

## Photo Description



A black bird with a long tail sits on green grass. The bird has dark feathers, a pointed beak, and bright yellow eyes. You can see small drops of water on the grass around the bird.

## Scientific Phenomena

This image represents the Anchoring Phenomenon of animal adaptation for survival. The blackbird displays specific physical features (structures) that help it survive in its environment. The pointed beak is adapted for finding and eating insects and worms in the grass, while its dark coloring provides camouflage. The bird's body structure, including its legs and feet, are perfectly designed for walking on ground surfaces while searching for food.

## Core Science Concepts

1. Animal Body Parts and Functions: Birds have specific body parts like beaks, wings, feet, and eyes that help them survive and meet their basic needs.
2. Habitat Requirements: Animals need food, water, shelter, and space to live and grow in their environment.
3. Observable Animal Behaviors: Birds demonstrate behaviors like foraging (searching for food) that help them survive.
4. Structure and Function Relationships: The shape and size of animal body parts are connected to how they are used.

### Pedagogical Tip:

Use the "See-Think-Wonder" thinking routine with this image. Have students first observe what they see, then think about what the bird might be doing, and finally wonder about questions they have. This builds observation skills and scientific curiosity.

### UDL Suggestions:

Provide multiple ways for students to share observations by offering options like drawing, verbal sharing, or using sentence starters like "I notice..." or "The bird's beak looks..." This supports diverse learners in expressing their scientific thinking.

## Zoom In / Zoom Out

1. Zoom In: Inside the bird's beak are specialized structures that help it grip and manipulate food. The bird's digestive system breaks down insects and worms into nutrients that give the bird energy to fly, build nests, and stay healthy.
2. Zoom Out: This blackbird is part of a larger ecosystem where it plays an important role. It helps control insect populations by eating bugs, and it also spreads seeds when it travels to different areas, helping plants grow in new places.

## Discussion Questions

1. What do you think this bird is looking for in the grass? (Bloom's: Apply | DOK: 2)
2. How does the shape of this bird's beak help it find food? (Bloom's: Analyze | DOK: 2)
3. What would happen if this bird couldn't find enough food in this area? (Bloom's: Evaluate | DOK: 3)
4. Why do you think the bird's eyes are on the sides of its head instead of in front like humans? (Bloom's: Analyze | DOK: 3)

## Potential Student Misconceptions

1. Misconception: All birds eat the same food.

Clarification: Different birds have different shaped beaks because they eat different foods - some eat seeds, some eat insects, and some eat fish.

2. Misconception: Birds only use their beaks for eating.

Clarification: Birds use their beaks for many things including building nests, cleaning their feathers, and defending themselves.

3. Misconception: All black birds are the same type of bird.

Clarification: There are many different species of black birds, each with slightly different features and behaviors.

## Cross-Curricular Ideas

1. ELA - Descriptive Writing: Have students write or dictate simple sentences describing the bird using sensory words. They can complete sentence frames like "The bird's feathers feel \_\_\_\_\_" or "The bird looks \_\_\_\_\_. This connects observational science to writing skills while building vocabulary.

2. Math - Counting and Measurement: Students can count the number of grass blades visible in a small section of the photo, then estimate how many might be in the whole picture. They can also measure the bird's tail length using non-standard units (like paper clips or blocks) to practice measurement concepts.

3. Art - Animal Illustration: Students can create their own drawings or paintings of birds, experimenting with different colors, beak shapes, and body features. They can compare their artwork to real birds to discuss how artists use observation to create accurate representations of nature.

4. Social Studies - Animal Habitats Around the World: Students can explore different habitats where birds live (forests, grasslands, wetlands, deserts) and learn about the birds found in each place. This builds geographic awareness and understanding of how animals adapt to different environments around the world.

## STEM Career Connection

1. Ornithologist (Bird Scientist): An ornithologist is a scientist who studies birds. They observe birds in nature, learn what they eat, where they live, and how they behave. Ornithologists help protect birds and their homes. Average Salary: \$65,000 USD per year

2. Wildlife Photographer: A wildlife photographer takes pictures of animals in their natural habitats, just like the photo you're looking at! They use cameras and patience to capture amazing moments of animals. Their photos help teach people about nature and why it's important to protect animals. Average Salary: \$35,000 USD per year

3. Zookeeper or Animal Care Specialist: Zookeepers work with animals every day, feeding them, keeping their homes clean, and making sure they stay healthy and happy. Some zookeepers specialize in caring for birds and learning about their needs and behaviors. Average Salary: \$28,000 USD per year

### NGSS Connections

- Performance Expectation: K-LS1-1 - Use observations to describe patterns of what plants and animals (including humans) need to survive.
- Disciplinary Core Ideas: K-LS1.C - All animals need food in order to live and grow
- Crosscutting Concepts: Patterns - Patterns in the natural world can be observed and used as evidence

### Science Vocabulary

- \* Beak: The hard, pointed mouth part that birds use to eat and pick up things.
- \* Habitat: The place where an animal lives and finds everything it needs to survive.
- \* Adaptation: A special body part or behavior that helps an animal survive in its home.
- \* Foraging: When animals search for and gather food.
- \* Camouflage: Colors or patterns that help animals blend in with their surroundings.

### External Resources

Children's Books:

- Beaks! by Sneed B. Collard III
- What Do You Do With a Tail Like This? by Steve Jenkins and Robin Page
- Birds by Kevin Henkes