

Objectives

- Students will ask and answer questions about key details in a text.
- Students will write informative text that gives facts about a topic.

Resources

- Vocabulary Assessment Master (page 4)

Summary

The fennec fox lives in the sunny, hot desert, but it is able to stay cool. The fox's big ears let heat leave the body. The fox's feet have fur, which protects them from the hot sand. The fox seeks shady, cooler spots. Trees block sunlight and provide shade. The fox also has a den that is underground, where sunlight doesn't shine. At night, when the desert is cooler, the fox comes out of its den to hunt for food.

BUILD VOCABULARY AND CONCEPTS

- cool
- shade
- den
- shadow
- heat
- sunlight
- protect

Introduce the vocabulary words to students by displaying them in the classroom on a word wall or on a board. Read each of these words aloud and say: **Some of these words go together. Let's see if we can find the words that have something in common with one another.** Point to the word "heat" and ask if there is a word on the list that is related to heat. Guide students to understand that sunlight provides heat. Then ask: **What about "cool"? Is there a word that relates to cool?** Guide students in a discussion about shade and how it provides a cooler spot on a sunny day that looks like a shadow. Then say: **We are going to read about a fox that lives in the hot desert. A den is a fox's home. It is underground. It keeps a fox cool and protects the fox from the desert heat.**

READ AND DISCUSS

A Fennec Fox Stays Cool in the Desert

Read the article to students as they follow along. You may want to read the entire article, or you may want to read each two-page spread and spend time discussing the concepts before moving on to the next two-page spread.

Before reading, ask students to listen and look for the vocabulary words as well as any other words that might be unfamiliar to them. Let students know they will be learning more about the fennec fox, a type of fox that lives in the desert.

Pages 2–3 Read the title and text to students. Ask: **What did we learn about the desert on these pages?** (*It is sunny and hot.*) **What did we learn about the fox?** (*It looks for ways to stay cool in the desert.*) Have students look at the picture and say: **This is a picture of a fennec fox. What do you notice about it?** (*It has big ears.*) Then say: **Let's read on to see if we can find out why its ears are so big.**

Pages 4–5 Ask: **What did we find out about the fox's large ears? How do the ears help the fox stay cool?** (*Heat leaves the fox's body through its ears.*) Point to the inset picture on page 5 and say: **Look closely at the fox's feet. What did we find out about them?** (*They are furry and protect the fox's feet from the hot sand.*) Make sure students look closely at the picture to see that the fur is on the soles of the fox's feet not just on top of its feet.

Pages 6–7 After reading the text on pages 6 and 7, ask: **How else does the fox stay cool?** (*It looks for shade and goes in its den.*) Ask students to point out the shade in the inset picture. Then have them to point to the den. Ask: **What do you notice about the shade and the den?** (*The shade and the den are both dark. The sunlight isn't shining there.*)

Pages 8–9* After reading the text on pages 8 and 9, ask: **What do we find out about the desert at night?** (*It is cooler because there is no sunlight.*) **What does the fox do at night?** (*It comes out of its den and hunts.*)

WRITE AND ASSESS

You can assess students' understanding of the vocabulary words with the Vocabulary Assessment Master for this article. You may also want to assess students' understanding of the article by having them write to give facts about the fennec fox.

- Write one way the fox stays cool.
- Write why it is cooler in the fox's den.

* Correction, page 9: The last sentence should read, "The fox also finds cool places out of the sun." Please ask students to cross out the "s" in the word "cools." We apologize for the error.

Objective

- Students will describe what a fennec fox does to cool off in a hot desert.

Resources

- Cool Ears poster (Teacher's Edition)
- Science Assessment Master (page 5)

Science Background

The fennec fox is the smallest of all foxes. It weighs only about 2–3 pounds, and the length of its body ranges from 9–16 inches. Fennec foxes are common in the Sahara and elsewhere in North Africa. The fennec fox is a nocturnal animal, often staying underground in its den during the day.

This fox also has adaptations that help it survive in the desert. Its oversized ears radiate body heat, cooling the animal. The fox's thick fur keeps it warm on cold nights and also protects it from the heat during the day. The fur on the soles of the fox's feet not only protect them from the hot sand but also provide traction. A coat of sandy beige fur and a white underbelly help the fox blend into its desert environment.

ENGAGE

Ask: **What does the air feel like on your skin on a hot and sunny summer day?** (*Students are likely to mention that the air is hot, and depending on where you live, it could be humid and sticky or very dry. This makes our skin feel hot, sticky, and sweaty.*) Ask: **What are some things you do on a hot, sunny day to stay cool?** Students will probably mention a number of different things. If they haven't mentioned it, add that finding a shady spot is one way to stay a little cooler when you are outside on a sunny day. You might mention that sweating is one way our body helps us cool off, too.

EXPLORE

Explore what happens on a sunny day. Ask: **How does a sidewalk or hot sand on a beach feel on your bare feet on a hot, sunny day?** (*Students should say that the sidewalk and sand feel hot.*) **How do we protect our feet?** (*Students might say we could put shoes or sandals on, or if we are at a beach, we could cool our feet in the water.*) Let students know that the desert is a very sunny, hot place, and they will learn about how one animal, the fennec fox, stays cool in the desert where it lives.

EXPLAIN

Read the article to students.

After reading, have students explain and describe how the fennec fox's body helps it stay cool in the desert. Students should note all of the following:

- The fox has large ears that let heat leave its body.
- The fox has furry feet that protect them from the hot sand.
- The fox looks for shade that provides a cooler spot.
- The fox goes in its den at midday, because the sun doesn't shine there.
- The fox leaves its den at night when it's cooler.

ELABORATE

Share the Cool Ears poster with students to learn about other animals that have big ears that keep them cool. Like the fennec fox, the African elephant and the jackrabbit have oversized ears that help the animals stay cool. You might want to research these animals with students to find out where they live and other ways these animals stay cool in their environment.

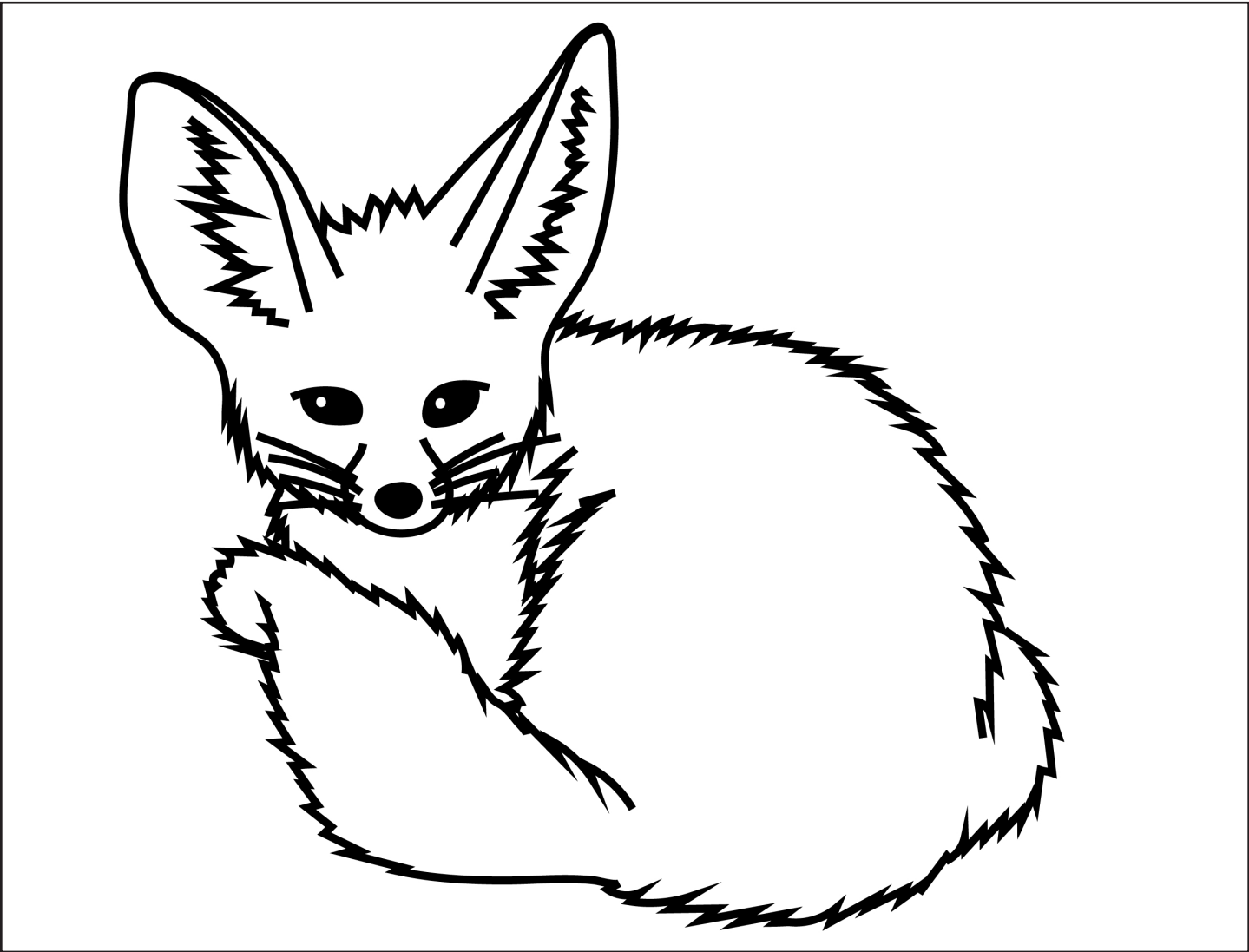
EVALUATE

Assess students' understanding with the Science Assessment Master for this article. You might also ask them the following questions:

- **How are the fox's feet protected from the hot sand?** (*They have fur on them.*)
- **What happens when a tree blocks sunlight?** (*It provides shade.*)

ASSESS VOCABULARY: Staying Cool

Write three facts about the fennec fox.



ASSESS SCIENCE: Staying Cool

Circle the body parts that help the fox stay cool.
Label the parts.

