

The Bio/Diversity Project

Lesson 3: Introduction to Bird Identification

Grade Level: 4-12

This lesson has been adapted from: [Lesson 4: Introduction to Bird ID: CornellLab](#)

AZ Science Standard:	Cheat sheet for AZ science standards <i>HS.L4U1.27</i> ● <i>Obtain, evaluate, and communicate evidence that describes how changes in frequency of inherited traits in a population can lead to biological diversity</i>
Learning Objectives:	● Students will describe three key clues to identify birds: size, shape, and plumage patterns. ● Students will identify and compare at least two bird species using observation skills and bird identification tools. ● Students will demonstrate how to use bird ID tools like the Merlin Bird ID app or field guides.



Scientist of the Week:



- ***Scientist of the Week: Dr. Sabrina McNew***
- Assistant Professor at the University of Arizona's Department of Ecology and Evolutionary Biology.
- Researches how environmental factors shape animal behavior and physiology, focusing on birds and their adaptation to environmental stress.
- Combines fieldwork and laboratory techniques to uncover mechanisms driving ecological and evolutionary processes.

Vocabulary	Materials
● Plumage ● Field marks	● Model of birds/nests (optional) ● Projector or computer with internet access ○ Slideshow ● Printed or digital bird images ○ Tucson Bird Cards ● Paper and colored pencils/markers ● For the virtual option of the 'bird walk' activity: ○ 2 common Tucson birds (video) ○ The birds in this video are the Gila Woodpecker and Cactus Wren.
Guiding Questions: ● <i>What makes a bird unique compared to other animals?</i> ● <i>How can we use size, shape, and plumage to identify birds?</i> ● <i>How do tools like bird guides or apps help scientists study birds?</i>	

Lesson 3: Introduction to Bird ID

Engage/Introduction

Time: 10-15 minutes

Objective: Get students thinking - what do they know about birds?

Activity:

Begin by showing photos or videos of common Tucson birds

- Ask students:
 - "Which of these birds have you seen before?"

Prepared by Lily McMullen, January 2025

- “What features do you notice about these birds?”

Share today’s goal: “We are learning how to identify birds using **size, shape, and plumage!**”

Explore

Time: 20-30 minutes

Objective: Investigate bird identification through key features.

Activity: Compare Tucson Birds

1. Begin with a brief explanation of size, shape, and plumage, and what these things tell us about a bird.
 2. Demonstrate how to identify a bird using AllAboutBirds.org with the class.
 3. Divide students into small groups or pairs. Give each group an image of a local bird species.
 4. Groups identify the following clues:
 - a. Size: Is the bird small, medium, or large?
 - b. Shape: What is the body shape, tail length, and beak type?
 - c. Plumage: What colors or patterns do you see?
 5. Groups create a sketch of their bird, labeling size, shape, and **plumage**.
 6. Students use AllAboutBirds.org to try to identify their bird’s shape. If they want an extra challenge, have them try to identify the species.
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Explain

Time: 15-20 minutes

Objective: Confirm and expand bird identification knowledge.

- Groups present their bird sketches to the class, explaining:
 1. Key features (size, shape, and plumage).
 2. If they were able to identify their bird.
 - Optional - Demonstrate how to use the Merlin Bird ID app to identify birds based on clues like size, color, and habitat.
 1. Use an example to walk students through the process.
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Extend

Time: 15 minutes

Objective: Apply skills in a real-world setting

Activity: Outdoor / Virtual Bird Walk

- Take students outside or near a window to observe birds in the area.
 - If this is not an option, use videos
 - Let the students watch the videos as many times as they need
 - Students record one bird they see, noting its size, shape, and **plumage**, and a sketch, if desired.
 - If few birds are found outside, discuss possible reasons why:
 - What time of day are birds most active?
 - Do birds avoid certain places?
 - Do birds have what they would need to survive here?
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Evaluate

Time: 5-10 minutes

Objective: Reflect and assess understanding.

- Students share their bird observations or sketches with the class.
 - What did they notice? Did other students who chose the same bird notice the same things?
- Encourage students to practice identifying birds at home or in their neighborhoods using the Merlin Bird ID app or other field guides.