



Ranger Rick

EDUCATOR'S GUIDE

EDUCATIONAL EXTENSIONS FOR THE SEPTEMBER 2018 ISSUE OF RANGER RICK® MAGAZINE

COOL CAMELS

After reading “**Camels**,” pages 6–11, have students complete the Creature Features student page. Then as a class, discuss the many physical adaptations that help camels survive in desert environments.

Point out that two main reasons camels can outlast many other animals in the desert is that (1) they lose water from their bodies very slowly, and (2) they can lose a huge amount of water and still stay alive. Explain that the cooler a camel is, the less it will sweat—and the more water it will save. On hot days, a camel often turns the front of its body toward the sun. This reduces the amount of body exposed to the sun, and so the camel stays cooler. On cold days, camels may warm up by turning the side of its body toward the sun so that sunlight hits more of the body and warms it.

Have students experience this process themselves by following these directions: Stand in bright sunlight and turn your hand so the light hits the whole hand. Now turn your hand so the light hits only part of it. Which way does your hand feel cooler.

MOTH SYMMETRY

After reading “**Moths That Think They’re Butterflies**,” pages 16–21, turn to page 17 and ask the class to look at the photo of the *Spanish moon moth*. Together, identify some key moth parts: antennae, head, thorax, abdomen, forewings, and hindwings. Now have students position the edge of a ruler along the center of the moth’s body. Point out that if you could fold the moth along the line formed by the ruler, the moth’s two sides (all of its parts) would match up perfectly. Tell students that when two sides of an object match, there is *symmetry*.

Have students look at the moth again. Do the two wings on the left side of the moth’s body have the same pattern

(colors and shapes) as the two wings on its right side? Ask children to identify the colors and shapes that make up the pattern on the moth’s wings. Tell them that some animals, including this moth, have the same parts *and* patterns on both sides of their bodies. In other words, they display two kinds of symmetry. (*Note:* There are other kinds of symmetry in nature as well.) Look at the other moths on this spread and discuss their symmetry.

Encourage students to make their own symmetrical moths. Have each child (1) fold a large piece of paper in half, (2) draw half of a moth shape along the fold line, (3) with the paper still folded, cut out this shape, and then (4) unfold the shape and decorate the moth the same on both sides.

Wrap up the lesson by assigning the May Nature Notebook page called Insect Symmetry. Find it online at rangerrick.org/naturenotebook.

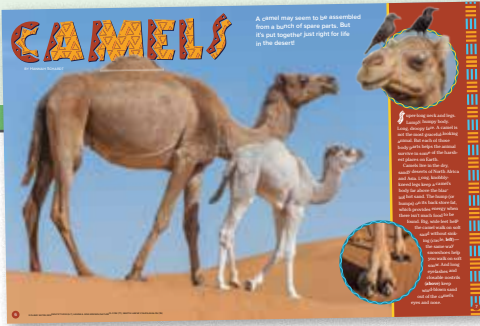
STRUCTURED NOTE-TAKING

Have students complete the framework in the Take Note! student page as they read “**Saving the Fishing Cat**,” pages 24–29.

GOPHER TORTOISES

After reading “**Home, Sweet Home**,” pages 30–35, have students create a game that will help players learn about the lives of gopher tortoises. Start by making a list of good and bad things that can happen to these tortoises. (*Examples of good things: lots of tasty flowers are blooming; forest manager starts a control burn to keep tortoises’ pine-forest habitat open and healthy; April 10 is Gopher Tortoise Day. Examples of bad things: pine-forest habitat gets cleared to build a shopping mall; cars on road that run through tortoise habitat.*) Then encourage groups of students to design a Candyland-style gameboard based on these ups and downs.





CREATURE FEATURES

Read **"Camels,"** pages 6–11. Use what you learn from the article as well as other sources to explain how the physical features below help camels survive in desert environments.

1 Long eyelashes _____

2 Large nostrils that can open and close _____

3 Long, knobby-kneed legs _____

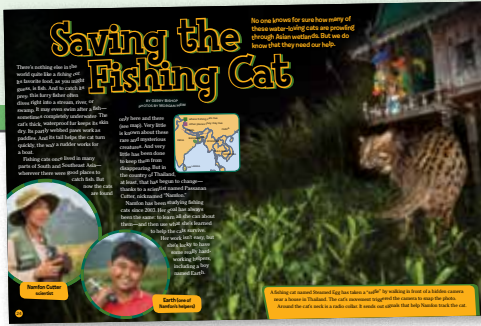
4 Big, wide, two-toed feet _____

5 Long tail _____

6 Hump (or humps) on its back _____

7 Thick, shaggy fur _____





TAKE NOTE!

As you read **"Saving Fishing Cats,"** pages 24–29, write down key information from the story in the framework below. Be prepared to explain why the information you chose is important.

1 What is a fishing cat?

2 Where do fishing cats live?

3 Why are fishing cats losing their habitat?

4 How does researcher Namfon Cutter track fishing cats?

5 What things does Namfon study about fishing cats?

6 How can people help fishing cats?

