

## 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

### 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

YouTube Videos:

- "Grasshopper Eating - Amazing Close Up" - Close-up footage of grasshoppers feeding on various plants (<https://www.youtube.com/watch?v=YqzWb8jGvGI>)
- "What Do Animals Eat? | Animal Song for Kids" - Educational song about different animal diets including herbivores (<https://www.youtube.com/watch?v=7QX8A8yC5Xs>)