Find The Hidden Animal

Life Science | Lesson Guide

1st Grade

Photo Description

This picture shows many rocks and pebbles on the ground. There are big rocks and small rocks in different colors like brown, gray, and tan. Some rocks are round and smooth, while others have rough edges.

Scientific Phenomena

The anchoring phenomenon in this image is camouflage - an animal's ability to blend in with its surroundings to avoid being seen by predators or prey. This happens because animals with body colors, patterns, or shapes that match their environment are more likely to survive and pass these traits to their offspring. The animal (likely an insect, spider, or small reptile) has evolved coloration and possibly texture that closely matches the rocky substrate, making it nearly invisible to both predators and potential prey.

Core Science Concepts

1. Animal Adaptations: Animals have special features that help them survive in their homes, like colors that help them hide.
2. Camouflage: Some animals can blend in with the things around them so other animals cannot see them easily.
3. Observation Skills: Scientists look very carefully at nature to find and study living things, even when they are hard to see.
4. Habitats: Animals live in places that give them what they need, like food, water, and places to hide.

Pedagogical Tip:

Use a "I Spy" approach with this image. Give students magnifying glasses (real or toy) and have them systematically search different sections of the photo. This builds the scientific practice of careful observation while making the lesson engaging and game-like.

UDL Suggestions:

Provide multiple ways for students to share their observations: verbal descriptions, pointing and gesturing, drawing what they see, or using simple descriptive words on cards. Some students may spot the hidden animal quickly while others need more time and support.

Zoom In / Zoom Out

1. Zoom In: At the microscopic level, the animal's skin or exoskeleton contains specialized cells called chromatophores (in some animals) or specific pigments that create colors and patterns matching the rocky environment.

2. Zoom Out: This camouflage strategy is part of a larger ecosystem where predator-prey relationships drive evolutionary adaptations. The rocky habitat supports a food web where camouflaged animals may be both predators of smaller organisms and prey for larger animals.

Discussion Questions

1. "What do you notice about the colors of the rocks in this picture?" (Bloom's: Remember | DOK: 1)

2. "Why do you think it might be hard to find the hidden animal?" (Bloom's: Analyze | DOK: 2)

3. "How does blending in with rocks help an animal stay safe?" (Bloom's: Apply | DOK: 2)

4. "What other places might animals hide, and what would they need to look like?" (Bloom's: Create | DOK: 3)

Potential Student Misconceptions

1. Misconception: Animals choose to change their colors like picking clothes.
Clarification: Animals are born with colors that help them hide. They cannot change their colors whenever they want (except for a few special animals).

2. Misconception: Only big animals need to hide from other animals.
Clarification: Small animals also need to hide from bigger animals that might want to eat them.

3. Misconception: The animal is just a rock that looks like an animal.
Clarification: It is a real living animal that has colors and shapes that make it look like the rocks around it.

Cross-Curricular Ideas

1. Math - Sorting and Counting: Have students sort rocks by size (big, medium, small) or color (light, dark, tan). Count how many rocks of each size or color they find. This builds classification skills and early math concepts.

2. ELA - Descriptive Writing: Ask students to draw the hidden animal they found and write or dictate simple sentences describing it using words like "bumpy," "brown," "hiding," or "safe." Create a class book titled "Our Hidden Animals."

3. Art - Camouflage Collage: Students create their own camouflaged animal by gluing torn pieces of brown, tan, and gray paper onto a matching background. This helps them understand how colors blend together.

4. Social Studies - Animal Homes Around Us: Take a nature walk around your school or neighborhood to find rocks, leaves, and soil. Discuss where animals might hide in your community and how their homes help keep them safe.

STEM Career Connection

1. Wildlife Biologist: A wildlife biologist is a scientist who studies animals in nature, including how they hide and survive. They go outside to watch animals, take pictures, and learn about camouflage and other adaptations. They help protect animals and their homes. Average Annual Salary: $63,000 USD

2. Zookeeper: A zookeeper takes care of animals at zoos and makes sure they have safe places to live that look like their natural habitats. They design homes for animals that help them feel safe and use camouflage to hide from other animals. Average Annual Salary: $29,000 USD

3. Nature Photographer: A nature photographer takes pictures of animals and nature, including hidden animals that use camouflage. They use cameras and patience to find and photograph animals that are hard to see, then share their pictures with other people to teach them about nature. Average Annual Salary: $39,000 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 Idea: 1-LS1.A - All organisms have external parts that they use to perform daily functions.
- Crosscutting Concept: Structure and Function - The shape and stability of structures of natural and designed objects are related to their function(s).

Science Vocabulary

* Camouflage: When an animal's colors help it blend in and hide in its home.
* Adaptation: Special body parts or behaviors that help animals survive.
* Predator: An animal that hunts and eats other animals.
* Habitat: The place where an animal lives and finds everything it needs.
* Observe: To look carefully and notice details about something.

External Resources

Children's Books:
- "What Do You Do With a Tail Like This?" by Steve Jenkins
- "Hiding in Plain Sight" by Gail Gibbons
- "Who's Hiding?" by Satoru Onishi