

## Photo Description



This image shows a small lizard resting on dark, weathered tree bark and fallen leaves on the forest floor. The lizard's brownish-tan coloring blends in so well with the gray and brown bark and dried leaves around it that it is hard to spot at first glance. This is an excellent example of how animals use color and pattern to hide from predators and stay safe in their habitats.

## Scientific Phenomena

### Anchoring Phenomenon: Animal Camouflage

This image illustrates camouflage, a survival adaptation where animals develop colors, patterns, or shapes that match their environment. The lizard's body color closely resembles the bark and leaf litter surrounding it, making it difficult for predators (like birds or snakes) to see it. Why this happens: Over many generations, lizards with coloring that matched their habitat were better at hiding and surviving to have babies. Those babies inherited the same helpful coloring, and this trait became common in the population. This is a form of natural selection—animals that blend in better live longer and pass their genes to the next generation.

## Core Science Concepts

- \* Adaptation: A trait or behavior that helps an animal survive and thrive in its environment. Camouflage is a physical adaptation.
- \* Habitat: The place where an animal lives, including the plants, soil, rocks, water, and weather. An animal's coloring must match its specific habitat to work as camouflage.
- \* Survival and Protection: Camouflage helps animals avoid being eaten by predators and also helps some animals sneak up on prey.
- \* Variation in Populations: Not all animals of the same species look exactly alike. Some are darker or lighter, and these differences can affect whether they survive.

### Pedagogical Tip:

Use a "camouflage hunt" game before teaching: Hide stuffed animals or cutouts of different-colored animals in your classroom or outdoor space. Ask students to find them. This concrete experience builds understanding before abstract discussion of why camouflage matters for survival.

### UDL Suggestions:

Representation: Show multiple close-up and wide-angle photos of camouflaged animals so students with visual processing differences can see the animal clearly separate from the background. Provide a labeled version alongside the "find it" version.

Engagement: Allow kinesthetic learners to act out being predators and prey. Use a sensory approach: have students close their eyes while you hide objects, appealing to different learning modalities.

Action & Expression: Let students demonstrate understanding by creating their own camouflaged animal using collage materials, or by writing/drawing where a specific animal might hide.

## Discussion Questions

1. Why do you think this lizard's color is brown and tan instead of bright red or blue? (Bloom's: Analyze | DOK: 2)
2. If this same lizard lived on a bright green plant instead of dark bark, what might happen to it? Why? (Bloom's: Evaluate | DOK: 3)
3. What other animals might use camouflage to hide from predators, and where do they live? (Bloom's: Apply | DOK: 2)
4. How would a predator's life be different if all the animals it hunted were easy to see? (Bloom's: Synthesize | DOK: 3)

## Extension Activities

1. Camouflage Scavenger Hunt (Outdoor or Classroom): Hide small objects (buttons, toys, paper squares) in colors that match their surroundings (brown objects on bark, green on plants, etc.). Have students hunt for them and discuss why some were easier/harder to find. Then hide objects in wrong colors (bright pink on bark) and compare.
2. Design Your Own Camouflaged Animal: Provide students with a habitat picture (forest floor, snowy meadow, ocean reef) and colored paper/markers. Have them create an animal that would blend into that habitat. Ask them to explain their color and pattern choices in a short sentence or drawing.
3. Animal Adaptation Sorting Game: Show images of different animals (chameleon, polar bear, snowshoe hare, tree frog, zebra). Ask students to sort them by habitat and discuss which adaptations help each animal survive. Create a classroom chart: "Animal ! Habitat ! Camouflage Color/Pattern."

## NGSS Connections

Performance Expectation:

3-LS4-3: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

Disciplinary Core Ideas:

- 3-LS4.C Adaptation by natural selection: The environment is shaped differently by different environments and, as a result, populations of organisms vary in the traits they possess. Other organisms vary in these traits as a result of differences acquired through adaptation, which influences the overall scope of the organism.
- 3-LS4.D Biodiversity and humans: Different plants and animals live in different habitats.

Crosscutting Concepts:

- Patterns Patterns in nature (color matching, habitat features)
- Cause and Effect How traits help animals survive in specific environments

## Science Vocabulary

- \* Camouflage: Coloring or patterns on an animal's body that help it blend in with its surroundings so it is harder to see.
- \* Adaptation: A special trait or behavior that helps an animal survive in its habitat.
- \* Habitat: The home environment where an animal or plant lives.
- \* Predator: An animal that hunts and eats other animals.
- \* Prey: An animal that is hunted and eaten by another animal.

\* Blend: To mix in or become part of something else so you are hard to notice.

### External Resources

Children's Books:

- The Mixed-Up Chameleon by Eric Carle (shows color adaptation in a fun, engaging way)
- Hiding from the Sun by Stephanie St. Pierre (explores camouflage across different animals and habitats)
- Who Hides Here? by Marianne Berkes (interactive picture book about animal camouflage)

YouTube Videos:

- "Animal Camouflage for Kids" by Crash Course Kids (2:46 minutes) — Clear explanation of camouflage with fun examples. [https://www.youtube.com/watch?v=TCf\\_WtN5Ylo](https://www.youtube.com/watch?v=TCf_WtN5Ylo)
- "Hide and Seek: Amazing Animal Camouflage" by National Geographic Kids (4:12 minutes) — Stunning footage of real camouflaged animals in nature. [https://www.youtube.com/watch?v=2NPmjZRi\\_54](https://www.youtube.com/watch?v=2NPmjZRi_54)