

## Photo Description



This image shows a green grasshopper sitting on a green leaf. The grasshopper has long back legs, antennae (thin feelers on its head), and big eyes. You can see how the grasshopper's green color matches the green plant, which helps it hide from animals that might want to eat it.

## Scientific Phenomena

**Anchoring Phenomenon:** A grasshopper using camouflage to blend in with its environment.

**Why This Happens:** Grasshoppers have evolved green coloring that matches the plants where they live. This is called camouflage—it helps them hide from predators like birds and spiders. The grasshopper's body color is similar to the leaf it's standing on, making it harder to see. This is an adaptation (a special feature) that helps the grasshopper survive in nature. Grasshoppers also live on plants because that's where they find food to eat (grass and leaves).

## Core Science Concepts

- \* Living things have body parts with special jobs: The grasshopper's long back legs help it jump, its antennae help it sense things around it, and its eyes help it see.
- \* Animals have traits that help them survive: The grasshopper's green color helps it hide on green plants. This is called an adaptation.
- \* Animals live in habitats where they find food and shelter: Grasshoppers live on plants because they eat plants and hide among them from predators.
- \* Plants and animals are connected: Grasshoppers depend on plants for food and shelter; plants depend on insects for pollination.

### Pedagogical Tip:

First graders learn best through observation and direct experience. Consider bringing in live grasshoppers (in a safe container) or showing high-quality videos before discussing adaptations. Let students observe real insects when possible rather than relying only on pictures. This concrete experience builds understanding of body parts and behaviors.

### UDL Suggestions:

**UDL Strategy - Multiple Means of Representation:**

Provide students with multiple ways to learn about grasshoppers:

- Visual: Show the photo and real insects in a viewing container
  - Auditory: Play recordings of grasshopper sounds (chirping)
  - Kinesthetic: Let students act out how a grasshopper jumps or use tactile models to feel body parts
- This ensures all learners can access the concept regardless of learning preference or ability.

### Discussion Questions

1. Why do you think this grasshopper is green? (Bloom's: Analyze | DOK: 2)
2. What body parts can you see on the grasshopper, and what do you think each one does? (Bloom's: Understand | DOK: 2)
3. If a grasshopper was brown instead of green, what might happen to it when it sits on this leaf? (Bloom's: Evaluate | DOK: 3)
4. Where do grasshoppers find their food, and why do they need to live near plants? (Bloom's: Understand | DOK: 1)

### Extension Activities

#### Activity 1: Camouflage Hunt

Hide green paper grasshopper cutouts around your classroom and outdoor area (green ones on green surfaces, brown ones on brown surfaces). Have students find them and discuss why some were easier to find than others. This concrete experience builds understanding of how color helps animals hide.

#### Activity 2: Design Your Own Grasshopper

Provide students with craft materials (colored paper, pipe cleaners for antennae, etc.) and have them create their own grasshopper. Ask them to choose colors and explain why they picked those colors. Would their grasshopper hide well in your classroom? On a green plant?

#### Activity 3: Observe Real Grasshoppers (If Available)

If safe and possible, keep grasshoppers in a large, ventilated container for 2-3 days while students observe and sketch them. Have them label body parts using the vocabulary from the lesson. Release the grasshoppers safely afterward and discuss where they go and why.

### 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 Ideas:

- 1-LS1.A Structure and Function (Animals have body parts that help them survive)
- 1-LS1.D Information Processing (Grasshoppers use eyes and antennae to get information about the world)

#### Crosscutting Concepts:

- Structure and Function (Body parts have jobs that help the grasshopper live)
- Patterns (Green grasshoppers are found on green plants—a pattern in nature)

### Science Vocabulary

- \* Grasshopper: A jumping insect with long back legs that eats plants and makes chirping sounds.
- \* Camouflage: Colors or patterns on an animal's body that help it hide from other animals.
- \* Antennae: Long, thin feelers on an insect's head that help it sense what is around it.
- \* Adaptation: A special body part or behavior that helps an animal survive in its home.

- \* Habitat: The place where an animal lives and finds food, water, and shelter.
- \* Predator: An animal that hunts and eats other animals.

### External Resources

#### Children's Books:

- Grasshopper on the Road by Arnold Lobel (a gentle fiction book about a grasshopper's adventure)
- National Geographic Little Kids First Big Book of Insects by National Geographic Kids (colorful photos and facts)
- The Very Hungry Caterpillar by Eric Carle (teaches about insects and life cycles with vibrant illustrations)

#### YouTube Videos:

- "Grasshoppers for Kids" by National Geographic Kids — A 3-minute video showing grasshopper behavior, jumping, and camouflage in nature. <https://www.youtube.com/watch?v=5ub56HG5g1k>
- "Grasshopper Body Parts" by Homeschool Pop — An animated video identifying grasshopper body parts with clear labels and simple language perfect for First Grade. [https://www.youtube.com/watch?v=Tp\\_3jVxvml](https://www.youtube.com/watch?v=Tp_3jVxvml)

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Teacher Note: This lesson builds foundational understanding of structure, function, and adaptation—key First Grade life science concepts. Encourage student questions and observations, and connect the grasshopper's features to students' own body parts when possible ("You have eyes to see, just like the grasshopper!"). This personal connection deepens learning.