Clues for Survival

Read how adaptations and fossils reveal life in changing environments.

3.4 "The student will investigate and understand that adaptations allow organisms to satisfy life needs and respond to the environment. Key ideas include populations may adapt over time; adaptations may be behavioral or physical..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each adaptation, circle the environmental condition or life need it helps with, and number the two fossil clues 1 and 2.

Foxes, Lizards, and Fossil Clues

(1) Long ago, a group of foxes lived where winters became colder and snowier. Foxes with thicker white winter fur were harder for predators to see and better able to stay warm. They were more likely to live long enough to have young. Over many generations, more foxes in the population had thick, white winter fur. This physical adaptation helped the population meet its needs.

(2) Adaptations are not always body parts. In summer, some desert lizards rest in shade during the hottest part of the day and search for food when it is cooler. This behavior helps them avoid getting too hot and saves water. Resting in shade is a behavioral adaptation because it is something the lizards do. Both physical and behavioral adaptations can help organisms survive in their environment.

(3) Scientists also study fossils, which are remains or traces of living things from long ago. A fossil shell found in rock can show that an animal with a shell once lived there. Many fossils of fish and other water animals in a layer of rock are evidence that the place had water long ago. Fossils help scientists learn about past organisms and the environments where they lived.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did thick, white winter fur become more common in the fox population?

2. Name one physical adaptation and one behavioral adaptation from the passage. Tell how each one helps an organism.

3. What fossil evidence suggests that a place had water long ago?

4. What two kinds of information can fossils give scientists?

3 YOUR TURN

Your own words

Choose an organism and a place where it lives. In the three panels, draw and label one physical adaptation, one behavioral adaptation, and one fossil clue, then write one sentence under each panel explaining how the adaptation helps or what the fossil tells about the long-ago environment.

ANSWER KEY

Clues for Survival

GRADE 3 · 3.4

PART 1 · READ AND MARK

Underline each adaptation, circle the environmental condition or life need it helps with, and number the two fossil clues 1 and 2. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did thick, white winter fur become more common in the fox population?	**Foxes with thick, white fur were more likely to survive and have young. Over many generations, more foxes in the population had that fur.**
2	Name one physical adaptation and one behavioral adaptation from the passage. Tell how each one helps an organism.	**Thick, white winter fur is a physical adaptation that helps foxes stay warm and hide from predators. Resting in shade is a behavioral adaptation that helps desert lizards avoid heat and save water.**
3	What fossil evidence suggests that a place had water long ago?	**Many fossils of fish and other water animals in a layer of rock suggest that the place had water long ago.**
4	What two kinds of information can fossils give scientists?	**Fossils can give information about organisms that lived long ago and the environments where they lived.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Panel 1: Draw a squirrel with sharp claws and label the claws. Sharp claws help a squirrel climb trees to find food and escape danger. Panel 2: Draw the squirrel burying nuts and label the behavior. Storing nuts gives the squirrel food to eat later. Panel 3: Draw fossil leaves in rock and label them. Fossil leaves show that plants grew in this place long ago.

Accept accurate physical traits and behaviors that help an organism meet needs in its environment. For the fossil panel, accept a reasonable fossil clue and a supported statement about a past organism or environment.