



Life is Wild

Grades K-2

Lesson Summary

During an outdoor walk, students will engage in discussions about the diversity of animal habitats, what plants and animals need, animal adaptations to cold weather, and man's mimicry of those adaptations. Students will then play a running game to demonstrate what they have learned.

Objectives

Students will:

- * Recognize and identify the diversity of the local habitat.
- * Demonstrate knowledge of animal adaptations to cold climates.
- * Identify human products that mimic animal adaptations to cold climates.

Materials

- * Large "YES" sign
- * Large "NO" sign
- * 10 cones (to mark sidelines and center)
- * Game questions (below)

Resources

- * https://www.coolantarctica.com/Antarctica%20fact%20file/science/cold_all_animals.php
- * https://www.canr.msu.edu/news/animal_adaptations_for_winter
- * Winter Adaptations video (3 minutes):
https://www.youtube.com/watch?v=vfcrxLk6QSs&ab_channel=naturalistoutreach

Preparation

Show your students a short video on animal adaptations to cold climates, or discuss the ways that animals survive the cold of winter (i.e. hibernate, migrate, or adapt).

- * **Hibernation:** Hibernation is like a very deep sleep. Animals hide away in a den or burrow. Their body temperature and heart rate slow down. This helps them to save their energy. Hibernating animals wake up in spring when the weather is nicer and there is more food around.
- * **Migration:** When the weather starts to get cold, migrating animals fly or swim to a warmer place where they can find food. Some travel great distances to their destinations.



❖ **Adaptation:** Animals that adapt to the cold weather often change their appearance. They grow warmer fur or feathers and sometimes change color. Some animals change color to camouflage themselves against the snow. These animals can find food in winter, even though there isn't much food around.

Game Questions

1. Do all animals need water to survive?

Yes, animals need fresh water for their bodies to function. Water is vital for bodily functions such as regulation of temperature, nutrient uptake, removing wastes, body weight, and health.

2. Do all plants need water to survive?

Yes, plants need water for photosynthesis. Water also helps move nutrients from the soil into the plant.

3. Do plants need food to survive?

No, plants are called producers because they make – or produce – their own food. Their roots take up water and minerals from the ground and their leaves absorb a gas called carbon dioxide (CO₂) from the air. They convert these ingredients into food by using energy from sunlight. The foods are called glucose and starch.

4. Do animals need sunlight to survive?

Yes, because they depend on plants. Also, some cold-blooded animals (reptiles) use the sun to warm their bodies.

5. Are large feet a good winter adaptation for animals?

Yes, it helps them move more easily on top of the snow.

6. Is losing weight a good winter adaptation for animals?

No, animals burn energy to maintain body heat. Therefore, they need to eat more food so they have something to burn to stay warm when it's cold.

7. Can this outdoor winter habitat contain more than 20 types of plants and animals?

Yes. This habitat contains many different plants and animals. Specific examples will vary by location.

8. Are you wearing something that mimics animal adaptation to winter?

Yes. Coats, hats, and gloves are like the fur that keeps an animal warm.



Procedure

Outside:

1. Take your students on a short hike, stopping now and then to search for and observe plant and animal life that has found a way to adapt to the winter weather. Discuss the diversity of the plants and animals, what plants and animals need to survive, and the ways that those plants and animals have adapted to life in the winter. Discuss ways the students' winter clothing mimics animal's adaptations.
2. On a level and open space, mark two sidelines, 30 feet apart, using 8 cones. Display a "YES" sign on one sideline and a "NO" sign on the other. Set up two cones halfway between the sidelines to designate where teams will line up for this game.
3. Gather students and explain that they will play a "yes or no" question game.
4. Divide the class into four teams. Explain that each team will get a different question.
5. Have one team at a time line up single-file behind the center cones, facing you, to hear their question.
6. Ask the first team a question, repeat the question, and then say "go!"
7. When you say "go," each member of the team must immediately choose (individually) which answer they think is correct and then run to either the YES sideline or to the NO sideline.
8. When all team members have made it to one of the sidelines, reveal the correct answer, have that team return to you, and discuss the question with the entire class.
9. Repeat with a new question for the next team until all four teams have had a turn or two.
10. Follow up with a short discussion about migration and hibernation as adaptations to cold climate.

Inside:

1. Have students choose an animal that adapts to winter weather.
2. Have students sketch their chosen animal wearing a human product that mimics the animal's adaptation. (For example, a snowshoe hare wearing snowshoes, or a bear in a fur coat).

Special Needs Students

Some students may need the assistance of a peer teammate or an adult.