

Photo Description



This image shows a katydid—an insect that looks like a large green grasshopper—sitting on grass and plant stems. The katydid's body is bright green, just like the leaves and grass around it, making it very hard to spot. You can see its long antennae, wings folded on its back, and strong back legs designed for jumping.

Scientific Phenomena

Anchoring Phenomenon: Why is this insect so hard to see in the grass?

This image demonstrates camouflage (also called protective coloration), a survival strategy where animals have colors, patterns, and shapes that match their environment. The katydid's green body blends in with green plants because natural selection has favored individuals whose coloring helps them hide from predators. Over many generations, katydids with greener bodies survived longer and had more babies, passing along genes for green coloring. This is an observable example of how animals adapt to their habitats to stay safe.

Core Science Concepts

- * Camouflage is an adaptation: Animals have body colors and shapes that help them survive in their environment. The katydid's green color helps it hide from predators like birds.
- * Colors help animals survive: Animals that blend in with their surroundings are harder for predators to find and eat. This keeps them alive longer.
- * Animals live in habitats: Habitats are homes where animals find food, water, and shelter. The katydid lives in grassy, leafy areas where green coloring helps it hide.
- * Animals have different body parts for different jobs: Katydids have long antennae for sensing their environment, wings for flying, and strong back legs for jumping away from danger.

Pedagogical Tip:

For First Grade, focus on the observable trait: "The katydid is green like the grass!" rather than complex genetic explanations. Use the phrase "camouflage" repeatedly so students build academic vocabulary. Point out specific details (body color, leaf shape similarity) with your finger on the image to guide student attention.

UDL Suggestions:

To support diverse learners, provide a printed image of the katydid on grass so students who struggle with screen viewing can examine it closely. Offer tactile comparisons by letting students hold green fabric samples next to real grass. For English learners, create a visual word wall with picture cards for: katydid, camouflage, green, grass, hide, predator. Allow students to respond to questions through drawing, verbal language, or gesture rather than writing.

Discussion Questions

1. Why is it hard to see the katydid in this picture? (Bloom's: Understand | DOK: 1)
2. What would happen to a red katydid sitting in green grass? Who might see it? (Bloom's: Analyze | DOK: 2)
3. Can you find three things in the picture that are the same color as the katydid? Why do you think that helps the katydid? (Bloom's: Analyze | DOK: 2)
4. What other animals do you think might use camouflage to hide from animals that want to eat them? (Bloom's: Apply | DOK: 2)

Extension Activities

1. Camouflage Hide-and-Seek Game: Place small green paper cutouts of katydids on a green poster board with various green objects (leaves, grass clippings, green construction paper). Challenge students to find the hidden katydids. Discuss why some were easier or harder to find. Then repeat with a red katydid on the same background to show how poor camouflage makes an animal visible to predators.
2. Create Your Own Camouflaged Animal: Provide students with magazines, colored paper, and a "habitat" background (green grass field, blue ocean, brown forest floor, etc.). Students cut out or draw an animal and color or decorate it to match their chosen habitat. Display creations and have classmates try to spot each camouflaged animal.
3. Nature Hunt Observation: Take students on a short outdoor walk to search for animals that are hard to see because of their coloring. Look for insects on plants, birds in trees, or spiders on branches. Photograph or sketch findings and discuss how each animal's color helps it hide. Create a class book titled "Animals That Hide."

NGSS Connections

Performance Expectation:

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

Disciplinary Core Ideas:

- 1-LS1.A: All organisms have external parts (like color and shape) that help them survive.
- 1-LS4.B: Animals have different body parts that help them survive in their habitats.

Crosscutting Concepts:

- Patterns: The pattern of green color in the katydid matches the pattern of green in grass and leaves.
- Structure and Function: The katydid's green color (structure) helps it hide and survive (function).

Science Vocabulary

- * Camouflage: When an animal's colors or patterns help it hide in its environment so predators cannot easily see it.
- * Katydid: A large green insect with long antennae and wings that looks similar to a grasshopper.
- * Adaptation: A body part or behavior that helps an animal survive and stay safe in its habitat.
- * Predator: An animal that hunts and eats other animals for food.
- * Habitat: The place where an animal lives and finds food, water, and shelter.
- * Antennae: Long, thin body parts on an insect's head used to sense and feel the environment.

External Resources

Children's Books:

The Mixed-Up Chameleon* by Eric Carle — A story about color-changing animals and adaptation (though chameleons change color differently than camouflage, it introduces the concept of color and survival).

Hide and Seek: Animals in Camouflage* by John Woodward — A factual, beautifully illustrated book showing 12 animals with camouflage.

Who Is the Beast?* by Keith Baker — An engaging story exploring how animals use camouflage and color to blend in.

YouTube Videos:

* "Animal Camouflage for Kids" by Crash Course Kids — A 5-minute overview of camouflage with clear examples and fun animation. <https://www.youtube.com/watch?v=WwBqVHN-YdE>

* "Camouflage: Hide-and-Seek in the Wild" by National Geographic Kids — Features real katydids, insects, and other animals using camouflage in their habitats (3 minutes). <https://www.youtube.com/watch?v=qwhc6vvYJQU>

Teacher Notes: This katydid image is an excellent anchor for introducing First Graders to animal adaptations and survival. The phenomenon is immediately visible and relatable—students can understand why hiding helps an animal stay safe. Use real or high-quality photos whenever possible, and encourage students to find camouflaged creatures in their own outdoor environments to deepen engagement and observation skills.