

Photo Description



A green grasshopper is eating a red flower bud on a plant. The grasshopper has long back legs and is using its mouth to bite the flower. The flower bud is dark red and has green leaves around it.

Scientific Phenomena

The anchoring phenomenon shown is herbivory - when animals eat plants for food. This grasshopper is feeding on the hibiscus flower bud because it contains nutrients like sugars, proteins, and water that the grasshopper needs to survive and grow. The grasshopper's strong mandibles (jaws) allow it to chew through plant tissue, and this feeding behavior is part of a natural food web where energy flows from plants to plant-eating animals.

Core Science Concepts

1. Animals need food to survive - The grasshopper is obtaining energy and nutrients by eating the plant
2. Different animals eat different foods - Grasshoppers are herbivores that primarily eat plants
3. Animals have body parts that help them get food - The grasshopper's strong jaws and legs help it feed
4. Plants and animals interact in nature - This shows a predator-prey relationship between the grasshopper and plant

Pedagogical Tip:

Use this image to help students make connections between what they observe animals doing in their own backyards and the scientific concept that all animals need food to survive. Ask them to share examples of animals they've seen eating.

UDL Suggestions:

Provide tactile experiences by letting students feel different textures of leaves and observe live insects (like crickets) eating. This supports kinesthetic learners and makes abstract concepts concrete.

Zoom In / Zoom Out

1. Zoom In: Inside the grasshopper's digestive system, special enzymes are breaking down the plant material into smaller molecules that can be absorbed and used for energy and growth.
2. Zoom Out: This feeding relationship is part of a larger food web where grasshoppers transfer energy from plants to other animals like birds, spiders, and frogs that eat them.

Discussion Questions

1. What body parts does the grasshopper use to eat the flower? (Bloom's: Analyze | DOK: 2)
2. Why do you think the grasshopper chose to eat this flower bud instead of the leaves? (Bloom's: Evaluate | DOK: 3)
3. What might happen to this grasshopper if there were no plants around? (Bloom's: Apply | DOK: 2)
4. How is the way a grasshopper eats different from how you eat? (Bloom's: Compare | DOK: 2)

Potential Student Misconceptions

1. Misconception: "The grasshopper is being mean to the plant"
Clarification: Animals eating plants is natural and necessary for survival - it's not mean, it's how nature works
2. Misconception: "All insects eat the same things"
Clarification: Different insects eat different foods - some eat plants, some eat other insects, and some eat nectar
3. Misconception: "Plants don't need anything to survive"
Clarification: Plants need sunlight, water, and air to make their own food, just like animals need food

Cross-Curricular Ideas

1. Math + Science: Create a simple bar graph showing "What do different insects eat?" Students can draw or cut out pictures of grasshoppers, beetles, and butterflies, then sort them by whether they eat plants, insects, or nectar. Count and compare the groups using tallies or picture graphs.
2. ELA + Science: Write a simple narrative from the grasshopper's perspective using a sentence frame: "I am a grasshopper. I eat _____ because _____. My favorite food is _____." Students can illustrate their sentences and create a class book titled "A Grasshopper's Day."
3. Art + Science: Create a nature collage or mixed-media artwork showing a food web. Students can use real leaves, flower petals, and drawn insects to show how grasshoppers, plants, and other animals are connected. Display these around the classroom as both science and art.
4. Social Studies + Science: Discuss how farmers and gardeners feel when grasshoppers eat their plants. Have students brainstorm respectful ways people can protect their gardens while still letting nature exist. This builds empathy and environmental stewardship.

STEM Career Connection

1. Entomologist - A scientist who studies insects like grasshoppers! Entomologists observe bugs, learn what they eat, where they live, and how they grow. Some help farmers protect crops while others work in museums teaching people about insects. Average salary: \$65,000
2. Botanist - A scientist who studies plants and flowers. Botanists learn why plants grow the way they do, what animals eat them, and how to help plants stay healthy. They might work in gardens, parks, or laboratories. Average salary: \$63,000
3. Wildlife Biologist - A scientist who studies how animals and plants live together in nature. Wildlife biologists observe food webs, track animal populations, and help protect habitats so all creatures can survive. They often work outdoors in forests, fields, and wetlands. Average salary: \$68,000

NGSS Connections

- Performance Expectation: 2-LS4-1 - Make observations of plants and animals to compare the diversity of life in different habitats
- Disciplinary Core Ideas: 2-LS2.A - Interdependent Relationships in Ecosystems
- Crosscutting Concepts: Structure and Function

Science Vocabulary

- * Herbivore: An animal that eats only plants
- * Nutrients: The good things in food that help living things grow and stay healthy
- * Mandibles: The strong jaw parts that insects use to bite and chew
- * Food web: How different living things are connected by who eats what

External Resources

Children's Books:

- What Do Insects Do? by Susan Canizares
- From Seed to Plant by Gail Gibbons
- Who Eats What? Food Chains and Food Webs by Patricia Lauber