

## Photo Description



Two deer are hiding in tall, golden grass near some trees. The deer's brown fur matches the color of the dry grass so well that they are very hard to see. Only their ears and parts of their bodies show through the grass.

## Scientific Phenomena

This image demonstrates the Anchoring Phenomenon of animal camouflage - specifically how deer use their natural coloration to blend into their environment. The deer's brown and tan fur closely matches the dried autumn grasses, making them nearly invisible to predators and observers. This camouflage occurs because the deer's coat color evolved over thousands of years to help them survive by avoiding detection. The phenomenon works because our eyes have difficulty distinguishing objects that have similar colors and patterns to their background.

## Core Science Concepts

1. Animal Camouflage: Animals have body colors and patterns that help them hide from danger by blending into their surroundings.
2. Survival Adaptations: Living things have special features that help them stay safe, find food, and survive in their homes.
3. Animal Habitats: Animals live in places that give them what they need - food, water, shelter, and protection.
4. Observation Skills: Scientists use their eyes carefully to notice things in nature, even when they are hard to see.

### Pedagogical Tip:

Use a "I Spy" game format to help kindergarteners practice the observation skills needed to spot camouflaged animals. Start with obvious examples and gradually make them more challenging to build confidence.

### UDL Suggestions:

Provide multiple ways for students to demonstrate their understanding of camouflage - through drawing, acting out hiding behaviors, or using manipulatives to create camouflage scenes. This supports different learning styles and abilities.

## Zoom In / Zoom Out

1. Zoom In: Each individual hair on the deer's coat contains tiny structures called melanin granules that create the brown and tan colors. These microscopic color particles reflect certain wavelengths of light while absorbing others, creating the specific shades that match their environment.

2. Zoom Out: This camouflage is part of a larger forest ecosystem where predators like wolves, coyotes, and mountain lions hunt deer. The grassland-forest edge habitat provides both food sources and hiding places, supporting a complex web of relationships between plants, herbivores, and carnivores across the landscape.

### Discussion Questions

1. What do you notice about how the deer's fur color compares to the grass around them? (Bloom's: Analyze | DOK: 2)
2. Why do you think it helps deer to be hard to see? (Bloom's: Understand | DOK: 2)
3. What other animals have you seen that are hard to spot in their homes? (Bloom's: Remember | DOK: 1)
4. How might a deer's camouflage help it in different seasons when the grass changes color? (Bloom's: Evaluate | DOK: 3)

### Potential Student Misconceptions

1. Misconception: Animals choose to change their colors to hide.

Clarification: Animals are born with colors that help them hide. They cannot change their colors like chameleons do.

2. Misconception: Only some animals need to hide from danger.

Clarification: Most animals have ways to stay safe, including hiding, running fast, or having hard shells.

3. Misconception: Camouflage only works in one place.

Clarification: Animals' colors work best in their home habitat, but may not help them hide in different places.

### NGSS Connections

- Performance Expectation: K-LS1-1: Use observations to describe patterns of what plants and animals need to survive
- Disciplinary Core Ideas: K-LS1.C (Organization for Matter and Energy Flow in Organisms)
- Crosscutting Concepts: Patterns and Structure and Function

### Science Vocabulary

- \* Camouflage: When an animal's colors help it blend in and hide in its surroundings.
- \* Predator: An animal that hunts and eats other animals.
- \* Habitat: The place where an animal lives and finds everything it needs.
- \* Adaptation: A special body part or behavior that helps an animal survive.
- \* Environment: All the living and non-living things around an animal.

### External Resources

Children's Books:

- What Color Is Camouflage? by Carolyn Otto
- Hide and Seek: Nature's Best Vanishing Acts by Andrea Helman
- Who's Hiding? by Satoru Onishi

YouTube Videos:

- "Animal Camouflage for Kids" - Simple examples of how different animals hide in nature (<https://www.youtube.com/watch?v=hFZFjoX2cGg>)
- "Deer Facts for Kids" - Educational video about deer behavior and habitat needs (<https://www.youtube.com/watch?v=T8gOh0wEgLM>)