighbors going to the same school, to cut down on car trips.

_____

_____

_____

_____

READING

8 Read about a volcano and choose the correct answers.

There are around 1,510 "active" volcanoes in the world. We currently know of eighty or more that are under the ocean. When these volcanoes erupt, they can cause tsunamis, floods, and earthquakes.

Mount Vesuvius, near Naples, is one of the world's best-known volcanoes. In the twentieth century, it erupted in 1906, 1929, and 1944, but its worst and most famous eruption was in 79 CE on August 24 and 25. That year, the area around Mount Vesuvius shook with a huge earthquake. The mountain's top split open and the magma, under huge pressure inside the earth, bubbled up and erupted through the crack. Then a cloud of gas and rock poured down the side of the mountain. The temperature of the lava was 350°C, so it devastated everything in its way.

The eruption happened so suddenly that there was no time to escape from the volcano. More than 2,000 people died in the Roman towns of Pompeii and Herculaneum. Thick, white ash covered the lava, completely burying the inhabitants of Pompeii and Herculaneum.

Whole families, homes, streets, buildings, and animals were buried underneath the layers of hot ash and lava. Pompeii was buried under three meters of rock and ash, while Herculaneum was buried under twenty-three meters of ash. It then began to rain in torrential downpours soon after the eruption. The rain water combined with the white ash to form a hard layer, almost like concrete.

For hundreds of years, Pompeii and Herculaneum lay undiscovered under the ash. Many years later, archeologists discovered how much of the towns had been preserved. They even found loaves of bread in a bakery, 2,000 years old!

Vesuvius has erupted more than fifty times since the eruption in 79 CE. When Vesuvius last erupted in 1944, there was just a flow of lava. No one died, but the volcano destroyed the towns of San Sebastiano and Massa.

1 What caused the eruption in 79 CE?
a a flood **b** an earthquake **c** a tsunami

2 How many times has Vesuvius erupted?
a three times **b** less than three times
c more than three times

3 Which town was not affected by the 79 CE eruption?
a Pompeii **b** Herculaneum
c San Sebastiano

4 What was the effect of the rain?
a It washed away the ash. **b** It washed away the survivors. **c** It hardened the ash.

5 What happened in the years immediately after the eruption of 79 CE?
a Nobody knew anything about the buried cities. **b** Archeologists discovered the buried cities. **c** Further eruptions took place.

VOCABULARY

9 Find words in the text with the following meanings.

1 hot, melted rocks inside the earth magma

2 the hot material that flows down the surface of the earth after an eruption _____

3 the small particles of material that come from burning rocks _____

4 when the earth explodes inside and causes material to flow out _____

5 when a force presses down on something _____



10 Choose one of the following world disasters to research.

- an earthquake
- a tsunami
- a drought
- a flood
- an avalanche
- a landslide
- a tornado

Useful words

sun rain wind cloud crops triggered downpour despair devastate suffer strand torrential washed away submerged rescue disease escape destroy destruction buried damaged starving dry mud

Take notes about the disaster and the consequences.

- Where did it happen, and when?
- Describe the disaster.
- What were the consequences?

11 Now write a newspaper article describing the disaster.

Unit 15 Tourist attractions

GRAMMAR

1 **Complete the sentences in the simple present passive using the verbs in parentheses.**

1 Guests are taken (take) to the hotel by helicopter.
2 French _____ (speak) in some countries in Africa.
3 This building _____ (regard) as a masterpiece.
4 All the rooms _____ (equip) with the latest technology.
5 This sculpture _____ (describe) as a symbol of the city in guidebooks.
6 Many palaces around the world _____ (construct) from marble.
7 The Alhambra _____ (consider) an important tourist attraction in Spain because of its rich Islamic history.

2 **Rewrite the sentences in the simple present passive. Include *by* if necessary.**

1 People ride bikes in China.
Bikes are ridden in China.
2 They make helicopters in Japan.
Helicopters _____.
3 Not only people in the U.S. speak English.
English _____.
4 A chauffeur usually drives a limousine.
A limousine _____.
5 Visitors take a lot of pictures.
A lot of pictures _____.
6 Do they use computers at your school?
Are computers _____?
7 Do architects design buildings?
Are buildings _____?
8 The doctor treats patients in the hospital.
Patients _____.

VOCABULARY

3 **Look at the following words related to architecture.**

spectacular plasterwork
dome ~~calligraphy~~ fountain
courtyard arch

Which one is…
1 a type of beautiful writing? calligraphy
2 an adjective meaning "incredible?" _____
3 a curved structure supporting the weight of a roof or wall? _____
4 a structure from which jets of water are pumped out? _____
5 an open area of ground surrounded by walls or buildings? _____
6 a rounded roof of a building? _____
7 ornamental work done with a paste that dries very hard and solid? _____

4 **Complete the text with words from Exercise 3.**



Buckingham Palace in London is a **1** spectacular building. To approach it, you walk through Admiralty Arch, across St. James's Park with its beautiful lake and **2** _____, past the marble Victoria Memorial, and stop in the large **3** _____ outside to admire the east façade. Inside, there are 775 rooms, including nineteen State Rooms. The Grand Staircase, which leads to these rooms, is an impressive sight, sculpted from bronze and lit by a **4** _____ above. The landing at the top has interesting **5** _____ on the walls, showing people and the four seasons of the year. The Queen's Gallery on the west side of the Palace has exhibitions of art ranging from portraits to **6** _____ and is open to the public for most of the year.

5 **Choose the correct answer.**

1 You can see the coral reefs from the boat because the bottom of the boat is made of *metal* / *glass*.
2 The bride's dress is made of the finest *brass* / *silk* from China.
3 DVD cases break easily because they are made of *plastic* / *glass*.
4 Burj Khalifa is constructed from strong *steel* / *diamond*.
5 Objects that are made of *steel* / *wood*, like tables and chairs, burn easily.
6 The statue is made of *silver* / *bronze*, which is polished to make it brown and shiny.
7 The king's crown is made of *marble* / *gold*.
8 Knives, forks, and other utensils used for eating are made of lightweight *silk* / *metal*.

GRAMMAR

6 **Complete the text with the simple present passive form of the verbs in parentheses.**



My family and I went to the Bahamas on vacation last summer. We stayed in a luxury hotel. It is **1** built (build) on a beautiful beach. Guests **2** _____ (take) to the hotel by limousine when they arrive. The stylish guest suites **3** _____ (decorate) beautifully, and they **4** _____ (equip) with huge, marble bathrooms and plasma TVs. There is a private beach and swimming pool and a private fitness center. Guests **5** _____ (entertain) in the evenings by live musicians.

7 **Complete the sentences with the simple present passive form of the verbs in the box.**

build	~~sculpt~~	use (for)
decorate (with)		make (of)
produce (in)		design

1 The statue is sculpted from bronze.
2 A building _____ by an architect, who draws the plans. Then it _____ by a construction company.
3 The windows _____ glass.
4 A lot of cars _____ Japan.
5 The gold ring _____ tiny diamonds.
6 A sharpener _____ sharpening a pencil.

WRITING

8 **Write about objects in your home and town. What are they made of? Use as many of these materials as you can.**

steel	metal	marble	silk	wood
glass	plastic	diamond	bronze	
brass	gold	silver		



READING

9 **Read the text and write *True* or *False*. Correct the false sentences.**

Hong Kong is one of the most important cities in East Asia. It is expanding rapidly. It has many luxury hotels, giant skyscrapers, and modern shopping malls. But despite the urban sprawl of the city, the region of Hong Kong is a natural wildlife habitat. The population density is one of the highest in the world, with 57,250 people per square kilometer in the busiest part of the city in 2014. However, the built-up area covers only 25% of the land, because much of it is mountainous and unsuitable for construction.

Country parks and nature reserves make up about 38% of Hong Kong. One of the most interesting ones is Kam Shan Country Park, where there is a large population of wild monkeys. It is a short distance north of the city. The reserve, which consists mostly of forest around a reservoir (a man-made lake), became a park in 1977. It contains a large variety of tree species, among which are camphor laurel and acacia trees. There are also many beautiful flowering plants, such as rose myrtle and Hong Kong Gordonia.

Several species of birds that are in danger of becoming extinct in other parts of Hong Kong live and breed in the park. An important example is the crested goshawk. The park is home to a variety of resident birds, but there are also migratory birds that live there in the winter or just pass through. The park is visited daily by many people from the nearby city, who come to enjoy nature and the open air. There are paths where visitors can run or walk, and areas for barbecues and picnics. To make it easier for people to reach the park, there are frequent buses from the city.

The highest hill in the park is called Golden Hill. Walkers climb it to see panoramic views of the surrounding hills, and the islands and the ocean beyond.

1 Kam Shan Country Park is more than ten years old. True

2 It is in the middle of the city of Hong Kong. _____

3 It consists of sand dunes and desert. _____

4 A reserve is not the same as a reservoir. _____

5 The buses make it easier for visitors to come to the park. _____

6 The crested goshawk is now extinct. _____

7 All visitors go running in the park. _____

8 Hong Kong Gordonia is a tree species. _____

VOCABULARY

10 **Find words and phrases in the text with the following meanings.**

1 a species no longer found living on the Earth extinct

2 an ever-growing area of city expansion _____

3 coming to and leaving an area regularly _____

4 the quantity of people in a certain area _____

5 reproduce and grow in number _____

6 very tall buildings _____

7 a natural home for a species _____

8 someone or something that lives somewhere permanently _____

11 **You are going to write a tourist brochure describing a place of beauty.**

Write about a nature reserve or wildlife/bird sanctuary in your country.
Do some research to find out and write about the following aspects of the area:

- landscape
- weather
- wildlife
- vegetation

Make a list of all the things there are to do and see for people who are interested in:

- physical activities and sports
- photography
- bird watching
- art and writing

12 **Now write a description of the place for a tourist brochure. Remember to use adjectives to make your writing interesting.**

Unit 16 Inventors in the past

VOCABULARY

1 **Complete the chart with the words for people.**

1 sculpture	sculptor
2 painting	
3 art	
4 invention	
5 music	
6 science	

GRAMMAR

2 **Write sentences in the simple past passive.**



1 The Parthenon / build / by the ancient Greeks.
The Parthenon was built by the ancient Greeks.

2 Many famous buildings in Turkey / design / by the great architect Sinan.

3 The wheel / invent / thousands of years ago.

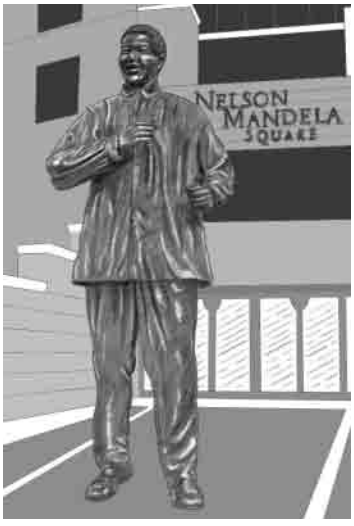
4 The painting *Water Lilies* / paint / by Monet.

5 The pyramids / construct / by the ancient Egyptians.

6 The first telephone call / make / in 1876.

7 Spectacles / first / wear / in 1268.

3 **Complete the newspaper article with the simple past passive form of the verbs in parentheses.**



The World's first public bronze statue of Nelson Mandela **1** was shown (show) to the public on March 31, 2004, in Johannesburg, South Africa. The statue **2** _____ (unveil) by Mandela's eldest granddaughter. The six-meter high statue **3** _____ (carve) out of bronze by Kobus Hattingh and Jacob Maponyane. It **4** _____ (complete) in February 2004. It **5** _____ (move) to Nelson Mandela Square in the middle of the night before the official unveiling the next day.

The statue **6** _____ (photograph) for the cover of a well-known magazine, and in this way, it **7** _____ (see) by people all over the world.

4 **Complete the text in the simple past passive.**

Flying a hot-air balloon

1 The first hot-air balloon / launch / in 1783.
The first hot-air balloon was launched in 1783.

2 Only animals / take / as passengers on that flight.

3 Two months later, a hot-air balloon / launch / two French brothers, the Montgolfiers, / from Paris.

4 In 1785, two balloonists / carried / across the English Channel / in their balloon. It / consider / a long-distance flight!

5 The first modern hot-air balloon / design and build / in 1960.

6 Finally, in 1999, / the first around-the-world flight / complete.

VOCABULARY

5 **Complete the sentences with the noun forms of the words in the box.**

engine ~~**music**~~ **paint**
science **sculpt**

1 Phil Collins is a famous musician from England. He started playing the drums at the age of five.

2 Auguste Rodin is my favorite _____. His statue *The Thinker* is world famous.

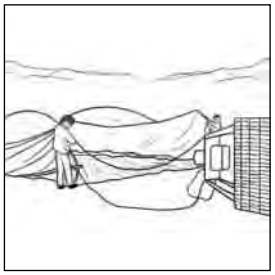
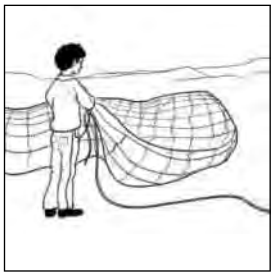
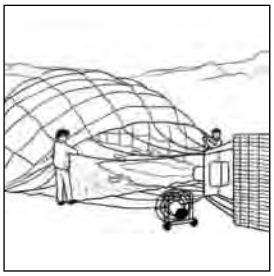
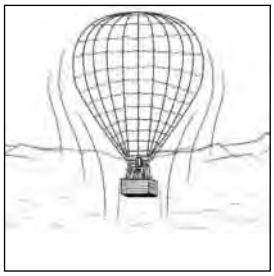
3 Isambard Kingdom Brunel was an _____ who constructed some of the longest bridges of the nineteenth century.

4 Claude Monet is a French _____ who painted scenes of social life in nineteenth-century Paris.

5 Alexander Fleming was a _____ who discovered penicillin.

WRITING

6 **How did one of the first hot-air balloons fly? Look at the pictures and write the steps, using the simple past passive and *by* if necessary.**

1 the balloon / unpack and lay flat / on the ground
The balloon was unpacked and laid flat on the ground.

2 the balloon / connect to / a basket and a burner

3 a rope / tie / to the balloon and / hold / by someone

4 the balloon / fill / with hot air

5 the balloon / lift from the ground / the wind

READING

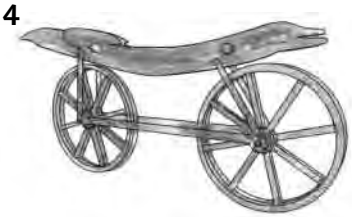
7 **Look at the pictures. What invention are you going to read about? Read and check.**

8 **Match the paragraphs and the pictures.**

1 

2 

3 

4 

Ever since animals were tamed, horses, camels, elephants, and donkeys have been ridden all over the world. Then a new development changed transportation forever: the bike was invented.

A _____

Leonardo da Vinci made a sketch of the modern bike in 1490. It was very modern for its time, but experts don't believe the sketch was ever used to make a bike.

B _____

Around 1790, a running machine was invented by a French craftsman named de Sivrac. It was made of wood and had two wheels that were connected by a longer piece of wood. The rider stood across the long piece, and the running machine was moved forward when he pushed his feet on the ground (similar to riding a scooter.) In 1817, steering was made possible by adding handlebars. The person who invented this type of bike was a German named Baron Karl von Drais. However, the roads at that time were too rough for this "hobby horse."

C _____

In 1839, Kirkpatrick MacMillan, a Scotsman, developed the idea further by adding pedals.

D _____

Ernest Michaux is considered the "father of the bike," as he and his brother Pierre added pedals, and cranks to make the wheels turn. Their design made the idea of riding a bike very popular, although it was a rough ride and it deserved the name of "the boneshaker!"
The brothers' design was improved by British engineers.

9 **Answer the questions.**

1 What was man's major form of transportation before the bike was invented?
animals – horses, camels, elephants, and donkeys

2 Who first had the idea for a bike? When? _____

3 How was the 1790 bike made to move? _____

4 How did the "hobby horse" improve in design, and who was responsible for this?

_____

5 Why wasn't it popular for long? _____

6 Why was the Michaux model called a "boneshaker"?

_____

VOCABULARY

10 **Complete the sentences with words from the text.**

1 Before a product is produced, the designer makes a sketch of what it will look like.
2 When two things are joined, they are _____.
3 _____ means being able to move the bike in the right direction.
4 A _____ is a two-wheeled form of transportation that is pushed along the ground with the feet.
5 _____ are used with the feet, to make the bike move forward.
6 The device that makes the wheels turn is called the _____.
7 A person who builds machinery is an _____.

WRITING: The history of an object

11 **Write an article about the history of an everyday object. Choose your own object to research or use the ideas below. Take notes.**





a famous building or structure
an electronic device
an article of clothing
an item of school supplies (pencil, eraser, etc.)
a form of transportation
a medical treatment or aid
a means of communication
a home appliance (washing machine, refrigerator, etc.)
a kitchen utensil

12 **Write about the invention of the object. Use the passive as much as you can. Make sure you answer these questions in your writing.**

- Who was it invented by, and when?
- How did the inventor get the idea for it?
- How was it first made?
- How did the design change or improve?
- How successful has it become?

Progress test 4

GRAMMAR

1 Choose the correct answer. (1 point each)

1 A desert is a place *who / that / where* there is very little rain.
2 Do you know anyone *who / whose / that* father is a doctor?
3 The Golden Gate Bridge, *what / who / which* is in San Francisco, is 244 meters long.
4 The polar bear is an animal *who / what / that* lives in the Arctic.
5 Climate change is something *what / who / that* affects us all.
6 Architect Jorn Utzon, *whose / which / who* designed the Sydney Opera House, is Danish.

6

2 Which sentences in Exercise 1 have defining relative clauses? Which have non-defining relative clauses? (1 point each)

Non-defining: _____

Defining: _____

6

3 Complete the sentences using the simple present or simple past passive form of the verbs in parentheses. (1 point each)

1 The world's oldest dinosaur fossils _____ in Madagascar in 1999. (find)
2 Thousands of books _____ every year. (publish)
3 Rocks _____ by geologists. (study)
4 Over 300 languages _____ in London schools today. (speak)
5 Tutankhamun's tomb _____ in 1922 by Howard Carter. (discover)
6 The Petronas Twin Towers, which are the world's tallest twin buildings, _____ in 1996. (complete)
7 The first coffee beans _____ in Yemen, in the fifteenth century. (roast)
8 Most of the world's bananas _____ from South America. (import)

8

4 Write the sentences in the passive form. (1 point each)

1 People consider Tokyo to be one of the most modern cities in the world.

_____

_____

2 These days most photographers use digital cameras.

_____

_____

3 The sculptor carved the statue out of bronze.

_____

_____

4 Every year they hold a competition for young inventors, and they give prizes to the winners.

_____

_____

5 After the eruption of Vesuvius, farmers planted vines in the fertile lava fields.

_____

_____

6 An earthquake under the ocean caused a tsunami.

_____

_____

7 People send nearly 5,000 text messages every second in Britain.

_____

_____

8 People mine most of the world's gold in South Africa.

_____

_____

9 The river flooded the entire town.

_____

_____

10 They took the injured survivors to the hospital.

_____

_____

10

VOCABULARY

5 Choose the correct answer. (1 point each)

1 A *drought / landslide* caused a huge amount of mud to move down the mountainside.
2 Houses became flooded after the torrential *wind / downpour*.
3 Many people called for help when they were left *stranded / frozen* on the roofs of their houses during the flood.
4 *Crops / Rocks* grow very well in the *dramatic / fertile* earth around volcanoes.
5 *Glass / Granite* is a very hard type of rock.
6 The power of the ocean and the wind causes softer rocks to *wear down / melt* and become sand.
7 A *suite / helipad* consists of a bathroom and a bedroom.
8 The scarf is made of *wood / silk*.
9 *An engineer / A musician* creates music.
10 *An inventor / A sculptor* makes statues.

10

6 Answer the questions. (1 point each)

1 Which of these kinds of art is a drawing – a sketch or a sculpture? _____
2 Which of these is a habitat – a plover or a wetland? _____
3 Which of the following is a bird – a flamingo or a limousine? _____
4 Which is a man-made habitat for fish – an aquarium or a lagoon? _____
5 Which material is used to make clothing – silk or brass? _____
6 Which material is NOT a metal – diamond or bronze? _____
7 Which is NOT a type of stone – marble or lava? _____
8 Which of the following causes a lot of water – a drought or a flood? _____
9 Which type of climate is warmer – a polar or a tropical climate? _____
10 Which of the following words refers to bones – a skeleton or an asteroid? _____

10

Total 50

Final test

1 Read these sentences carefully and choose the correct words to complete the sentences. (1 point each)

1 What's the name of the book that you _____ right now?
a read **b** are reading **c** will read

2 How often _____ to the library?
a are you usually going **b** go
c do you go

3 By the time she was twenty-one, my mother _____ to college.
a went **b** had been **c** has been

4 Aida and I _____ best friends for three years.
a are **b** are being **c** have been

5 _____ diving before?
a Have you ever tried **b** Did you ever try **c** Had you ever tried

6 I don't like this TV show because it's _____
a boring **b** bored **c** not interested

7 I was born on _____.
a April 12 **b** April **c** 1997

8 I haven't been to the ocean _____ last summer.
a just **b** for **c** since

9 My sister _____ medicine next year.
a will study **b** doesn't study **c** studies

10 I haven't finished my homework _____.
a already **b** just **c** yet

11 I need a bigger pair of shoes. These shoes _____.
a are too big **b** aren't small enough
c are too small

12 There _____ milk in the refrigerator.
a aren't any **b** isn't a **c** isn't any

13 I _____ my vacation a lot.
a enjoy **b** am enjoying **c** don't enjoy

14 If you don't study hard, you _____ do well.
a not **b** don't **c** won't

15 What _____ if you met a famous person?
a you say **b** would you say
c will you say

16 _____ we study together this weekend?
a Let's **b** Should **c** How about

17 If you can't do the work, the teacher _____ you.
a help **b** will to help **c** will help

18 Jenny is the girl _____ lives next door to me.
a who **b** which **c** whose

19 The building, _____ completed last year, is the tallest in the world.
a which was **b** what **c** it was

20 These days, most of our paper _____ from wood.
a makes **b** was made **c** is made

	20

2 Choose the correct answer. (1 point each)

Thousands of vacations **1** *are taken / were taken* every year. But in 2001, the first trip to outer space **2** *is made / was made*. The traveler was Dennis Tito, **3** *that / who* was a millionaire. He paid **4** *a lot / enough* of money for this trip, **5** *what / which* was a "trip of a lifetime." So far, it's the most expensive vacation package that **6** *had / has* ever been booked! Now the idea of space travel **7** *is becoming / becomes* more popular, and several other wealthy people are **8** *interested / interesting* in a trip to space. But I don't think I **9** *will / would* go, even if I had the chance – for me, the idea is too **10** *scared / scary*.

	10

3 **Rewrite the sentences using the correct relative pronoun. (1 point each)**

1 We went to Italy. We saw some awesome ruins.

_____

_____

2 My brother is practicing for his music test. It's next week.

_____

_____

3 Lara's cousin visited her today. Her cousin is from Kuwait.

_____

_____

4 A famous writer is coming to our school today. I've forgotten his name.

_____

_____

5 I've read two books on astronomy. Sally lent them to me.

_____

_____

6 They visited Antarctica last year. There are lots of penguins there.

_____

_____

	6

4 **Complete the sentences with the correct form of the verbs in parentheses. (1 point each)**

a My uncle, who is a scientist, usually **1** _____ (work) in a laboratory. But right now, he **2** _____ (teach) in college.

b **John:** How about **3** _____ (go) camping in the mountains this weekend?
Bob: Good idea. But what **4** _____ (we do) if it **5** _____ (get) cold at night?

c **Jeff:** **6** _____ (you walk) across the new bridge yet?
Alan: Yes, I **7** _____!
Jeff: Really? When **8** _____ (you go) there?
Alan: It was just after it **9** _____ (be open) by the mayor.

d Gold **10** _____ (first discover) in Egypt around 3100 BCE. And miners **11** _____ (still find) gold in Egypt today.

e Helen is an exceptionally intelligent girl. By the time she started school, she **12** _____ (already learn) to read. Now she's only fifteen, and she **13** _____ (just write) her first novel!

f **John:** I hope you have a good trip to China! **14** _____ (you send) me a postcard if you visit the Great Wall?
Robert: Of course I will!

	14

Total | | 50 |
|---|---|

Key:
adj = adjective
adv = adverb
n = noun
v = verb

All nouns are listed in the singular and can be assumed to form the plural by adding *s*, unless the noun has no plural form (e.g., *shorts*) or an alternative plural is listed (e.g., *gases*, *flies*).

A

absorb (v)
achieve (v)
achievement (n)
act (n)
actor (n)
adapt (v)
adaptation (n)
admire (v)
adventurer (n)
adventurous (adj)
advertisement (n)
alligator (n)
alloy (n)
alternative (adj)
amazing (adj)
ambassador (n)
amber (noncount n)
ambitious (adj)
amphibian (n)
anaconda (n)
anemone (n)
angelfish/angelfish (n)
anger (noncount n)
annual (adj)
appalling (adj)
approval (noncount n)
arcade (n)
arch (n)
archeologist (n)
archeology (noncount n)
architecture (noncount n)
Arctic fox/Arctic foxes (n)
arithmetic (noncount n)
artist (n)
ascend (v)
ash (noncount n)
assassinate (v)
asteroid (n)
astrolabe (n)
astronomer (n)
astronomy (noncount n)
atmosphere (n)
attempt (v)
audience (n)
award (n, v)
awesome (adj)
awful (adj)
axe (n)

B

backstage (noncount n)
ballpoint pen (n)
ban (v)
bandit (n)
basalt (noncount n)
base (n)
bat (n)
battle (n)
beautiful (adj)
beauty (noncount n)
become (v)
bee (n)
biography/biographies (n)
biology (noncount n)
bird watching (noncount n)
bleaching (noncount n)
blizzard (n)
bone (n)
botany (noncount n)
brass (noncount n)
bravery (noncount n)
breathe (v)
breathtaking (adj)
brigadier general (n)
brochure (n)
bronze (noncount n)
bubble (v)
bull shark (n)

C

calligraphy (n)
calm (adj)
camel (n)
canyon (n)
capital city/capital cities (n)
capsize (v)
captivating (adj)
carry out (v)
cart (n)
carving (n)
catapult (n)
caterpillar (n)
cattle (n)
cautious (adj)
century/centuries (n)
challenge (n)
challenging (adj)
charity/charities (n)
charm (v)
chart (n, v)
chatty (adj)
chauffeur (n)
cheerful (adj)
chemical (n)
chemistry (noncount n)
chimpanzee (n)
circumnavigate (v)
clear (adj)
cliff (n)
climate (n)
clownfish/clownfish (n)
coast (n)
comedy/comedies (n)
common (adj)
compass/compasses (n)
competitor (n)
complain (v)
compose (v)
confident (adj)
conquer (v)
conquest (n)
conservation (noncount n)
conspire (v)
construct (v)
continent (n)
contribute (v)
coral (noncount n)
coral reef (n)
courtyard (n)
crack (n)
crampon (n)
crash (v)
crater (n)
creature (n)
crew (n)
crocodile (n)
crop (n)
cruise (n)
crust (n)
crystal (adj)
crystal clear (adj)
cunning (adj)
curious (adj)
current (n)
cuttlefish/cuttlefish (n)
cymbal (n)

D

dagger (n)
damage (v)
danger (n)
dawn (noncount n, v)
deafening (adj)
deck (n)
decorate (v)
deep (adj, adv)
defeat (v)
dependable (adj)
desert (n)
design (v)
despair (noncount n)
destination (n)
determined (adj)
devastate (v)
dhow (n)
diamond (n)
dinosaur (n)
disastrous (adj)
discovery/discoveries (n)
disease (n)
dismay (noncount n)
diver (n)
dolphin (n)
dome (n)
downpour (n)
drawing (n)
dreadful (adj)
drought (n)
dull (adj)
dune (n)
dynamite (noncount n)

E
eagle (n)
easygoing (adj)
ecology (noncount n)
economic sciences (n)
eel (n)
emerald (n)
emperor (n)
empire (n)
enemy/enemies (n)
energy (noncount n)
engineer (n)
enormous (adj)
enthusiast (n)
environmental science (n)
equipment (noncount n)
erupt (v)
escape (v)
essayist (n)
event (n)
evolve (v)
excavation (n)
excursion (n)
exhausting (adj)
exotic (adj)
expedition (n)
experiment (n)
exploration (noncount n)
explore (v)
explorer (n)
explosive (n)
exposure (noncount n)
extinct (adj)
extroverted (adj)

F
factor (n)
failure (n)
famous (adj)
fascinating (adj)
feather (n)
ferry/ferries (n)
fertile (adj)
fever (noncount n)
fight (v)
fish/fish (n)
flamingo (n)
flashlight (n)
flipper (n)
flood (n)
flooding (noncount n)
flood water (noncount n)
fly/flies (n)
forecast (n)
formation (n)
fossil (n)
fountain (n)
frame (n)
freezing (adj)
friendly (adj)
frostbite (noncount n)
frozen (adj)
fun-loving (adj)
funny (adj)

G
galley (n)
gallery/galleries (n)
gas/gases (n)
gasp (v)
gem (n)
general (n)
generous (adj)
genius/geniuses (n)
geology (noncount n)
giant (n)
gift (n)
glacier (n)
glass (noncount n)
global warming (noncount n)
gloomy (adj)
gold (noncount n)
granite (noncount n)
greenhouse gas/greenhouse gases (n)
guidebook (n)
guitar (n)

H
habitat (n)
handle (n)
hang glider (n)
hardworking (adj)
harmful (adj)
heat (noncount n)
heir (n)
helicopter (n)
helm (n)
hero/heroes (n)
hidden (adj)
highlight (n)
historian (n)
hole punch/hole punches (n)
honest (adj)
horizon (n)
hovercraft (n)
huddle (v)
hummingbird (n)

I
ice (n)
ice age (n)
iceberg (n)
ice cap (n)
ice floe (n)
illuminate (v)
imaginative (adj)
impressive (adj)
incandescent (adj)
industrial (adj)
inscription (n)
insect (n)
insect repellent (noncount n)
installation (n)
intelligent (adj)
invasion (n)
invention (n)
inventor (n)
investigate (v)

J
jazz (noncount n)
jeep (n)
jewel (n)
jewelry (noncount n)
journal (n)
journey (n, v)
judge (n)

K
kangaroo (n)
kayaking (noncount n)
kind (adj)
kingdom (n)
knight (n)

L
laboratory/laboratories (n)
ladder (n)
landscape (n)
landslide (n)
lapwing (n)
lava (noncount n)
lazy (adj)
leak (v)
legend (n)
light (n)
lightbulb (n)
lionfish/lionfish (n)
liquid (n, adj)
literature (noncount n)
lizard (n)
logging (noncount n)
lowland (n)
loyal (adj)
luxurious (adj)

M
magma (noncount n)
mammal (n)
marathon (n)
marble (noncount n)
marine (adj)
marine archeology (noncount n)
mask (n)
mast (n)
mathematician (n)
mathematics (noncount n)
medicine (noncount n)
melting (adj)
metal (n)
meteorology (noncount n)
microorganism (n)
microscope (n)
migrate (v)
mine (n)
modest (adj)
molten (adj)
monarchy/monarchies (n)
monsoon (n, adj)
moray eel (n)
mosquito net (n)

mountain (n)
mountaineering (noncount n)
mountain range (n)
movie theater (n)
moving (adj)
mud (noncount n)
musk ox/musk oxen (n)

N

net (n)
nostril (n)
novel (n)

O

oar (n)
obsidian (noncount n)
ocean (n)
officer (n)
oil rig (n)
operation (n)
ornament (n)
outgoing (adj)
outstanding (adj)
overlook (v)
oxygen (noncount n)

P

pain (noncount n)
painter (n)
painting (n)
palace (n)
parachuting (noncount n)
parrot (n)
passport (n)
patient (adj)
paw (n)
peace (noncount n)
peaceful (adj)
peak (n)
pearl (n)
pedal (n)
pelican (n)
penguin (n)
penicillin (noncount n)
perilous (adj)
petal (n)
pharaoh (n)
philosopher (n)
phonograph (n)
photographer (n)
physics (noncount n)
pilgrimage (n)
piranha (n)
plain (n)
plasterwork (n)
plastic (noncount n)
play (n)
playwright (n)
plot (v)
plover (n)
poem (n)
poet (n)
polar (adj)
polar bear (n)
polite (adj)
pollute (v)
port (n)
postage stamp (n)
precious (adj)
predict (v)
prediction (n)
prehistoric (adj)
pressure (n)
principle (n)
prison (n)
prisoner (n)
produce (v)
profession (n)
proud (adj)
provide (v)
pseudonym (n)
puffer fish/puffer fish (n)
pumice (noncount n)

Q

quartz (noncount n)
quiet (adj)

R

radioactivity (noncount n)
radium (noncount n)
rainforest (n)
rare (adj)
rat (n)
ray (n)
record (v)
reef (n)
rehearsal (n)
reign (v)
reindeer/reindeer (n)
relative (n)
relaxing (adj)
reliable (adj)
relieve (v)
rent (v)
repellent (noncount n)
report (n)
reproduce (v)
reptile (n)
reputation (n)
research (noncount n, v)
resin (noncount n)
review (n)
rigging (noncount n)
rock (n)
rod (n)
rope (n)
rough (adj)
routine (n)
ruby/rubies (n)
ruler (n)

S

safari (n)
sail (n, v)
salmon (noncount n)
sapphire (n)
satirist (n)
saw (n)
saxophone (n)
scary (adj)
scenery (noncount n)
sculptor (n)
sculpture (n)
scurvy (noncount n)
sea creature (n)
sea horse (n)
sea kayaking (noncount n)
sea level (n)
seal (n)
seize (v)
sensitive (adj)
serious (adj)
shark (n)
sheath (n)
shy (adj)
Siberian crane (n)
silk (noncount n)
silver (noncount n)
sink (v)
site (n)
skateboard (n)
sketch/sketches (n)
skydiving (noncount n)
skyscraper (n)
sled (n)
smart (adj)
snowstorm (n)
soldier (n)
solid (n, adj)
souvenir (n)
spaceship (n)
sparkle (v)
species/species (n)
spectacular (adj)
spider (n)
spire (n)
stage (n)
stapler (n)
starvation (noncount n)
starving (adj)
statue (n)
steel (noncount n)
stem (n)
stingray (n)
stonefish/stonefish (n)
strand (v)
strategy (n)
streamlined (adj)
structure (n)
stubborn (adj)
submerge (v)
submersible (n)

succeed (v)
success (n)
successful (adj)
suffer (v)
sultan (n)
summit (n)
sunken (adj)
sunscreen (noncount n)
superb (adj)
supermarket (n)
surfboard (n)
surfing (noncount n)
surgeon (n)
swan (n)
swimsuit (n)
sword (n)

T

talented (adj)
talkative (adj)
task (n)
teenager (n)
telegraph (n)
temperate (adj)
temperature (n)
terrifying (adj)
test (n, v)
theory/theories (n)
thief/thieves (n)
threat (n)
thrilling (adj)
throne (n)
tiny (adj)
toad (n)
tomb (n)
torrential (adj)
tour (n)
tourism (noncount n)
tower (n)
trade (v)
traffic (noncount n)
tragedy/tragedies (n)
tragic (adj)
training (noncount n)
trait (n)
transplant (n)
travel agency/travel agencies (n)
treasure (n)
treeless (adj)
trek (n)
trekking (noncount n)
trigger (v)
trip (n)
trophy/trophies (n)
tropical (adj)
trustworthy (adj)
tundra (noncount n)
twilight (noncount n)

U

unique (adj)
unreliable (adj)

V

vacation (n)
vacuum (n)
valley (n)
valuable (adj)
vessel (n)
video (n)
vitamin (n)
volcano/volcanoes (n)
voyage (n)
voyager (n)

W

ward (n)
warning (n)
waste (noncount n)
watch/watches (n)
waterfall (n)
waterproof (adj)
wealthy (adj)
wear down (v)
webbed (adj)
wetland (n)
wetsuit (n)
whale (n)
wicked (adj)
wildlife (noncount n)
win (v)
wing (n)
winner (n)
wonder (n)
wonderful (adj)
wood (noncount n)
worsen (v)
wreck (n)

Y

yacht (n)

Z

zoology (noncount n)

Module 5

Unit 9

The present progressive

● We use the present progressive to talk about what is happening now.
Science today is continuing to develop.
I am eating lunch right now.

● We use the present progressive to talk about a temporary activity or situation.
I'm only working in Australia for two more weeks.
They are staying with their grandparents for the summer.

● We use the present progressive with a time adverb or phrase to talk about future events.
Then I'm coming home.
The moment it stops raining, we're going out.

● We use the present progressive with an adverb to show annoyance.
He's a very impatient person – he is always looking at his watch.

Unit 10

Stative and action verbs

● Action verbs, such as *walk*, *talk*, *do*, *go*, *eat*, *drink*, *run,* and *watch*, describe actions and activities and can be used in both the simple present and the present progressive.
I usually do my homework before dinner.
I'm doing my homework now.
He often goes for a walk after work.
He's going for a walk this afternoon.

● Stative verbs, such as *be*, *like*, *love*, *hate*, *know*, *think*, *believe*, *remember*, *forget*, *need*, *want*, *see*, *hear,* and *feel*, describe states, opinions, and feelings and do not usually appear in the present progressive. This is because they are used to describe fairly permanent, instead of transient, states.
She is American.
He likes soccer.
We see lightning before we hear thunder.
I forget her name.
Scientists need microscopes to do their research.

Module 6

Unit 11

The first and second conditionals

● We use the first conditional to talk about possible future events that depend on other future events.
If the ice caps continue to melt, then by 2100, sea levels will rise by forty-three centimeters.
If this happens, there will be disastrous consequences.

● We form the first conditional with *If* + simple present, *will/won't* (or another modal verb) + base form. *Will* is often contracted to *'ll*.
If you go in February, you'll see the penguin chicks.
If you go there in the winter, you won't see the sun.

● We can put the situation (the *if* clause) or the consequence first. If the situation comes first, we use a comma.
If you travel with us, you won't regret it.

● If the consequence comes first, we don't use a comma.
You won't regret it if you travel with us.

● We can use *when* if the situation is certain.
When you visit the U.S., I'll show you around New York City.
I'll take you to the Empire State Building when you visit New York.

● We can also use unless instead of if in a negative context.
If the rain doesn't stop, we will stay home.
Unless the rain stops, we will stay home.

● We use the second conditional to talk about imaginary, impossible, or unlikely situations, either in the present or the future. It is often used to express the opposite of what is true.
If I had a car, I would drive you to the station now. (But the fact is that I don't have a car, so this is impossible.)
If I found a big diamond, I would give it to you. (Not impossible, but extremely unlikely.)
If we lived in Australia, we would go surfing every day. (But the truth is that we don't live in Australia, and so we don't go surfing.)

● We form the second conditional with *If* + simple past, *would/wouldn't* + base form. In spoken or informal English, we use *'d* for *would*. We can use *could* or *might* instead of *would*.
If she had a diamond ring, she'd wear it.
If I lived by the ocean, I might learn to swim.

● In the second conditional, we can put either the situation or the consequence first. If the situation comes first, we use a comma.
If you went there in the winter, you wouldn't see the sun.
You would be unlucky if you didn't see any seals.

Unit 12

Making suggestions

● There are several ways that we can make suggestions, either directly or indirectly. We can do this directly by putting forward an idea, that is, by making a statement.
Let's book the vacation today.
This approach invites a response, such as simple agreement or the putting forward of a different suggestion.
That's a great idea.
Yes, that sounds great.
I don't know. Maybe we should look at other possibilities.

● When we make direct suggestions, the verb form used is the base form.
Let's go to Seattle tomorrow.
Let's book the tickets today.

● We can make suggestions indirectly in the form of a question that is really a disguised proposal.
Why don't we visit somewhere different this year?
How about going to Canada?
Should we go in September?
What about September 1?

● When we make indirect suggestions through questions, different verb forms are used – either the base form or the *-ing* form.
Why don't we go to Canada this year?
How about going on a safari?
What about driving to Spain?

● We put *should* before the subject to form the interrogative.
Should we take a guidebook?

will/won't

● We use *will* and *won't* + base form to talk about future plans.
They will rent a car.
You won't have time to visit Toronto.

● We use *will* + base form to form the simple future. *Will* is often contracted to *'ll*.
I'll go by plane.

● We use *will* + *not* + base form to form the negative. *Will not* is usually contracted to *won't*.
You won't believe how many bears we have seen.

● We put *will* before the subject to form the interrogative.
Will they take the train?
Will the weather be good?

● To ask questions about the future, we may put a question word at the beginning of the question.
How will you travel to India?
What will you do there?

Module 7

Unit 13

Defining relative clauses

● Defining relative clauses are used to identify which particular person, place, or thing is being talked about. The defining relative clause is usually related to the main clause by a relative pronoun such as *who*, *that*, *where,* or *when*. We use *who* (and sometimes *that*) to refer to people; *that* to refer to things and animals; *where,* to refer to places, and *when* to times. *Whose* is the possessive form of *who*. *Whom* is the object form of *who*.
They affect the people who inhabit the region.
An iceberg is a huge piece of ice that floats in the ocean.
Places where there is a tropical climate are close to the Equator.
The months when heavy rain falls follow months of dry weather.
He's the man whose daughter I met in Argentina.

● Defining relative clauses follow a noun, which may be either the subject or object of the relative clause. There is no comma between the noun and the relative clause.
I have a cat that is black.
I lost the cat that I had.

● Where the relative pronoun refers to the object, it may be omitted.
I lost the cat I had.

Unit 14

Non-defining relative clauses

● Non-defining relative clauses are used to give more detail about a particular person, place, or thing that is being talked about. The non-defining relative clause (underlined in the examples below) is usually related to the main clause by a relative pronoun such as *who*, *which*, *where,* or *when*. We use *who* to refer to people; *which* to refer to things and animals; *where* to refer to places, and *when* to times. *Whose* is the possessive form of *who*.
Geologists, who study the Earth's rocks and fossils, can "read" layers of rock.
The ice caps, which are in the Arctic and the Antarctic, are melting.
Humans, whose activities cause global warming, need to take action.
Venice, where there are no cars, is a city in Italy.
Fall, when the trees lose their leaves, is her favorite season.

● A non-defining relative clause differs from a defining relative clause in that it gives additional, instead of essential, information, and without it the sentence would still convey meaning.
Geologists can "read" layers of rock.
The ice caps are melting.

● Non-defining relative clauses follow a noun and are set off from the rest of the sentence with commas (or dashes or parentheses).

Archeologists have made surprising discoveries in the southern Sahara, where plants and animals face a harsh desert environment.

● In non-defining relative clauses, the relative pronoun is never omitted.

Module 8

Unit 15

The simple present passive

● We use the simple present passive when an action or idea or opinion is more important than the person or thing that does or has it (the agent). In such cases, we either don't know, or are not interested, in the identity of the agent.
English is taught in most schools.
The Alhambra is located in Granada, Spain.
Walls are designed with detailed plasterwork.

● We also use the simple present passive to describe a process, where again we either don't know or are not interested in who carries out the process.
Rice is grown in China.
The table is made of wood.

● We form the simple present passive with subject + *am/is/are* + the past participle of the verb. *Am/is/are* are often contracted to *'m/'s/'re*.
I'm invited to a party.
This letter's written in blue ink.

● We form the negative of the simple present passive with subject + *am/is/are* + *not* + the past participle of the verb. *Am/is/are* + *not* are usually contracted to *'m not/isn't/aren't*.
I'm not invited to the party.
The swimming pool isn't heated in the summer.
Some hotels aren't illuminated at night.

● We form questions in the simple present passive by changing the word order. We may also use a question word.
Is rice grown in India?
Where is rice grown?
What is made at a bakery?

● If more than one verb relates to the subject, only the past participles are needed after the first verb.
The fish are kept in an aquarium and fed and monitored every day.
Where is rice grown and harvested?

Unit 16

The simple past passive

● We use the simple past passive when an action or idea is more important than the person or thing that did or imagined it (the agent). In such cases, we either don't know, or are not interested in, the identity of the agent.
During his lifetime, Leonardo was admired and greatly respected.
Most of his designs were hidden in his notebooks.

● We also use the simple past passive to describe a process, where again we either don't know or are not interested in who carried out the process.
Some of his inventions were built.

● We form the simple past passive with subject + *was/were* + the past participle.
Leonardo was very interested in machines.
His notebooks were filled with sketches.

● We form the negative of the simple past passive with subject + *was/were* + *not* + the past participle of the verb. *Was/were* + *not* are usually contracted to *wasn't/weren't*.
Leonardo wasn't really understood.
Many of his paintings weren't finished.

● We form questions in the simple past passive by changing the order of the words. We may also use a question word.
Was the painting finished when he died?
When was the painting finished?

● When it is important to mention the person or thing that did the action, we use *by*.
Sunflowers *was painted by van Gogh*.
The first great invention that was developed by Edison was the phonograph.
Jane Eyre *was written by Charlotte Brontë*.

Irregular verbs

Base form	Simple past	Past participle
be	was/were	been
become	became	become
begin	began	begun
blow	blew	blown
break	broke	broken
bring	brought	brought
build	built	built
buy	bought	bought
catch	caught	caught
choose	chose	chosen
come	came	come
do	did	done
draw	drew	drawn
drink	drank	drunk
drive	drove	driven
eat	ate	eaten
fall	fell	fallen
fight	fought	fought
find	found	found
fly	flew	flown
forget	forgot	forgotten
get	got	gotten
give	gave	given
go	went	gone/been
grow	grew	grown
have	had	had
hear	heard	heard
hide	hid	hidden
hold	held	held

Base form	Simple past	Past participle
keep	kept	kept
leave	left	left
make	made	made
put	put	put
ride	rode	ridden
ring	rang	rung
run	ran	run
say	said	said
see	saw	seen
sell	sold	sold
send	sent	sent
sing	sang	sung
sit	sat	sat
sleep	slept	slept
speak	spoke	spoken
spend	spent	spent
stand	stood	stood
swim	swam	swum
take	took	taken
teach	taught	taught
tell	told	told
think	thought	thought
throw	threw	thrown
understand	understood	understood
wear	wore	worn
write	wrote	written