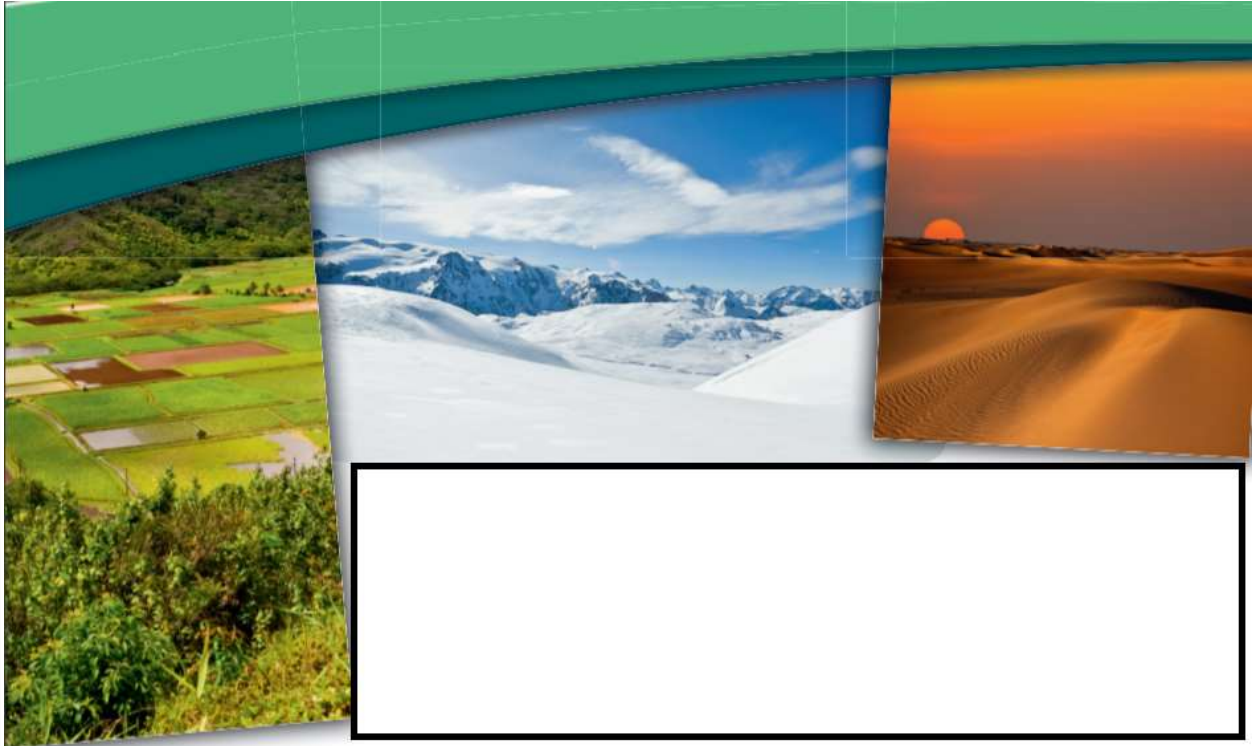


Unit 8

Lessons 3+4

Student's Book pages 64 and 65



VOCABULARY: Climate change

1 Find words from the text on page 62 that relate to the following subjects.

Climate	Natural Disasters	professions

Suggested answers

Climate: ice ages, cold, dark, warm periods, warmer, global warming, extreme.

Natural disasters: volcanic eruptions, clashes with asteroids, smoke and dust.

Professions: Geologists, Archaeologists

VOCABULARY: Adjectives

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

warm fertile dark frozen small

1 In past ice ages, much of 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

Answer

1 frozen

2 dark

3 warm

4 Small

5 fertile

LISTENING

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



Audioscript

A green Sahara

An international team of archaeologists, who were searching for dinosaurs fossils, has made a dramatic discovery in the Sahara Desert.

In the Gobero area of Niger, which is treeless today, the archaeologists 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 the valley dried up, about 4,500 years ago.

Archaeologists found evidence that people, who lived at the site between 4,500 and 10,000 years ago, lived next to a lake and hunted fish and animals. Paul Sereno, who made a team of researchers, described how he saw bones belonging to animals that didn't live in the desert. It's amazing that people once lived in an area that is now largely dust.

Answers

Archaeologists found evidence that people lived and hunted in the Sahara Desert between 4,500 and 10,000 years ago. There were bones belonging to animals that didn't live in the desert.

QUOTATION

**Read the quotation. Do you agree with it? Why/Why not?
Translate the quotation into Arabic.**

Wherever you go, no matter what the weather, always bring your own sunshine.

Anthony J.D'Angelo, Author

مهما كانت الظروف والتحديات، كن إيجابياً

READING AND GRAMMAR: Non-defining relative clauses

4 Read and complete the news report. Use the phrases from the box.

who later on established the Royal Society of Conservation of Nature

that used to be covered with plants

who both aim at turning the desert in Aqaba into an oasis
that bring back the desert to life
which were full of trees in the past



Jordan's wildlife

Through the years, Jordan has faced several environmental problems. One of these problems is the deforestation of areas (1)..... . These areas, (2)..... , have now become deserts. The loss of forested areas has put many animal species, as well as the soil, in danger. The decline of wildlife was first noticed by a group of hunters many years ago, (3)..... , a non-governmental organisation that carries out projects to protect the environment. The Jordanian

government has also taken steps towards protecting the remaining forests, and started projects (4)..... . One of these projects is the Sahara Forest Project, an agreement signed by Jordan and Norway, (5).....

Answers

1 that used to be covered with plants

2 which were full of trees in the past

3 who later on established the Royal Society of Conservation of Nature

4 that bring back the desert to life

5 who both aim at turning the desert in Aqaba into an oasis

SPEAKING

5 What other projects do you think can be carried out to protect nature? Discuss your ideas in a group. Then share your ideas with the class.

Answers

Students' own answers

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

Answers

Students' own answers

WRITING

Writing strategies

Post-writing

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

7 Write three paragraphs about what causes climate change and if you think it is important for the future of Earth. Use your ideas and those of the class from exercise 6.

Answers

Students' own answers

Unit 8

Lessons 3+4

Activity Book page 45

VOCABULARY

4 Complete the text about a volcano in Indonesia with the words from the box.

blocked dark dramatic fertile froze provide warm small

The Mount Tambora volcano The eruption of Indonesia's Mount Tambora on 5 April 1815 CE 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. The eruption (3) _____ out part of the sun's light for months afterwards. June, July and August, which were usually (4) _____ months, were extremely cold across Europe and North America that year. That's why, 1816 CE was called 'The Year Without a Summer'. All over the world crops failed and farmers had to kill their cattle to (5) _____ food. At least 300,000 people starved or (6) _____. In Indonesia, it took five years before the ground became (7) _____ enough for plants to grow again. **1 cold 2 clouds, rain 3 sun 4 wind**

1 dramatic

2 dark

3 blocked

4 warm

5 provide

6 froze

7 fertile

5 Use the words from the box in exercise 4 to put them under the two headings in the table below.

Adjectives	Verbs

dark, dramatic, fertile, warm,
small

blocked, froze, provide

WRITING

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



1 In 1812 CE, Petra was discovered. It was one of the ancient world's 'lost cities'. (which)

2 Jean-Louis Burckhardt is a Swiss traveller and explorer. He discovered Petra. (who)

3 Jean-Louis Burckhardt began his long expedition in 1810 CE. His main purpose was to find the source of the River Niger. (whose)

4 A local guide helped him find the Tomb of Aaron. He was employed by Burckhardt. (who)

5 Petra is now Jordan's most-visited tourist attraction. It is famous for its amazing architecture and water system. (which) **1 1 In 1812 CE, Petra, which was one of the ancient world's 'lost cities', was discovered.**

2 Jean-Louis Burckhardt, who discovered Petra, is a Swiss traveller and explorer.

3 Jean-Louis Burckhardt, whose main purpose was to find the source of the River Niger, began his long expedition in 1810 CE.

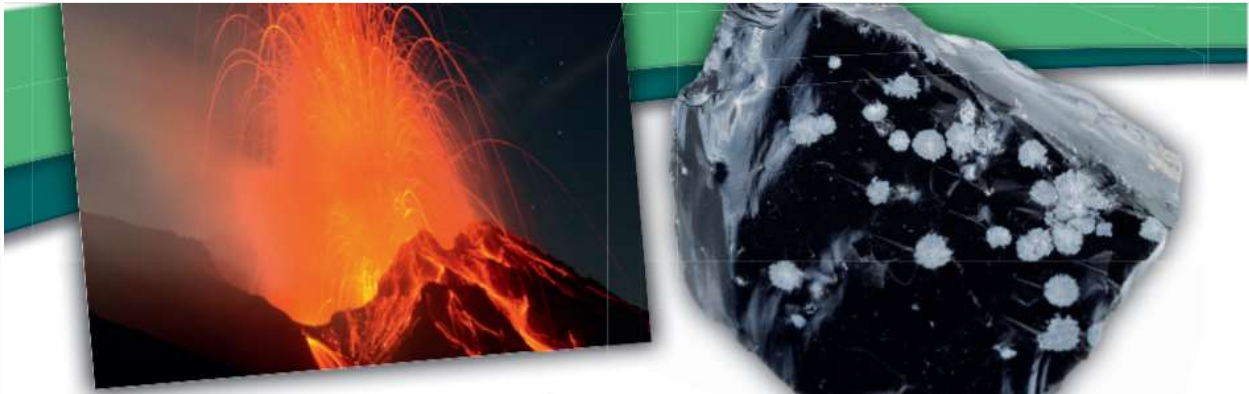
4 A local guide, who was employed by Burckhardt, helped him find the Tomb of Aaron.

5 Petra, which is famous for its amazing architecture and water system, is now Jordan's most-visited tourist attraction.

Unit 8

Lessons 5+6

Student's Book pages 66 and 67



VOCABULARY: Volcanoes

1 These words are all connected to volcanoes. Which ones refer to kinds of rocks? Check the meaning of any words you don't know in the Activity Book Glossary or in a dictionary.

plate crust pressure bubble
up magma lava basalt ash crush wear
down obsidian

Answer

Basalt, obsidian

READING

2 Read the article about volcanoes. What positive effects do volcanoes have?

Volcanoes

A _____

Volcanoes occur where the plates in Earth's crust have cracks or weak spots in them. The very hot melted rocks, which lie deep under 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. Some of these were active in Jordan. Today, one sixth of Jordan is covered with

basalt, or hardened lava. Most of this area is called the “Basalt Plateau”, and lies between Azraq, Mafraq and the northern borders with Syria. There are at least forty volcanic centres in Jordan, all inactive now.

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, the ash and lava make the ground very good for farming. The magma cools into different kinds of solid rocks that wear down and become earth that is very good for growing plants. A long time ago, farmers used the obsidian (volcanic glass) for their tools. Even nowadays, obsidian is still used to make knives for medical operations.

Answers

Ash and lava make the ground good for farming. Magma becomes earth that is good for growing plants. The obsidian is used as farming and medical tool.

COMPREHENSION

Reading strategies

- After the first reading of the text, you will have a general idea of the content. Think about possible headings. What content would you expect for each heading? Underline the key words in each paragraph to help you.
- Now, read the text again more carefully. After you read each paragraph, consider what would be the most suitable heading for it.

- Consider why your headings are correct. What information in the paragraph helped you to choose the heading?

3 Choose a suitable heading for each paragraph, then explain your answers.

Suggested answers

a How do volcanoes form.

b volcanoes in the past

c Positive effects of volcanoes

4 Read the text again and answer the questions.

1 Where do volcanoes occur? *Volcanoes occur where the plates in Earth's crust have cracks or weak spots in them.*

2 What are the hot melted rocks called?

3 Are there any active volcanoes in Jordan nowadays? Explain.

4 Why is the ash dangerous?

5 Do you think it is safe to live near a volcano? Why/Why not?

Answers

1 **Volcanoes occur where the plates in Earth's crust have cracks or weak spots in them.**

2 **The hot melted rocks are called magma.**

3 **All volcanic sports in Jordan are inactive now. They were active many years ago.**

4 **Because it can crush houses and plants.**

5 Students' own answers.

Research box

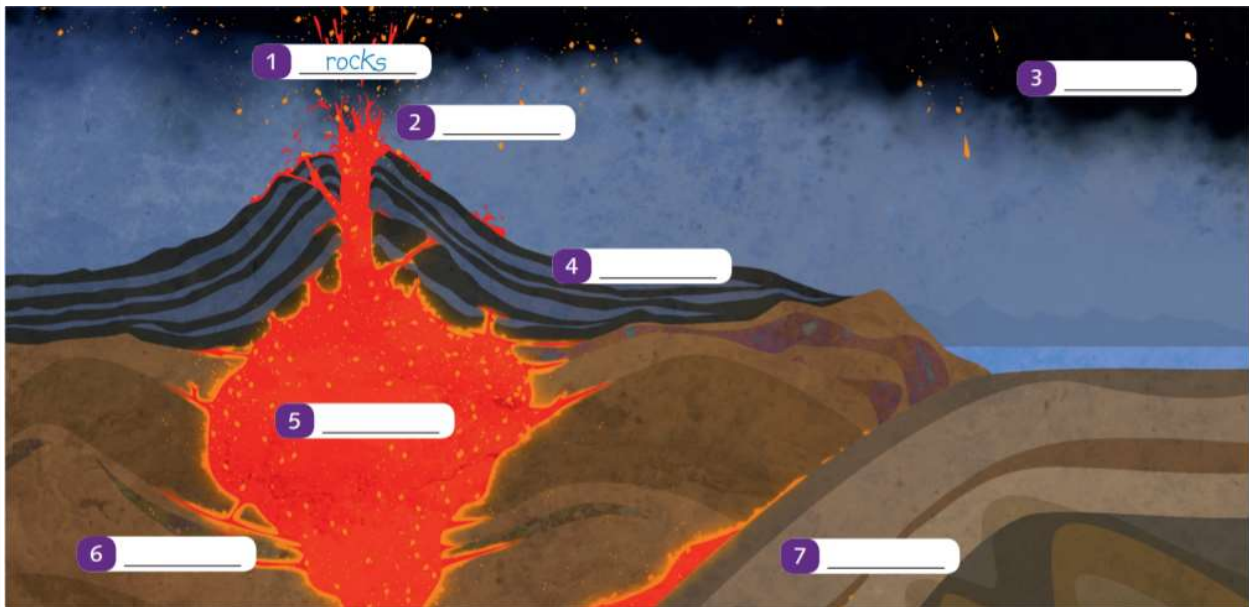
The deepest mines on Earth are only about four kilometres deep.
?How far is the centre of Earth from the surface

The distance between the centre of Earth and the surface ranges
from 6,353 to 6,384 km.

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



Answers

1 rocks

2 lava

3 ash

4 crust

5 magma

6 cracks

7 plates

PRONUNCIATION

6 Listen to the words in the box. Notice the sound at the beginning of the words. Repeat them. What are the letters that make the sound?

We call the sound of two consonants a cluster. In pairs, find words in the vocabulary box on page 66 that start with other clusters. Write the words and say them.

crust crack crush

Answers

The letters are *c* and *r*.

Other words are *pressure* and *plate*.

WRITING

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

Answers

Students' own answers

Unit 8

Lessons 5+6

Activity Book pages 46 and 47

Reading

7 Read about volcanoes and choose the correct answers.

There are around 1,510 'active' volcanoes in the world. We currently know of 80 or more which are under the oceans. When these volcanoes erupt, they can cause tsunamis, floods and earthquakes.

Around 1.5 million years ago, some of the youngest volcanoes in Jordan were active. Back then, these volcanoes – like all other volcanoes – exploded when their top split open and the magma, under huge pressure inside the earth, bubbled up and erupted through the crack.

The many eruptions that happened back then resulted in the hardened lava that, today, covers almost 17% of Jordan. This cover is referred to as basalt. If you would like to see this basalt cover, you must visit the North Arabian basalt plateau, which

covers an area of about 11,000 square kilometres in the northeast of Jordan.

At present, more than 40 volcanic centres can be easily found in Jordan. The northeastern part of Jordan is the best destination for visiting volcanoes. An example of a complete and undamaged volcano that can be seen from Azraq is Jabal Aritayn, Safawi. Luckily, these natural Jordanian volcanoes are now safe and no longer active.

1 What happens to the magma when the top of a volcano splits open?

a It bubbles up and erupts.

b It stays inside the volcano.

c It turns into ashes.

2 What covers almost 17% of Jordan today?

a magma

b crust

c basalt

3 What happened to the volcanoes in Jordan?

a They disappeared.

b They are no longer active.

c They exploded.

4 How many natural volcanoes can still be found in Jordan today?

a more than 80

b more than 40

c none

5 Which one is an example of a volcano in Jordan?

a Azraq

b the North Arabian basalt plateau

c Jabal Aritayn

1 a

2 c

3 b

4 b

5 c

8 Find words in the text with the following meanings:

1 hot, melted rocks inside the earth_____

2 the hot material that flows down the surface of the earth after an eruption_____

3 a line on the surface of something that has split but hasn't separated into parts_____

4 a volcanic rock formed from the fast cooling of lava_____

5 a force applied to something_____

6 become more intense and about to blow up_____



1 magma 2 lava 3 crack 4 basalt 5 pressure 6 bubble up

WRITING: A NEWSPAPER ARTICLE ABOUT A DISASTER

9 Choose one of the following world disasters to research.

an earthquake a drought an avalanche a
tsunami a flood a tornado

Useful words

sun rain wind cloud crops trigger despair
devastate suffer wash
away rescue disease escape destroy damage sta
rving dry mud

Make notes about the disaster and its causes and consequences.

- Where did it happen, and when?
- What happened?

