

Global 6 Readings

A Primary Literacy Anthology

with Digital
Student's Book

 macmillan
education

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How's That Possible?

Explanation Game



A Look at the picture. Choose a thing. What is it?

Let's choose the sky.

OK!

B What do you notice about it? Tell your partner.

It's yellow there.

And then it turns orange.

C Why do you think it is that way?

maybe because it's morning.

Or it's ...

D What are some other reasons it might be that way? Share with the class.

We think ...

What do you think?

E Think and write. What real-world mysteries have you heard about? Make a list.

F Think, predict, and discuss. Look at the headings and pictures on the next pages. What do you think the reading is about? Why do you think it's called *The Sci-Files*?

Now read *The Sci-Files*

THE SCI-FILES

CASE STUDY 1: Sliding rocks in Death Valley

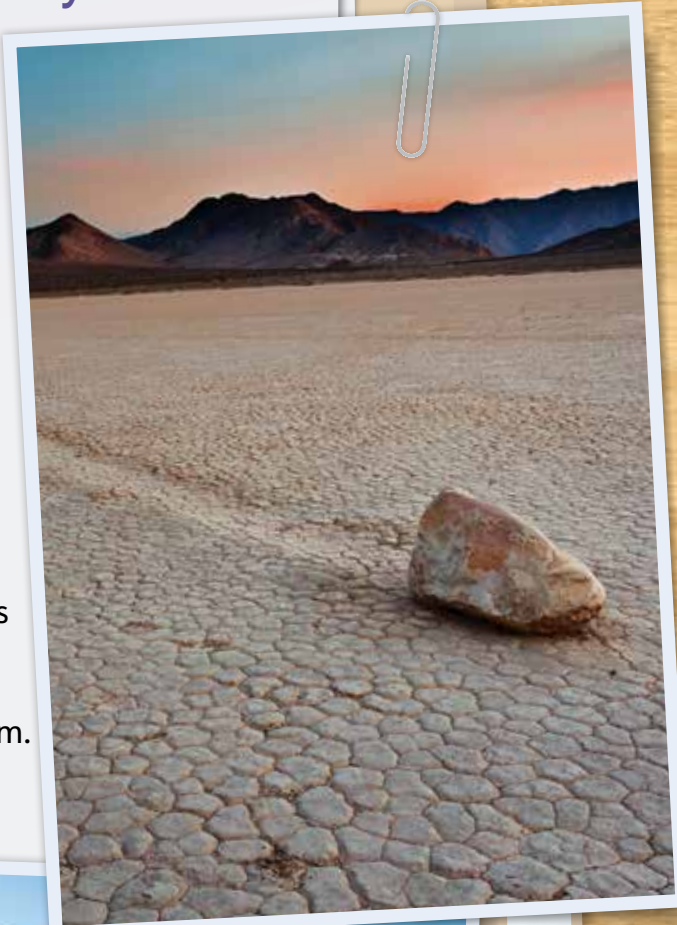
How can rocks move on their own?

The mystery

The Racetrack is a playa, or dry lake bed, in Death Valley National Park, California, USA. Years can pass without a drop of rain falling here. But it has become famous for a geological mystery. Rocks that are stuck in the dry mud have long tracks behind them. They appear to have moved hundreds of meters on their own.

Possible theories

- Hypothesis:** It could have been a trick. Someone might have moved the rocks.
Argument against: They couldn't have done this without leaving evidence of a truck or footprints.
- Hypothesis:** Strong winds might have moved them.
Argument against: Many of the rocks are extremely heavy.



What do you think the explanation might be for the two mysteries?



CASE STUDY 1

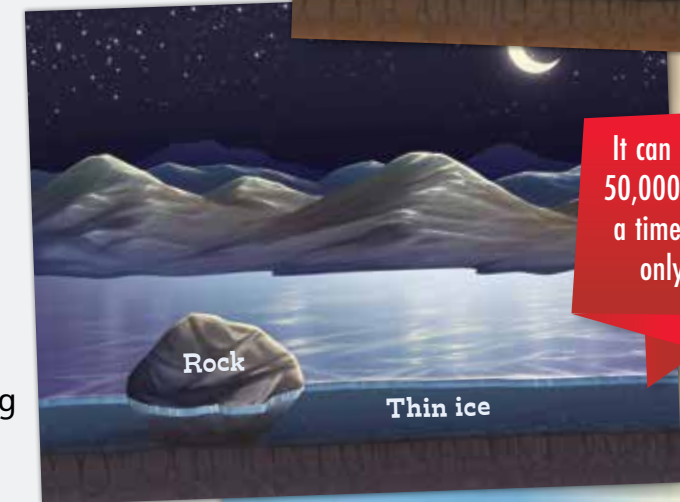
Investigation

The problem was that nobody ever saw the rocks moving, but a team of scientists had an idea. They fitted rocks with GPS trackers and used time-lapse photography to record any movement. It was going to be a long experiment taking up to 10 years. But only two years later, when scientists visited the site to collect information in 2013, by coincidence, the rocks started to move while they were there. It was icy after some rain and the mystery was solved!

Conclusion

Sometimes rain falls in winter, creating a shallow pond in the playa, half covering the rocks. At night, the temperature drops suddenly. The top of the pond freezes into a thin but strong sheet of ice. On sunny mornings, the ice starts to melt and break up. Light winds cause the floating ice sheets to push the rocks slowly across the playa, leaving tracks in the mud. In spring, the ground dries up and the rocks are left at the end of their tracks.

This rare sequence of events has to happen to start the rocks moving. Because it's dry 99% of the time in Death Valley, this might not happen for many years.



It can take more than 50,000 photos to make a time-lapse video of only 76 seconds.



Words in Context

Find these words in the reading. What do you think they mean?

geological GPS trackers uniform termites colony ecologists aerial



Are these case studies **primary sources** (where the information came from) or **secondary sources** (a description of the primary sources)?

CASE STUDY 2: Fairy circles in the Namib Desert

Where do these amazing patterns in the desert come from?

The mystery

The grasslands of the Namib Desert in Africa are covered with large circles that are uniform in size. They are known as fairy circles and have puzzled the local Himba people for generations. What might have created these bare patches of ground?

Possible theories

1 Hypothesis: Termites were seen in the fairy circles, so the circles might have been caused by termite nests.

Argument against: It didn't explain why the circles are so regular in size.

2 Hypothesis: Dying plants might have poisoned the soil.

Argument against: It couldn't have been caused by this as there was no evidence of poison in the soil.

3 Hypothesis: Thicker grass grew around the circles, so they could have been caused by plants competing for water.

Argument against: It hadn't been proven by any tests.



Investigation

Termites look for food in a circular area around their nest. If they meet another colony of a similar size, they don't go any further. Ecologists, who study how plants and animals live together, created computer software to investigate the result of termite colonies surrounded by other colonies of a similar size eating the roots of plants above their nests. This caused the plants to die. They also investigated plants living close together that create natural shade for each other but grow long roots. These roots take water from the soil further away, causing the plants there to die. The software predicted regular patterns would be formed of big circles

created by the termites eating the plants' roots, and small circles because of the plants competing for water. The team then took aerial photos of the fairy circles.

Conclusion

The aerial photos confirmed the predictions of the software and showed small circles between the large circles. So two of the three theories were correct. Nobody noticed the small circles because everyone was interested in the big circles. They couldn't see the forest for the trees!



forest



wood



They couldn't see the forest for the trees. What do you think this means?

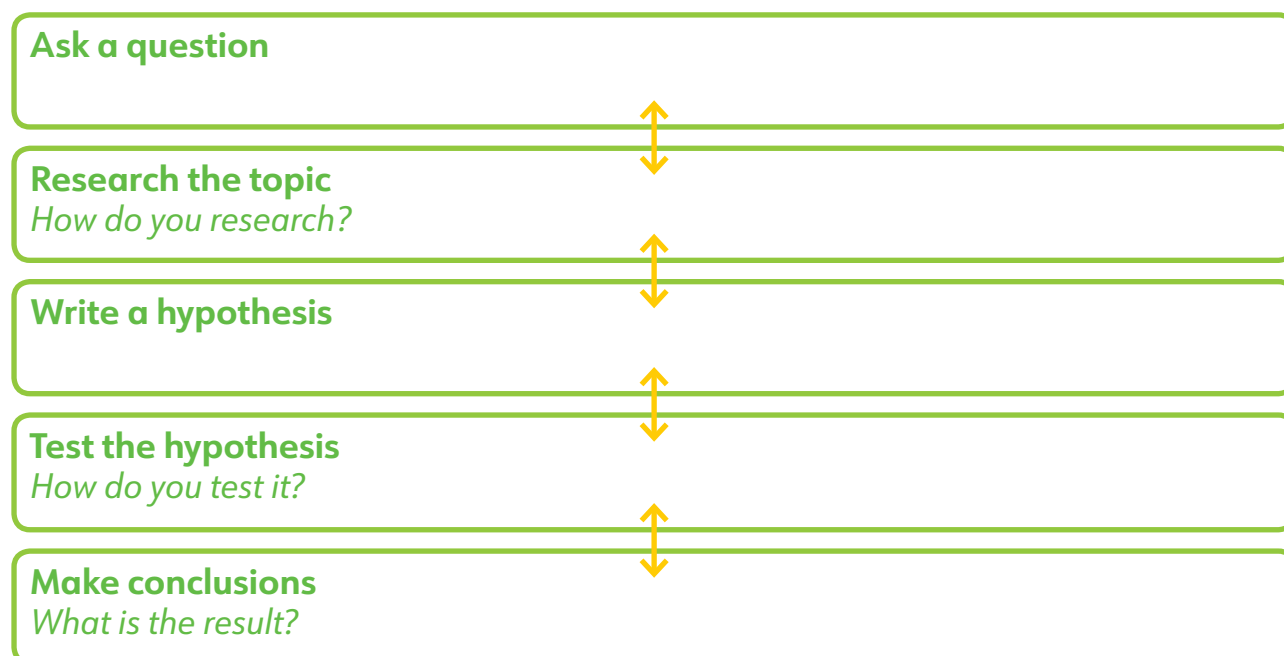
A Think and write. Complete the table.

	Sliding Rocks	Fairy Circles
1 Where does the mystery take place?		
2 What was one of the hypotheses?		
3 What was one of the arguments against?		
4 What technology did they use to solve it?		

B Write *True* or *False*. Then discuss. What makes you say that?

- 1 It doesn't rain often in Death Valley. _____
- 2 The mystery of the sliding rocks took the team of scientists a long time to solve. _____
- 3 It's always very hot at night in Death Valley. _____
- 4 The Himba people have recently come to live in the Namib Desert. _____
- 5 Plants develop extensive root systems to search for water. _____
- 6 The small circles were caused by dying plants poisoning the soil. _____

C Scientists use the Scientific Method to answer a question or solve a mystery. Choose a mystery from E on page 57. Complete the diagram with the different stages.



A Read and make inferences from the reading to answer the questions. Support your answers with evidence from the reading.

In 1722, a Dutch explorer named Jacob Roggeveen was searching for an imaginary continent called Terra Australis. Instead, he reached a small island in the southeastern Pacific Ocean previously undiscovered by Europeans. He named this extremely remote spot Easter Island. When Roggeveen named it, Easter Island had few trees and little wildlife. The nearly 2,000 inhabitants were expert fishermen and also hunted seabirds. It's believed that 15,000 people were living there only a century before Roggeveen arrived.

- 1 Did Roggeveen find the place he was searching for?
No, he didn't. He found Easter Island, not Terra Australis.
- 2 Was the place Roggeveen found the same size as the place he wanted to find?

- 3 Was Roggeveen the first to discover the island?

- 4 Why was there so little wildlife on the island in 1722?

When we read, we need to make **inferences** to help us understand a text, because writers don't always provide all the information. These inferences are based on textual evidence and our own knowledge and experience.

B Read and write. Read the introduction to *An Enlightening Journey*. What evidence can you find to support the sentences below?

It was hot and the sun was already high in the sky when Eddy woke up. *A perfect day to take Nora and Josh on another adventure*, he thought. He told Nora about his plan to take them on a boat trip. "Where are we going this time?" asked Nora.

"I haven't decided yet," grinned Eddy, "but we'll need to take lunch and dinner."

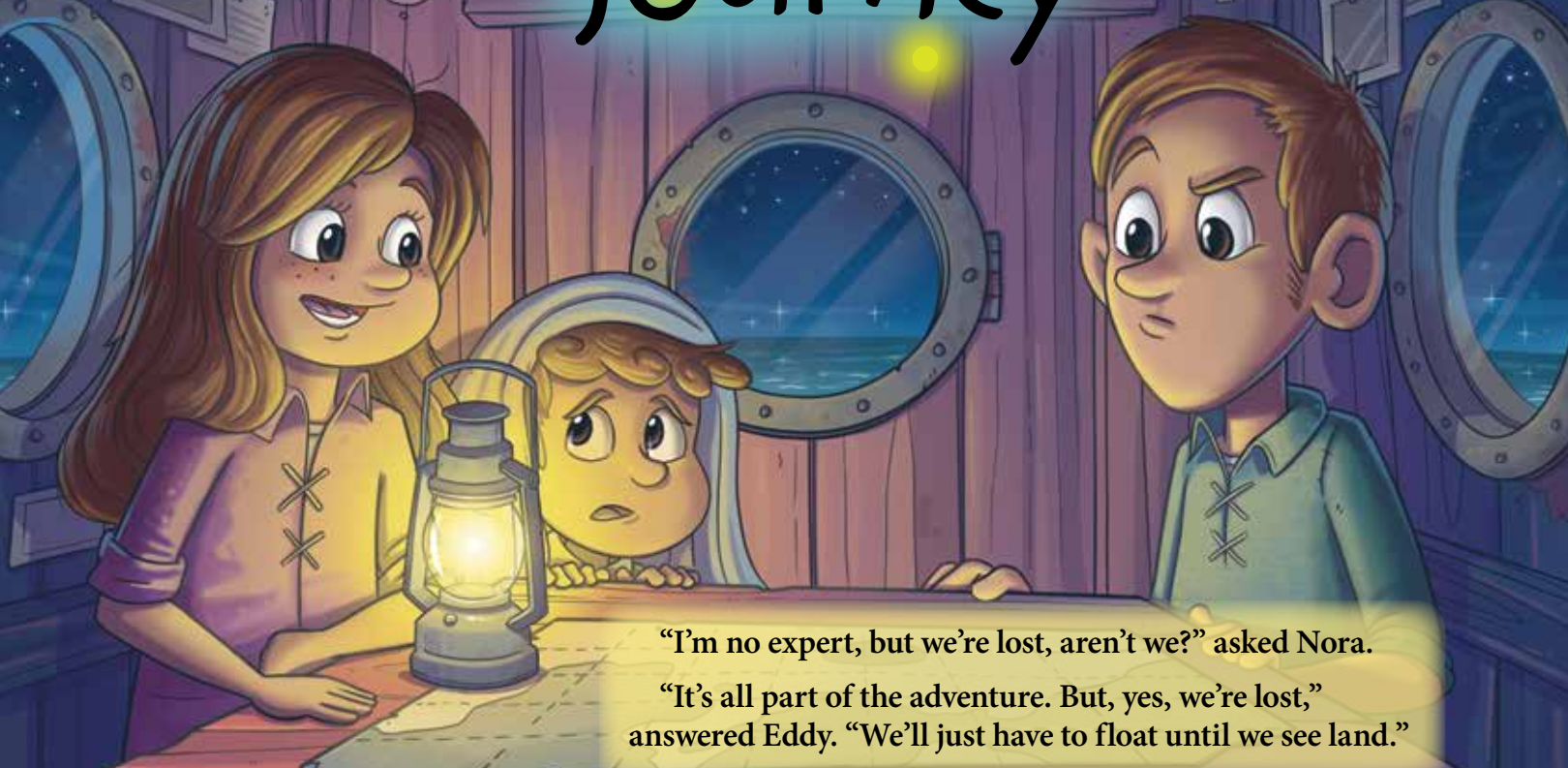
- 1 It's summertime. _____
- 2 Eddy often plans adventures. _____
- 3 Eddy hasn't finalized his plan. _____

C Think and discuss. Look at the pictures in *An Enlightening Journey* and think about the title. What mysterious things do you think happen on the journey?

Now read **An Enlightening Journey**



An Enlightening Journey



“I’m no expert, but we’re lost, aren’t we?” asked Nora.

“It’s all part of the adventure. But, yes, we’re lost,” answered Eddy. “We’ll just have to float until we see land.”

“Go to sleep, Josh, we’ll be home soon,” Nora whispered.

“I have bad dreams when it’s dark,” mumbled Josh.

“There’s nothing to worry about,” replied Nora.

“But there’s something outside. There’s a light.”

“It’s probably just an optical illusion,” Eddy said.

They went outside to investigate.

Josh pointed at the water. “The sea is on fire!”

“No, it isn’t fire, but it’s beautiful and very strange,” said Nora.



What were you afraid of when you were young?

“I can see land,” shouted Eddy suddenly. “Look! That must be a town.” They could hear the sound of thunder in the distance.



Some plants, animals, and bacteria can create their own light, called *bioluminescence*.

“Where’s the town?” Eddy was disappointed. “I saw lights. I can’t have imagined them. But look at the sea!”

The children watched the sparkling waves dance along the beach.

Josh jumped. “Did you hear that? I think there’s something following us.”

“No, there isn’t, but there’s a storm coming,” said Eddy. “We should keep moving.”



Words in Context

Find these words in the reading. What do you think they mean?

hovered firefly swamp glowing swirling hurling



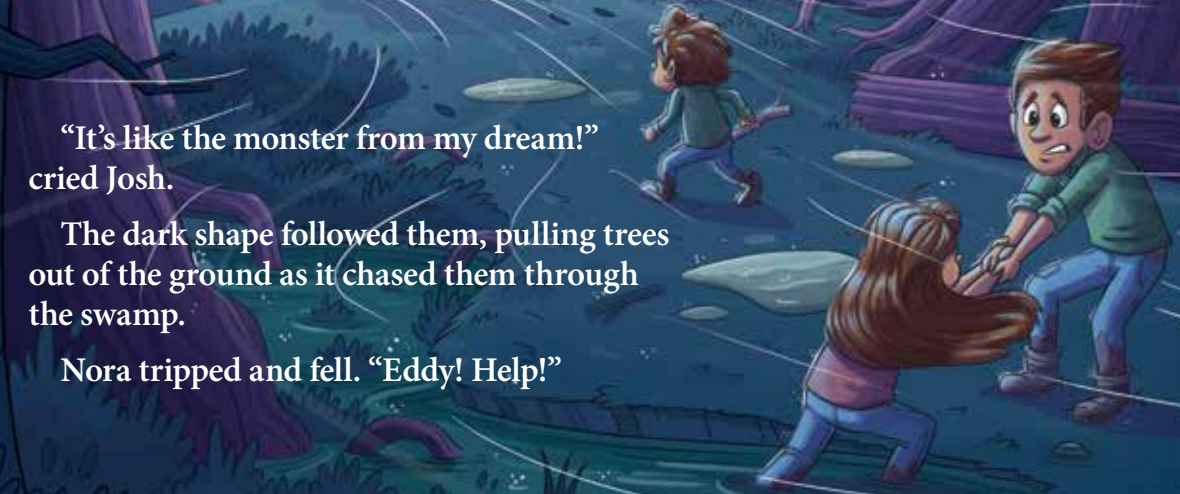
A single light hovered in front of Josh's face. "What's that? Its tail is flashing."
"It's a firefly," replied Eddy. "Look. There are lots of them!"



"It's like the monster from my dream!" cried Josh.

The dark shape followed them, pulling trees out of the ground as it chased them through the swamp.

Nora tripped and fell. "Eddy! Help!"



A crack of thunder and lightning came from the sky as Eddy grabbed Nora's hand. They ran until they were exhausted.

"A cave. Quick, get inside!" shouted Nora.

Outside, the tornado rushed past the entrance of the cave, hurling branches and pieces of rock in anger.



"Get away from her!" Josh picked up a branch and threw it as hard as he could. It swallowed the branch whole.



As they walked, the ground became softer and wetter.

"I don't like this place. It smells bad," Josh said.

"We're in a swamp, Eddy," whispered Nora.

"I know, but I think we should follow the lights." Eddy pointed to the glowing path. "It's OK, Josh, I'll carry you."

"There's something following us. Listen!" sobbed Josh.

"He's right. I can hear it." Eddy looked up to see a swirling dark shape approaching from the distance. "Run!"

Fireflies light up their tails to attract other fireflies.

Inside, the cave was quiet.

“This is unbelievable,” whispered Eddy. Looking closely at the strings of light, they could see they were made of threads of silk. “All this must have been made by insects.”

Josh felt safe in the cave. “I saved you from the monster, didn’t I, Nora?”

“You were very brave, Josh,” Nora replied. “You can go to sleep now. Look, the lights are on!”



In the morning, the sun was shining outside.

“Where are you going?” said Nora, rubbing her eyes.

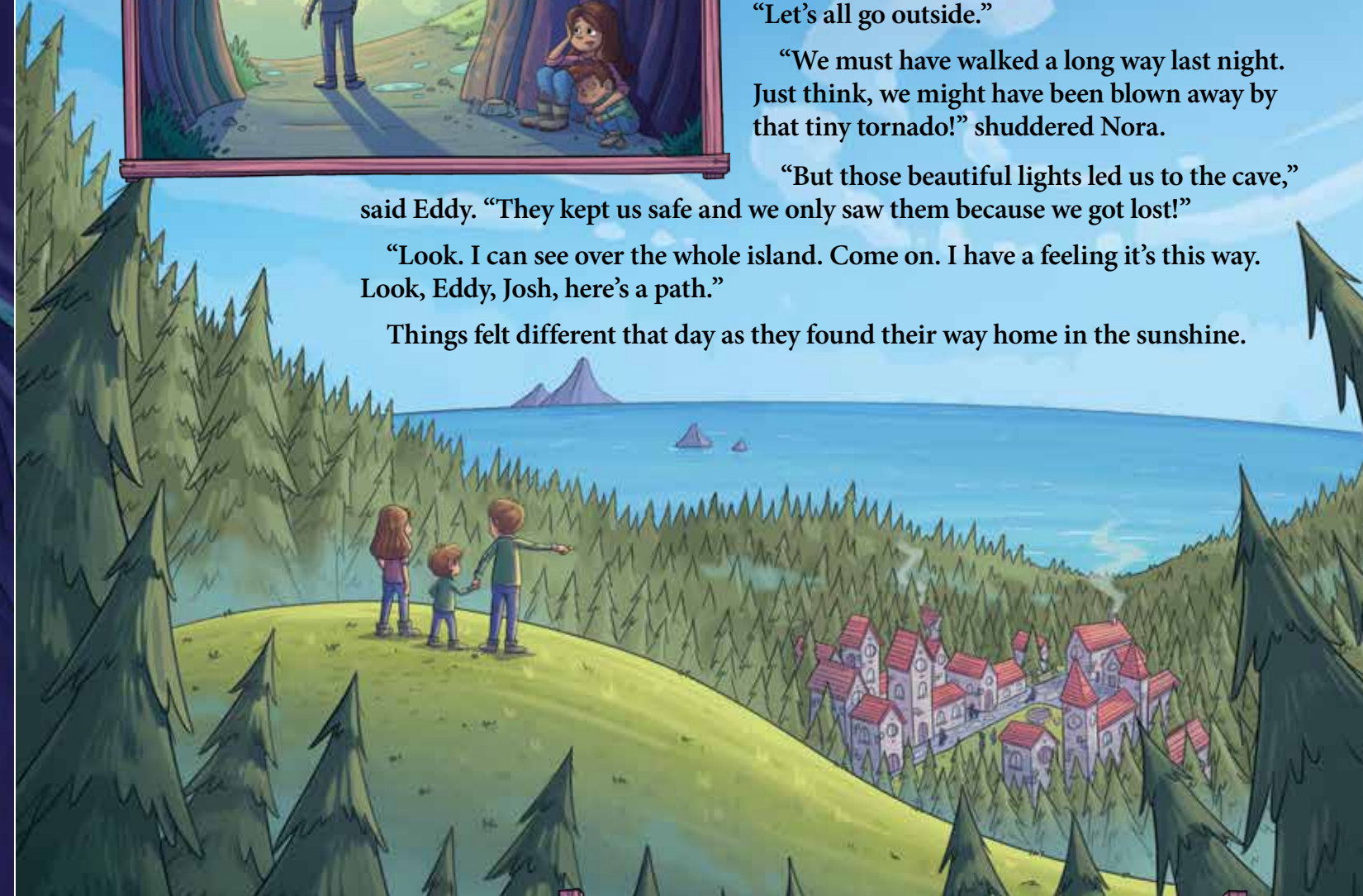
“Now that it’s daylight maybe we can find clues to help us get home,” answered Eddy. “Let’s all go outside.”

“We must have walked a long way last night. Just think, we might have been blown away by that tiny tornado!” shuddered Nora.

“But those beautiful lights led us to the cave,” said Eddy. “They kept us safe and we only saw them because we got lost!”

“Look. I can see over the whole island. Come on. I have a feeling it’s this way. Look, Eddy, Josh, here’s a path.”

Things felt different that day as they found their way home in the sunshine.



Back home, Nora pulled the blanket up over her little brother.

“Do you want me to leave the light on, Josh?”

“No. I’m not scared of the dark anymore,” he answered as he fell asleep.



What are you still afraid of? Have you ever had to face your fear?

A Read and answer the questions. Write evidence from the reading to show how you found your answer.

- 1 What was Josh scared of at the beginning of the story?

- 2 What did Eddy hope to find when they landed on the beach?

- 3 How did they find their way to the cave?

- 4 Why wasn't Josh scared anymore at the end of the story?

B Think and discuss. What do you think really happened? Give a scientific explanation for these mysterious things from the story.

- 1 Josh thought the sea was on fire.
- 2 Eddy thought he saw a town.
- 3 Josh thought something was following them.
- 4 Josh thought the black shape was pulling trees out of the ground.
- 5 Josh thought the lights were on in the cave.
- 6 Josh thought the creature swallowed the branch whole.



C Think and discuss. How did the children stop each other from getting upset? Now think of a time you've had a problem. What did you do?

Literary Term Personification

Personification is when human characteristics or feelings are given to objects, animals, or ideas.

Underline the objects that are personified.

- 1 The moon hid behind the clouds that cold December night.
- 2 The sun was shining. The leaves played in the wind.
- 3 They swam to safety as the sea swallowed the boat whole.
- 4 Plants are happiest when they have food and water.

Now find more examples of personification in the reading.

Why are mysteries so fascinating?

A Complete the table. What are the explanations for the mysteries in *The Sci-Files* and *An Enlightening Journey*?

Mysteries	Explanations
fairy circles	
sliding rocks	
fire in the sea	
hovering light	
swirling dark shape	
strings of lights	

B Look at **A**. What do all of the explanations have in common?

C Which mysteries in nature fascinate you? Do an Inside-Outside Circle.

why is the sky blue?

D Think and write. Choose questions from **C**. How are you going to find out the answers? Make a list.

My Reading Journal

What stories do you know about mysteries?

Which of the mysteries from this unit did you find most fascinating? Why?

Choose an object from the unit. Then play the Explanation Game.