Mourning Dove

Life Science | Lesson Guide

5th Grade

Photo Description

A small mourning dove sits quietly on dark soil in a garden bed surrounded by green plants, white flowers, and a clay pot. The bird has grayish-brown feathers with darker spots and appears to be resting or searching for food among the garden plants. This peaceful scene shows how wild birds visit gardens and interact with human-made spaces.

Scientific Phenomena

The anchoring phenomenon here is animal habitat selection and adaptation to human environments. The mourning dove has chosen this garden location because it provides essential survival resources: shelter from the dense vegetation, potential food sources like seeds from flowers and plants, water access, and nesting materials. This demonstrates how animals make behavioral choices based on their biological needs and how some species have successfully adapted to live alongside humans in suburban environments.

Core Science Concepts

1. Habitat Requirements: All animals need four basic things to survive - food, water, shelter, and space. This garden provides multiple habitat elements that attract the mourning dove.

2. Behavioral Adaptations: Birds like mourning doves have learned behaviors that help them survive, such as foraging on the ground and selecting safe resting spots near cover.

3. Human-Wildlife Interactions: Gardens create mini-ecosystems that can support wildlife, showing how human activities can positively impact local animal populations.

4. Animal Structure and Function: The dove's coloring (camouflage), ground-walking ability, and small size are physical traits that help it survive in this environment.

Pedagogical Tip:

Have students create a "Bird's Eye View" checklist by observing the photo and identifying what resources this garden location provides for the dove. This helps them think like scientists making observations and inferences.

UDL Suggestions:

Provide multiple ways for students to demonstrate their understanding by offering choices: drawing and labeling the habitat features, creating a written list, or verbally explaining to a partner what makes this a good spot for the bird.

Zoom In / Zoom Out

1. Zoom In: At the cellular level, the dove's brain is processing sensory information from its environment - analyzing sounds for danger, using its eyes to spot food, and coordinating muscle movements for balance and quick escape responses.

2. Zoom Out: This garden scene is part of a larger urban ecosystem where mourning doves migrate seasonally across continents, connecting this small backyard to vast flyway corridors that span from Canada to Central America.

Discussion Questions

1. What evidence can you find in this photo that shows this garden meets the mourning dove's basic survival needs? (Bloom's: Analyze | DOK: 2)

2. How might the dove's behavior change if one element of this habitat was removed, like the plants or water source? (Bloom's: Evaluate | DOK: 3)

3. What other animals might also find this garden habitat suitable, and what would they need that's the same or different from the dove? (Bloom's: Apply | DOK: 2)

4. If you were designing a bird-friendly garden, what features would you include based on what you observe in this photo? (Bloom's: Create | DOK: 4)

Potential Student Misconceptions

1. Misconception: "Birds only live in wild places like forests."
Clarification: Many bird species have adapted to live in human environments and actually thrive in gardens, parks, and suburban areas that provide food and shelter.

2. Misconception: "All birds build nests in trees."
Clarification: Mourning doves often build simple, flat nests on the ground, in shrubs, or even on human-made structures like building ledges.

3. Misconception: "Birds don't need water to drink."
Clarification: Birds need fresh water daily for drinking and bathing to maintain their feathers and regulate body temperature.

Cross-Curricular Ideas

1. Math - Data Collection and Graphing: Have students conduct a "bird survey" in a garden or park over several weeks. Record which bird species they observe, how many of each type, and at what times of day. Create bar graphs or pictographs to display their data and compare results with classmates. This connects to measurement, data representation, and pattern recognition.

2. ELA - Descriptive Writing and Poetry: Ask students to write a detailed observation journal entry from the perspective of the mourning dove, describing what it sees, hears, and experiences in the garden. Alternatively, have them create acrostic poems using the word "HABITAT" or "MOURNING DOVE" that describe the bird's needs and behaviors.

3. Social Studies - Human Communities and Wildlife: Explore how different neighborhoods and communities design their outdoor spaces. Research how urban planners and community gardeners work together to create spaces that support both people and wildlife. Discuss how decisions people make about their yards and parks affect local animal populations.

4. Art - Nature Observation Sketching: Students create detailed pencil or watercolor sketches of birds they observe, focusing on accurately capturing feather patterns, colors, and body proportions. Display finished artwork in a classroom gallery and have students write labels identifying the bird species, habitat features visible, and survival adaptations shown in their drawings.

STEM Career Connection

1. Ornithologist (Bird Scientist): An ornithologist is a scientist who studies birds - how they live, what they eat, where they travel, and how they interact with their environment. Ornithologists observe birds in nature, keep detailed records, and use their research to help protect bird populations and their habitats. Some work for universities, wildlife organizations, or government agencies. Average Annual Salary: $65,000 - $75,000

2. Landscape Designer/Ecological Garden Specialist: These professionals design outdoor spaces like gardens, parks, and yards with both people and wildlife in mind. They choose plants, arrange water features, and plan layouts that attract birds and other animals while looking beautiful for people to enjoy. This job combines creativity with science knowledge about what different animals need to survive. Average Annual Salary: $55,000 - $70,000

3. Wildlife Biologist: Wildlife biologists study how animals interact with each other and their environments. They might track bird migration patterns, study how gardens affect bird populations, or work to protect endangered species. They spend time outdoors observing animals and use computers to analyze their data and share findings with other scientists. Average Annual Salary: $62,000 - $80,000

NGSS Connections

- Performance Expectation: 5-LS2-1 - Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment
- Disciplinary Core Ideas: 5-LS2.A - The food of almost any kind of animal can be traced back to plants
- Disciplinary Core Ideas: 5-ESS3.A - Human impact on Earth's systems
- Crosscutting Concepts: Systems and System Models - A system can be described in terms of its components and their interactions
- Crosscutting Concepts: Cause and Effect - Cause and effect relationships are routinely identified and used to explain change

Science Vocabulary

* Habitat: The natural environment where an animal lives and finds everything it needs to survive.
* Adaptation: A special trait or behavior that helps an animal survive in its environment.
* Foraging: The behavior of searching for and gathering food.
* Camouflage: Colors or patterns that help an animal blend in with its surroundings.
* Ecosystem: A community of living and non-living things that interact with each other.
* Migration: The seasonal movement of animals from one place to another to find food or breeding areas.

External Resources

Children's Books:
- "About Birds: A Guide for Children" by Cathryn Sill
- "The Mourning Dove" by Sherry Shahan
- "Birds in Your Backyard" by Barbara Herkert