### HOW NATURE WORKS



UNIT 4

#### **LESSON THREE**



# A Wildlife Safari

Objective: For students to observe firsthand the value of animal adaptations

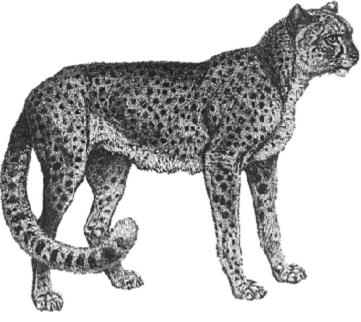
#### LEARNING OUTCOMES

- Students can identify a specific animal's physical adaptations.
- Students can relate an animal's adaptations to its lifestyle and predict which habitat it lives in.

#### **MATERIALS**

Adaptation Match activity sheet (1 per student), pencils, clipboards (optional)

#### **ZOO VISIT PREPARATION**



Cheetah

visit a
zoological
park,
nature
center,
wildlife
refuge, or
other
suitable
site ahead
of time to
prepare for
this lesson.
Map out a
pre-

a. Try to

determined route that you will follow with your students so that they can view animals with the physical adaptations listed on the *Adaptation Match* activity sheet. As you plan your route, you can tailor this lesson. For a basic lesson, choose only a couple of animals with some of the more obvious adaptations listed on the activity sheet. For a more challenging lesson, observe more animals with a wider variety of adaptations.

- b. Arrange for parents to join you on your Zoo visit.
- c. Share your itinerary with the parents that will be joining you and ensure that they understand the planned activities.

#### **PROCEDURE**

- 1. Before going to the zoo ... Have your itinerary ready and explain to the students that they will be viewing several different kinds of animals. Hold up the *Adaptation Match* activity sheet and briefly explain that they will need to look at the animals and record information on the activity sheet. You may also wish to review the adaptations listed on the bottom of the sheet.
- 2. At the zoo ... have the students use the *Adaptation Match* activity sheet as they observe the animals. Encourage your students to study each animal for several minutes before filling out their sheets. Have them look for signs at the exhibits that might assist them.
- 3. This activity can be made into a competitive game by assigning points for each correct adaptation identified. You may wish to provide students with extra sheets of paper so that they can

### HELP

record additional adaptations. If so, give students one extra point for each extra adaptation they find.

- 4. Once you return from the zoo ... discuss students' answers. Many animals will have more than three adaptations. For example, a Cheetah could be listed as having spots (for camouflage), a long tail (for balancing) long legs and a long body (for running fast), sharp teeth (for eating meat), and fur (for protection against the elements).
- 5. For homework, each student should choose an animal from the *Adaptation Match* activity sheet and write a story entitled: "A Day/Night in the Life of ..." In the story, the student should use the adaptations listed for the animal and show how these adaptations help the animal survive in its habitat.

#### **OPTION**

As a challenge for advanced students, take the study of adaptations one step further. This activity sparks a deeper understanding of the lifestyles and adaptations of different species. In many cases, different animals share similar adaptations. For example, both horses and cheetahs have long legs to help them run quickly. However, two species can also share an adaptation that appears similar, but that serves different functions. For example, wading birds such as herons also have long legs, but they use this adaptation to help them wade and fish in the water, not to run.



Tamandua

Write the three species pairings and the accompanying questions below on the board. Assign each student to one pair. Instruct students to go to the library, look up their two species, and answer the questions.

Poison Arrow Frog and Cardinal

• Why is the poison arrow frog brightly colored?

The poison arrow frog's bright colors serve as a warning to other species that it is poisonous or has a bad taste.

 Why is a male cardinal bright red in color?

The bright red color of a male cardinal helps him attract a female.

• Does the adaptation serve the same purpose for each animal?

No, the bright colors of the poison arrow frog are a warning to other animals while the bright color of a male cardinal helps him to attract a mate.

Skunk and Skunk Cabbage

 How does the skunk use its foul smell?

The skunk sprays its foul smell as a defense against predators.

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 How does the skunk cabbage use its foul smell?

The foul smell is to attract pollinators, insects that are attracted to the odor.

 Does the adaptation serve the same purpose for the skunk and the cabbage?

No, for the skunk the smell is a defense mechanism; for the cabbage the smell is a crucial component of reproduction. Jaguar and Giant Anteater

How does the jaguar use its sharp claws?

The jaguar uses its sharp claws to hunt and climb through the trees.

• How does the giant anteater use its sharp claws?

The giant anteater uses its sharp claws to dig for the mainstay of its diet, ground-dwelling ants, and to dig sleeping hollows in the ground. The giant anteater also uses its claws for protection against predators (such as jaguars). They can inflict serious wounds.

• Does the adaptation serve the same purpose for each animal?

No, for the jaguar sharp claws are an adaptation for hunting and climbing; for the giant anteater sharp claws are an adaptation for digging and protection.







## **Adaptation Match**



First write the name of the animal and its natural habitat. Then look carefully at each animal. Does the animal have any of the physical adaptations listed at the bottom of the page? Pick the three most important adaptations for survival that you can see. Write them in the space provided below. Try to figure out how each adaptation helps the animal survive, and write it down.

| Animal Name Physical Adaptation  |                                 | Habitat: How Does It Help?   |                                     |
|----------------------------------|---------------------------------|------------------------------|-------------------------------------|
|                                  |                                 |                              |                                     |
| Animal Name                      |                                 | Habitat:                     |                                     |
| Physical Adaptation 1 2.         |                                 | How Does It Help?            |                                     |
| 3                                |                                 |                              |                                     |
| Animal Name                      |                                 | Habitat:                     |                                     |
| Physical Adaptation              |                                 | How Does It Help?            |                                     |
| 2.<br>3.                         |                                 |                              |                                     |
| • Long body                      | • Long legs                     | • Large ears                 | • Large eyes                        |
| <ul> <li>Round body</li> </ul>   | • Short legs                    | • Small ears                 | • Small eyes                        |
| • Thin body                      | <ul> <li>Small feet</li> </ul>  | • Fur/Hair                   | • Flippers/Fins                     |
| • Flat body                      | • Big feet                      | <ul><li>Feathers</li></ul>   | • Wings                             |
| • Long tail                      | <ul> <li>Webbed feet</li> </ul> | <ul><li>Scales</li></ul>     | <ul> <li>Opposable thumb</li> </ul> |
| <ul><li>Short tail</li></ul>     | <ul><li>Hooves</li></ul>        | <ul><li>Moist skin</li></ul> | <ul><li>Sharp claws</li></ul>       |
| <ul><li>Spots/Stripes</li></ul>  | <ul><li>Strong beak</li></ul>   | <ul><li>Hard shell</li></ul> | • Other?                            |
| • Dull dolor                     | • Sharp teeth                   | <ul><li>Naked skin</li></ul> |                                     |
| <ul> <li>Bright color</li> </ul> | • Flat, grinding tee            | eth                          |                                     |

Poisonous fangs