Mourning Dove

Life Science | Lesson Guide

1st Grade

Photo Description

This bird has gray and brown feathers with dark stripes. It sits on the ground with sticks and leaves around it. The bird has a small black beak and round dark eyes.

Scientific Phenomena

This image represents the Anchoring Phenomenon of animal camouflage and habitat adaptation. The dove's mottled gray-brown plumage with intricate barring patterns allows it to blend seamlessly with the forest floor debris of twigs, dried leaves, and organic matter. This coloration is an evolutionary adaptation that helps the bird avoid predators by making it nearly invisible when resting or foraging on the ground. The phenomenon demonstrates how animals have developed physical characteristics that match their specific environment for survival.

Core Science Concepts

1. Animal body coverings serve protective functions - The dove's feathers provide both insulation and camouflage protection
2. Animals have features that help them survive in their habitat - The bird's coloring matches its ground-dwelling environment
3. Living things can be found in different places - This dove lives on or near the forest floor where it can find food and shelter
4. Animals use their senses to stay safe - The bird's eyes help it watch for danger while it rests

Pedagogical Tip:

Use "I Notice, I Wonder, It Reminds Me Of" thinking routine when showing this image. Students will naturally notice the bird's colors and wonder why it looks like the ground, leading to rich discussions about animal survival.

UDL Suggestions:

Provide multiple ways for students to express their observations - drawing, verbal descriptions, or acting out how the bird might move. Use hand gestures to show how the bird "disappears" into its surroundings.

Zoom In / Zoom Out

1. Zoom In: Each individual feather has tiny barbules that lock together like velcro, creating the smooth appearance we see. The pigment cells in each feather contain melanin that creates the brown and gray colors.

2. Zoom Out: This dove is part of a forest ecosystem food web, eating seeds and small insects while serving as prey for hawks, owls, and ground predators. Its camouflage affects the entire ecosystem balance.

Discussion Questions

1. "What do you notice about how this bird's colors match the ground around it?" (Bloom's: Observe | DOK: 1)

2. "Why might it be helpful for this bird to look like the sticks and leaves on the ground?" (Bloom's: Analyze | DOK: 2)

3. "How do you think this bird's feathers help it in different ways?" (Bloom's: Apply | DOK: 2)

4. "What other animals do you know that have colors or patterns that help them hide?" (Bloom's: Apply | DOK: 2)

Potential Student Misconceptions

1. Misconception: "The bird chose to be brown and gray to hide."
   Scientific Clarification: Animals are born with colors that help them survive. They don't choose their colors.

2. Misconception: "All birds look the same."
   Scientific Clarification: Different birds have different colors and patterns depending on where they live and what they need to survive.

3. Misconception: "The bird is dirty from sitting on the ground."
   Scientific Clarification: The brown and gray colors are the bird's natural feather colors, not dirt.

Cross-Curricular Ideas

1. ELA - Animal Storytelling: Have students create a simple story about the dove's day. "Where does the dove go? What does it eat? What does it hide from?" Students can dictate stories to you or draw pictures with captions. This connects narrative writing with animal behavior observation.

2. Art - Camouflage Collage: Students create their own camouflage picture by gluing torn pieces of brown, gray, and tan paper onto a background of sticks, leaves, and twigs. They can draw an animal shape and cover it with materials that match its habitat, exploring color mixing and blending concepts.

3. Math - Feather Pattern Counting: Students observe the stripes and patterns on the dove's feathers and create repeating patterns using craft materials. They can count the stripes, sort feathers by color, or create AB or ABC patterns, developing foundational patterning and counting skills.

4. Social Studies - Animal Homes: Connect this dove's ground habitat to where students live. Discuss how different animals need different homes, just like people choose where to live. Create a classroom map showing different animal habitats (forest floor, tree, pond, etc.).

STEM Career Connection

1. Wildlife Biologist: A wildlife biologist studies animals in nature, just like this dove! They watch animals, learn what they eat, where they live, and how they stay safe. They help protect animals and their homes. Average Salary: $67,000 USD/year

2. Zookeeper: Zookeepers take care of animals at zoos and nature centers. They feed animals, clean their homes, and watch to make sure the animals are healthy and happy. They use what they know about where animals live in nature to create good homes for them. Average Salary: $35,000 USD/year

3. Animal Illustrator/Nature Artist: These artists draw and paint animals like this dove to show how beautiful they are and to help people learn about them. They study animals carefully so they can show their real colors, patterns, and shapes in pictures for books and museums. Average Salary: $52,000 USD/year

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 - All organisms have external parts that they use to perform daily functions
- Crosscutting Concepts: Structure and Function - The shape and stability of structures are related to their function

Science Vocabulary

* Camouflage: When an animal's colors help it blend in and hide from other animals
* Habitat: The place where an animal lives and finds everything it needs
* Feathers: The soft covering on birds that keeps them warm and helps them fly
* Predator: An animal that hunts and eats other animals
* Adaptation: A special body part or behavior that helps an animal survive

External Resources

Children's Books:
- What Do You Do With a Tail Like This? by Steve Jenkins
- Whose Eyes Are These? by Peg Hall
- Animals in Camouflage by Phyllis Limbacher Tildes