

Teaching Activity: Creature Features

Introduction: Any physical trait of an organism that helps it live in its environment is called an *adaptation*. Adaptations make each kind of organisms suited to its environment. Adaptations allow one kind of organism to live where other kinds cannot. A cactus has adaptations that allow it to live in a dry, desert environment. A cactus has a thick, leathery stem that stores water. It also has spines, special, leaves that keep the plant from losing too much water. A cactus would not do well living in the wet, subtropical environment of the Everglades. Some living things are adapted to living in very cold environments. Polar bears have thick fur and fat layers to protect them from the extreme temperatures in Arctic regions. Polar bears would not be able to survive in a hot, humid rain forest in the Amazon.

Adaptations can also be responses of living things to their environment. Turn a plant so that its leaves face away from the Sun and in a few days, the leaves of the plant will turn back toward the Sun. The movement of the plant's leaves is a *response*. A response is also an adaptation of an organism to a specific *stimulus* in its environment and allows it to function and survive under changing conditions.

Objective:

- To define adaptation;
- To describe several adaptations that would help a creature live on Venus or Mars;
- To research information on Venus and Mars in preparation for designing an alien creature;

Important Terms: Adaptation, habitat, environmental conditions, predator, prey, warm/cold blooded;

Materials: Creature Feature page, reference books, pencils, crayons, markers, pictures of animals or plants with distinctive adaptations, large pieces of construction paper, scissors, glue;

Procedure:

1. Begin the activity by talking about the word adaptation and why it means.
 - Show the class some pictures of different plants and animals and talk about the parts of their bodies that are unique to them and what they are used for. Example: polar bear, cactus, dolphin;
2. Explain that, like plants and animals living on Earth, if there were living things on other planets, specifically Venus or Mars, they would be specially adapted to their own environments. For example, a creature living on Mercury might have special adaptations for living in extreme hot and cold temperatures and for moving around on a rough, rocky surface.

4. Make an overhead transparency from the **Creature Features** page and hand out a copy to the class.
 - Discuss with the students the uses a creature might have for each of them. For example, the suction cup legs might be used for climbing up steep cliffs and the balloon-like body could help a creature float in a gaseous atmosphere.
5. Tell students they are to design one creature adapted to living on Venus and one adapted to living on Mars.
 - They may use the parts from the **Creature Features** page or create their own.
 - As they design the creature they should keep the following information in mind:
 - What does the creature eat and how does it gather its food?
 - How is it adapted for moving around?
 - Does it have any predators and how does it avoid them?
 - How is it adapted to the temperatures on the planet?
6. To reinforce their knowledge of the two planets, have the students write a descriptive paragraph about the characteristics of the planet and how their creature will survive there.
7. When finished, students should present their creatures to the class for comments and questions.

CREATURE FEATURES

