

## Photo Description



This picture shows a spider sitting on the bark of a tree. The spider's body and legs are brown and gray, just like the tree's bark. It is hard to see the spider because it blends in with its surroundings!

## Scientific Phenomena

Anchoring Phenomenon: Camouflage—an animal's ability to hide by looking like its environment.

Why This Happens: This spider has evolved coloring and patterns that match tree bark. This is a survival adaptation that helps the spider hide from predators (animals that hunt it) and also helps it sneak up on prey (insects it wants to eat). The spider doesn't consciously choose to hide; rather, its body color is naturally similar to bark because spiders with these colors were more likely to survive and pass on their genes to offspring.

## Core Science Concepts

- \* Camouflage: When an animal's colors, patterns, or shape help it blend into its habitat so it's hard to see.
- \* Adaptation: A special body part or behavior that helps an animal survive in its environment. The spider's brown-gray color is an adaptation.
- \* Habitat: The home where an animal lives. This spider's habitat is tree bark, and its color matches this environment.
- \* Predator and Prey: Predators are animals that hunt other animals (prey). Camouflage helps both hide from predators and catch prey.

### Pedagogical Tip:

For Kindergarteners, avoid overwhelming scientific language. Instead of saying "natural selection" or "evolutionary advantage," use simpler phrases like "The spider looks like the tree so other animals can't see it as easily." Use sensory language: "Can you see the spider? It's tricky! The colors look the same!"

### UDL Suggestions:

Provide multiple means of representation: Show the image on a screen AND pass around printed copies so students can touch and examine it closely. Some learners benefit from tactile exploration. You might also place a toy spider on a piece of bark or tree branch in front of the class and have students point to where the spider is hiding—this makes the concept concrete and kinesthetic.

## Discussion Questions

1. Why is it hard to see the spider on the tree? (Bloom's: Understand | DOK: 1)
2. What would happen if this spider was bright red instead of brown? Would it be easier or harder to find? (Bloom's: Analyze | DOK: 2)
3. Can you think of another animal that hides by looking like its home? (Bloom's: Apply | DOK: 2)
4. How do you think the spider got its brown color? (Bloom's: Evaluate | DOK: 3)

## Extension Activities

1. Camouflage Hunt Game: Hide pictures or toy spiders on a bulletin board covered with bark-textured paper or brown construction paper. Have students search for the hidden animals. Discuss: "Why was it hard to find?" This reinforces the concept through play.
2. Create Your Own Camouflaged Animal: Provide students with a picture of an animal (butterfly, frog, etc.) and a sheet with a habitat drawn on it (forest, grass, pond). Let them color their animal to match the habitat using crayons or markers. Display with the question: "Can you find the animal?"
3. Nature Walk Observation: Take students on a short outdoor walk near trees or plants. Challenge them to spot insects, spiders, or other small creatures hiding on bark, leaves, or soil. Bring a magnifying glass if available. Discuss: "What colors do you see? Does the animal match its home?"

## NGSS Connections

Performance Expectation:

K-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive.

Disciplinary Core Ideas:

- \* K-LS1.A (Structure and Function—animals have body parts that help them survive)
- \* K-LS1.C (Organization for Matter and Energy Flow in Organisms—animals need food and water)

Crosscutting Concepts:

- \* Patterns (The spider's color pattern matches the bark pattern)
- \* Structure and Function (The spider's brown-gray color helps it survive)

## Science Vocabulary

- \* Camouflage: When an animal's colors or patterns help it hide from other animals.
- \* Spider: A small animal with eight legs that spins webs to catch food.
- \* Bark: The hard, bumpy outside covering of a tree trunk and branches.
- \* Blend in: To look so much like something else that it's hard to see.
- \* Habitat: The place where an animal lives, like a forest, desert, or pond.
- \* Adaptation: A special way an animal's body or behavior helps it survive where it lives.

## External Resources

Children's Books:

- Hide and Seek: The Life of Creatures in Camouflage\* by Jennifer Shand (engaging illustrations of camouflaged animals)
- Who Hid the Eggs?\* by Satoshi Kitamura (interactive search-and-find with animals in habitats)
- Camouflage\* by Shelley Rotner & Anne Woodhull (photo-based with real animals)

YouTube Videos:

\* "Amazing Animal Camouflage for Kids" by CrashCourse Kids—A 5-minute video showing various animals that hide in their environments with clear, engaging visuals. <https://www.youtube.com/watch?v=mG-VhR9WdLU>

\* "Can You Spot the Animal? Camouflage in Nature" by National Geographic Kids—A fun, short (4-minute) video with stunning close-up photography of camouflaged creatures and a "spot the animal" challenge. <https://www.youtube.com/watch?v=t7ZXbLaALvE>