

## 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.

### 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

YouTube Videos:

- "Amazing Animal Camouflage | National Geographic Kids" - Shows various animals using camouflage in their natural habitats (<https://www.youtube.com/watch?v=40uWBKHiNv0>)
- "Hide and Seek Champions | SciShow Kids" - Kid-friendly explanation of how and why animals use camouflage (<https://www.youtube.com/watch?v=qQB2NXfJev0>)