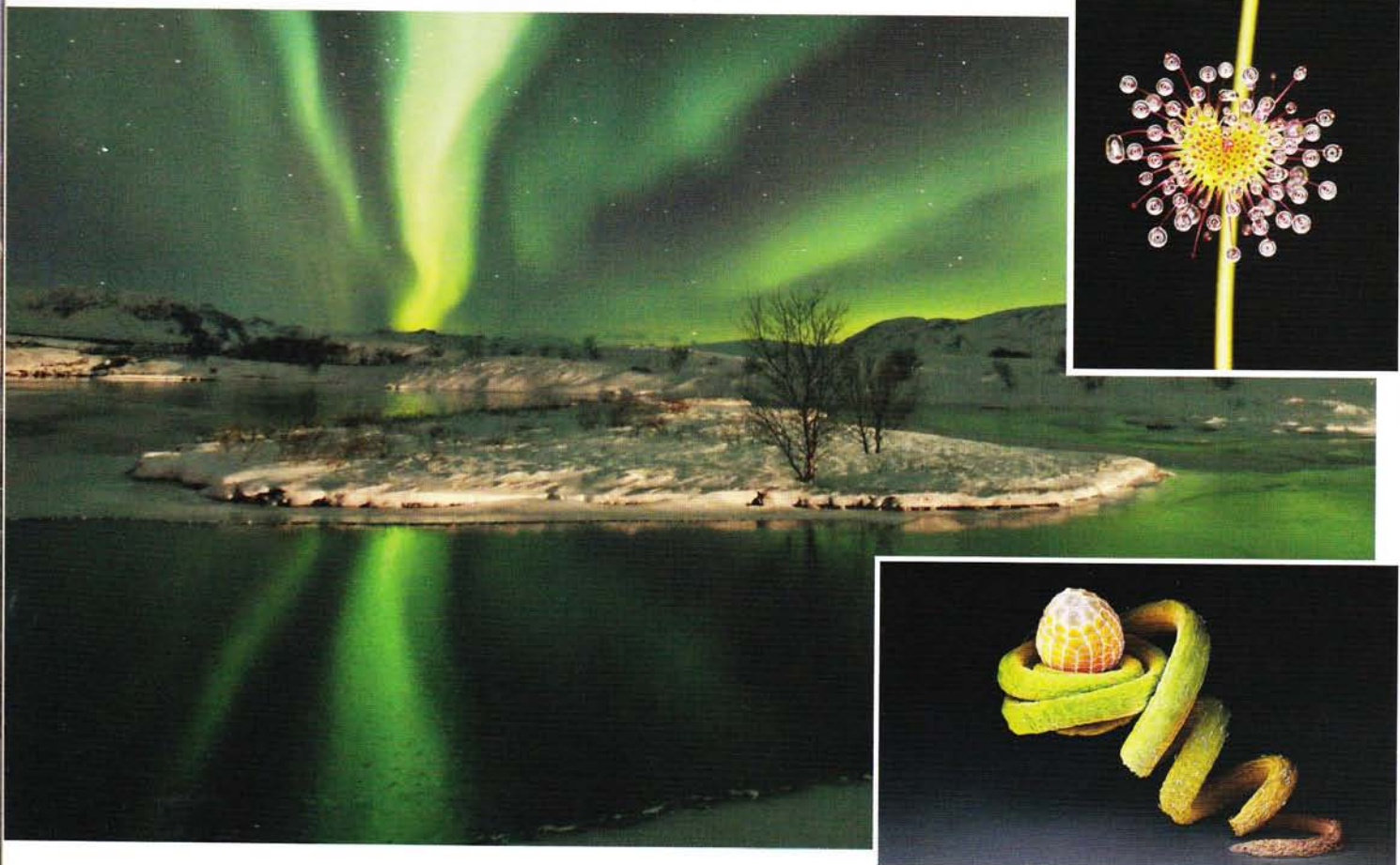


8a Nature's mysteries



Vocabulary and listening the natural world

- 1** Work in pairs. You are going to listen to some audio clips from a website about mysteries in nature. Look at the photos from the website. Discuss the photos with your partner.

It looks like (a) ...

It reminds me of (a) ...

- 2** You will hear these words in the audio clips. Work in pairs. Complete the sentences with these words.

ants atmosphere beetles butterflies flies insect
nitrogen oxygen particles predators radiation
stem species spikes

- 1 _____ and _____ are gases which exist in the Earth's _____.
- 2 Both _____ and _____ are types of flying _____.
- 3 _____ is the name for energy in the form of rays or waves.
- 4 _____ and _____ live on the ground and in soil.
- 5 Leaves and flowers grow from the main _____ of a plant.
- 6 _____ are tiny pieces of material.
- 7 _____ are things which catch and eat other _____.
- 8 Some plants have long, sharp _____, like needles.

- 3** **2.9** Listen to the audio clips. Write the number of the clip (1–3) next to the words in Exercise 2.

- 4** **2.9** Listen to the clips again. Are the sentences true (T) or false (F)?

- 1 The colours are man-made lights.
- 2 The colour of the lights depends on the amounts of oxygen and nitrogen.
- 3 The orange ball is a butterfly egg.
- 4 The image uses a technique called macro photography.
- 5 Some plants can actually chase and catch insects.
- 6 The Australian sundew plant traps flies on its sticky spikes.

- 5** What can you remember? Can you answer the questions? Test your partner.

- 1 What are the lights in the sky?
- 2 Why might butterflies lay eggs in places like this?
- 3 How do some plants catch animals?

Grammar modal verbs (2)

- 6 Match these sentences (1–4) from the audio clips with their uses (a–d).
- The colours are so vivid, like neon street signs, that you think they can't be natural.
 - You imagine that they must be man-made.
 - This might be a painting or a work of art.
 - It may not seem logical, but there are indeed plants that catch insects.
- The speaker is certain something is true.
 - The speaker is certain something is not true.
 - The speaker thinks it's possible something is true.
 - The speaker thinks it's possible something is not true.

SPECULATION AND DEDUCTION ABOUT THE PRESENT

must	+ infinitive
might (not) / may (not) / could	+ be + -ing
can't	

For further information and practice, see page 84.

- 7 Look at the grammar box. Underline other verb forms from the box in the audioscript on page 92.
- 8 Read the text *Navigation in nature*. Cross out any options which are not possible.

Word focus look

- 9 Can you match the two parts of these sentences from the audio clips? Check your answers in the audioscript on page 92. Underline another expression with *look* which means the same as item 1.
- The sky looks as though
 - The sky looks
 - The shiny drops look like
 - Look
- carefully.
 - water.
 - it's on fire.
 - green.
- 10 Complete the sentences with an expression with *look* from Exercise 9.
- You _____ great! Are you going somewhere special?
 - Have you seen what Mark's wearing today? He _____ a model!
 - Joe _____ he hasn't slept all night.
 - You _____ angry! What's the matter?
 - You _____ you've had some good news.
 - I'll need to _____ closely at this contract.

Speaking

- 11 Work in two pairs within a group of four. You are photo editors at a magazine. You can't find the correct captions for your photos. Describe your photos to the other pair and find the correct caption.
- Pair A: Turn to page 81. Look at the photos and captions.
- Pair B: Turn to page 82. Look at the photos and captions.

NAVIGATION IN NATURE

Arctic terns (pictured) are among many animals that travel huge distances every year, returning to the same place each time. How do they find their way? Scientists believe that this ability ¹ *must be* / *can't be* instinctive in some animals, such as salmon, because they are not guided by a parent. They think that the fish ² *might recognise* / *could recognise* the smell of the river they came from. According to current theories, some migrating birds, like the tern, ³ *could use* / *may use* the Earth's magnetic field or the sun as a guide. Studies have shown that in some species, older birds are more successful navigators. This ⁴ *can't mean* / *could mean* that birds learn with experience or they react to weather conditions. In fact, instinct ⁵ *may be* / *can't be* the whole story: a flock of young geese once learned their migration route by following a human in a plane.



8b Desert art

Vocabulary history

- 1 Are you interested in history? Complete the questions with some of these words. Then work in pairs. Ask and answer the questions.

ancient belief century period prehistoric
sacred society tradition

- Do you enjoy visiting _____ monuments?
- Which historical _____ would you like to live in?
- What do the drawings in _____ cave art often show?
- What do you think were the key historic events of the 20th _____?
- Many historical sites had religious or _____ significance. Can you name any in your country?
- Do you think we can learn from studying how _____ lived in the past?

Listening and reading

- 2 2.10 Have you heard of the Nasca lines? Work in pairs. Try to answer the questions. Then listen to part of a radio programme. Check your answers.

- | | |
|-----------------------|----------------------------------|
| 1 What are they? | 6 How big an area do they cover? |
| 2 Where are they? | 7 How old are they? |
| 3 How big are they? | 8 What are they made of? |
| 4 What do they show? | |
| 5 How many are there? | |

I've never heard of them. But from the photo, they look as if they're drawings or something.

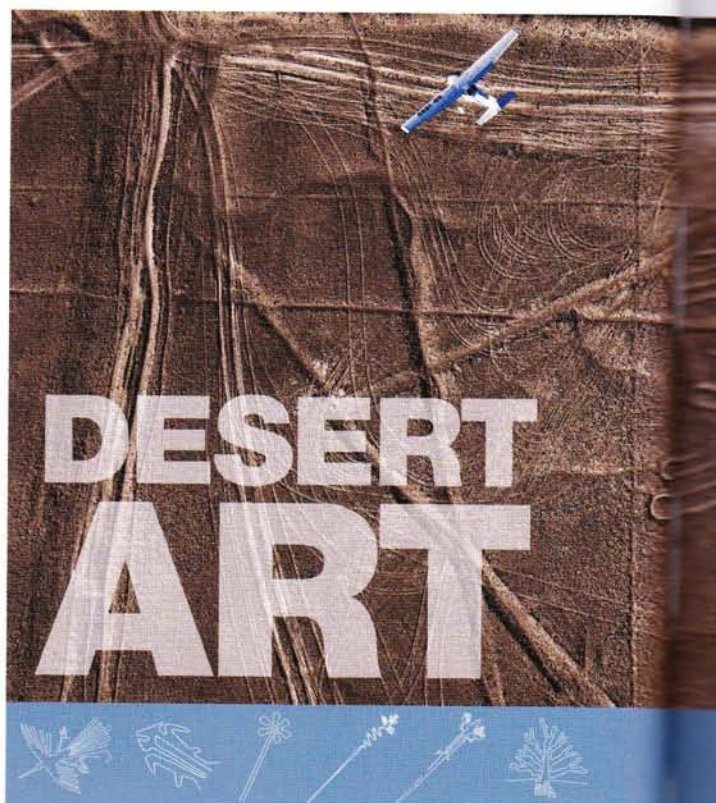
I think they might be in South America, but I'm not exactly sure.

- 3 Did any of the information in the programme surprise you? Is there any additional information you would like to know about the Nasca lines? Write two or three questions.

- 4 Read the article *Desert Art* and answer the questions. Does the article answer your questions from Exercise 3?

- When did people 'discover' the Nasca lines?
- What ideas did people have about the purpose of the lines?
- Why was water important to Nasca society?
- What is the current theory about the significance of the lines?

- 5 Why do you think people are so fascinated by the Nasca lines?



The mysterious desert drawings known as the Nasca lines have puzzled people since they first became widely known in the late 1920s. Before air travel in Peru began, it was impossible to get a clear view of the giant drawings of the spider, monkey and hummingbird. Yet the Nasca people who made these patterns 2,000 years ago couldn't have seen them from above.

One of the first formal studies of the lines was by Maria Reiche. She spent half a century working for their conservation and was convinced that the lines must have been part of an astronomical calendar. Other people thought they might have been ancient Inca roads or irrigation systems. The weirdest idea was that they could have been landing strips for alien spacecraft!

phenomenon (n) /fə'nomɪnən/ an event or fact
ceremonial (adj) /,serə'məʊniəl/ ritual and traditional

► WORDBUILDING noun → adjective

We can make adjectives from nouns by changing the endings of the nouns.

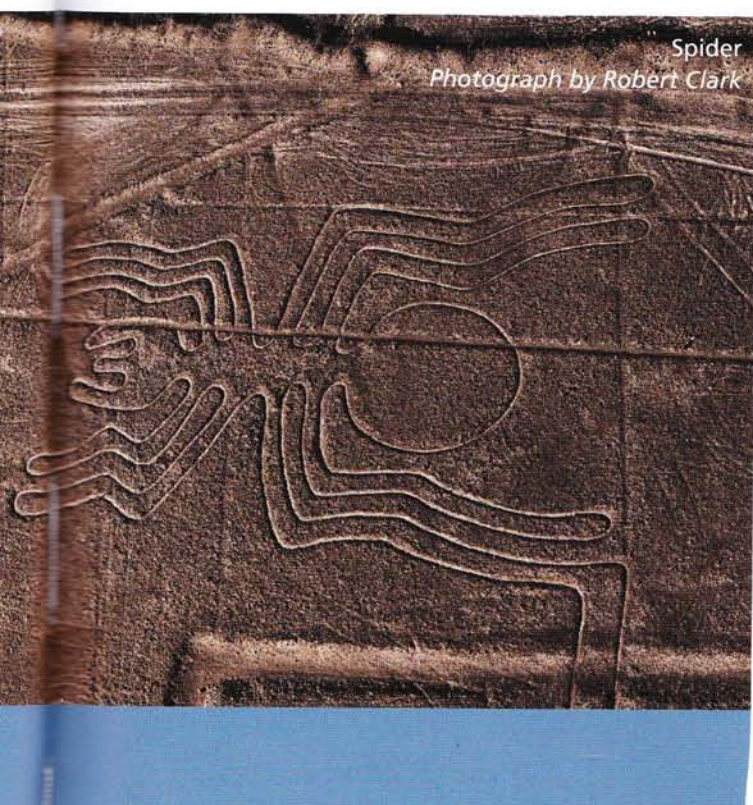
mystery + -ous → mysterious

religion + -ous → religious

astronomy + -ical → astronomical

ceremony + -al → ceremonial

For further information and practice, see Workbook page 113.



This region of Peru is one of the driest places on Earth and yet successful societies, including the Nasca, lived here. Water must have had an incredible significance to these societies, so perhaps the lines were related to this. We know that the Nasca River, which comes down from the nearby mountains, runs underground for about fifteen kilometres before suddenly emerging on the surface again. This must have seemed an astonishing, even sacred, phenomenon to ancient societies. It has also become clear that there are many huge drawings in the area, not just the ones on the flat desert plain. Many are much older than the Nasca figures themselves, so the same group of people can't have created them. It now seems that the Nasca lines may have been part of a long tradition of ceremonial activities connected to water and religious beliefs.

Grammar modal verbs (3)

- 6 Look at the grammar box. Find and number eight sentences with these forms in the article.

SPECULATION AND DEDUCTION ABOUT THE PAST

must
might / may / could have + past participle
can't / couldn't

For further information and practice, see page 85.

- 7 Answer the questions about the sentences (1–8) in the article.

- Which sentences speculate about things which were possible?
- Which sentences express certainty about the explanations they give?
- Which sentences make a deduction based on logical information?

- 8 Rewrite the sentences about the Nasca using one of the words in brackets.

- We know water wasn't easy to find. (*can't / must*)
- It's possible the rivers dried up. (*might / may not*)
- There's no doubt the lines were very important. (*could / must*)
- Perhaps the lines had a religious significance. (*may / can't*)
- It isn't logical that the animal drawings were roads. (*might / couldn't*)
- Obviously the animals lived in the region. (*might / must*)
- One possibility is that the Nasca people used simple tools. (*could / must*)
- It seems clear that people maintained the lines carefully. (*might / must*)

- 9 2.11 Listen and check your sentences from Exercise 8.

10 Pronunciation weak form of have

- a Look at the sentences you wrote in Exercise 8. Is the verb *have* the main verb or an auxiliary verb?
- b Listen again. Is *have* pronounced /hæv/ or /həv/?

Speaking

- 11 Work in pairs. Why do you think the Nasca lines were created? What about other mysterious sites you have heard about?
- 12 Work in groups. Look at the list of things archaeologists have found. They all date from around 2,000 years ago – the same period as Nasca society. What do they say about how people lived then?

a leather sandal
a circle of 2m-high granite 'standing stones'
fragments of pottery with iron-based painted patterns
a metal pot containing cream with a fingerprint visible
pits dug in the ground, full of apricot and plum seeds
a bronze mirror in a grave
pots in the ground containing hundreds of coins
pieces of burnt animal bones

- 13 Tell the class your ideas. Which ideas are the most interesting?