Raccoon

Life Science | Lesson Guide

1st Grade

Photo Description

A raccoon sits on a tree stump in the woods. The raccoon has gray fur and a black mask around its eyes. It has small ears and is resting in the shade of green plants and trees.

Scientific Phenomena

The Anchoring Phenomenon is animal adaptation for survival in different environments. The raccoon displays multiple adaptations that help it survive: its distinctive facial markings (which may help reduce glare and improve night vision), its body position showing rest behavior during daylight hours (since raccoons are primarily nocturnal), and its choice of habitat near fallen logs and vegetation where it can find food and shelter. These observable features represent how animals have special body parts and behaviors that help them meet their basic needs for survival.

Core Science Concepts

1. Animal Body Parts and Functions: Raccoons have special body parts like their black "mask" around their eyes, sensitive front paws for feeling, and thick fur for warmth.

2. Animal Behaviors: Raccoons rest during the day and are active at night (nocturnal behavior), demonstrating how animals have different activity patterns.

3. Habitat Needs: Animals need shelter, food, water, and space to survive. The raccoon is in a forest habitat that provides these needs.

4. Animal Adaptations: The raccoon's features help it survive - its mask may help with vision, and its location shows how it uses its environment.

Pedagogical Tip:

Use this image to have students practice making observations versus inferences. Ask them to first describe only what they can see (gray fur, black mask, sitting on stump) before discussing what they think the raccoon might be doing or feeling.

UDL Suggestions:

Provide multiple ways for students to share observations by offering drawing, verbal sharing, or acting out what they notice about the raccoon. This supports different learning styles and communication preferences.

Zoom In / Zoom Out

1. Zoom In: The raccoon's sensitive front paws contain many nerve endings that help it feel and identify objects, almost like having tiny sensors in its fingertips that send messages to its brain about texture, size, and shape.

2. Zoom Out: This raccoon is part of a forest ecosystem where it plays an important role as both predator (eating insects, small animals) and seed disperser (spreading plant seeds through its waste), connecting to the larger food web that includes plants, other animals, soil, and water.

Discussion Questions

1. What body parts do you notice on this raccoon and how might they help it survive? (Bloom's: Analyze | DOK: 2)

2. Why do you think the raccoon chose to rest on this tree stump instead of other places? (Bloom's: Evaluate | DOK: 3)

3. How are a raccoon's needs similar to and different from your needs? (Bloom's: Compare | DOK: 2)

4. What would happen if this forest habitat changed and there were no more fallen logs or trees? (Bloom's: Predict | DOK: 3)

Potential Student Misconceptions

1. Misconception: "Raccoons are dirty because they have black around their eyes."
   Clarification: The black markings are natural fur coloring that may help raccoons see better, not dirt.

2. Misconception: "All animals sleep at night like people do."
   Clarification: Different animals are active at different times - raccoons are nocturnal, meaning they sleep during the day and are awake at night.

3. Misconception: "Wild animals are just like pets."
   Clarification: Wild animals like raccoons have different needs and behaviors than pets and should be observed from a distance for safety.

Cross-Curricular Ideas

1. ELA - Descriptive Writing & Storytelling: Have students write or dictate a simple story about the raccoon's day. "Where did the raccoon go last night? What did it eat? Where will it sleep tomorrow?" This connects language arts with animal behavior concepts while building narrative skills.

2. Math - Counting & Measurement: Use the raccoon photo to practice counting (How many trees do you see? How many leaves?) and comparing sizes (Is the raccoon bigger or smaller than the tree stump?). Students can also measure and compare the lengths of different objects in the classroom to the raccoon's size.

3. Art - Nature Sketching & Mask Making: Students can draw the raccoon and practice observing details like its distinctive black mask. They can also create their own animal masks using craft materials, learning about how different animals have unique features while developing fine motor skills.

4. Social Studies - Community Helpers: Connect to local wildlife officers and park rangers who protect animals and habitats. Discuss how people in the community help keep forests safe for animals like raccoons to live in.

STEM Career Connection

1. Wildlife Biologist: A wildlife biologist is a scientist who studies animals in their natural homes, just like forests. They watch raccoons and other animals to learn how they live, what they eat, and how to keep them safe and healthy. They might count raccoons, track where they go, or help protect their homes. Average Salary: $63,000 USD

2. Veterinarian (Animal Doctor): A veterinarian is a doctor who takes care of animals when they are sick or hurt. Some veterinarians work with wild animals like raccoons at zoos or wildlife centers, helping them feel better and stay healthy. Average Salary: $93,000 USD

3. Forest Ranger/Park Ranger: A forest ranger takes care of forests and the animals that live in them. They walk through the woods, watch for animals, protect habitats, and teach people about nature and animals like raccoons. They make sure forests stay healthy and safe for all the creatures living there. Average Salary: $48,000 USD

NGSS Connections

- Performance Expectation: 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
- Disciplinary Core Ideas: 1-LS1.A - All organisms have external parts that they use to perform daily functions.
- Crosscutting Concepts: Structure and Function - The shape and stability of structures of natural objects are related to their function.

Science Vocabulary

* Habitat: The place where an animal lives and finds everything it needs to survive
* Nocturnal: Active during the night and sleeping during the day
* Adaptation: A special body part or behavior that helps an animal survive
* Mammal: An animal that has fur or hair and feeds milk to its babies
* Shelter: A safe place where animals can rest and hide from danger

External Resources

Children's Books:
- Raccoons by Emily Rose Townsend
- A Raccoon Grows Up by Pam Zollman
- Raccoon Moon by Nancy Shaw