



Lesson Plan: **Birders' Most Important Equipment**

Field Guides and Identification App

Alignment with STEM Framework

Inventor  **Altruist**  **Conservationist** 

Overview

In this lesson, the facilitator shares several kinds of bird field guides and identification apps. Before youth can offer an opinion about a bird identification they must be able to list at least three characteristics that make them think that they have correctly identified the bird.

Practice Goals

- Creating methods for data collection
- Identifying Birds
- Obtaining, evaluating, and communicating information about backyard birds

Content Goals

- How do I use a field guide to identify birds?
- How do I use the Merlin app to identify birds?

Purpose

The purpose of this lesson is to introduce students to field guides and bird identification apps that they can use to learn more about birds and help them identify the birds that they see.

Teacher Background Information

The facilitator should practice identifying common backyard birds with both field guides and the Merlin app so that they are prepared to help youth use these identification tools.



Affinity Goals



I can act like an **Altruist** by engaging in citizen science that supports the bird community.



I can act like an **Investigator** by looking for birds in my yard and neighborhood and my school grounds and noticing their colors, size, beak size and shape, flight patterns, and calls. I can use my observations paired with a field guide or a bird app like Merlin to identify the birds I see or hear.



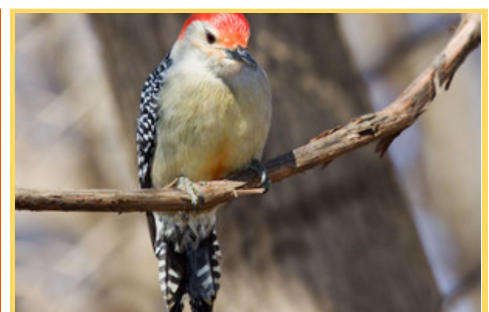
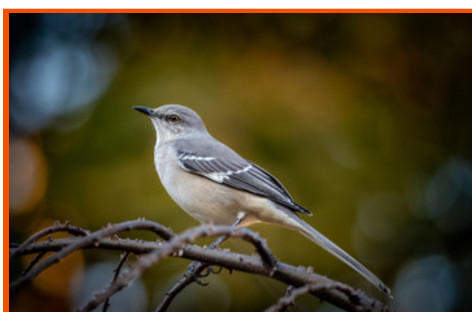
I can act like a **Conservationist** by learning to identify birds to contribute to citizen science projects.

Materials

- Field guides to Birds
- Merlin App

Time Needed

45 Minutes



Instructional Sequence

Facilitator will:

- Introduce students to Field Guides, providing each student with a different field guide.
- Ask youth questions about their field guide such as...
 - “Is there a table of contents?”
 - “How do you find a specific bird in the field guide that you have?”
 - “Are some field guides more focused on a specific area than other field guides?”
 - If so, “Which field guide do you think would be easier to use and why?”

Facilitator can:

- Ask youth to all find an entry on northern cardinals, our North Carolina state bird. Several youth can share information from their field guide. It is likely that some of the information will be consistent across field guides and some information will differ.

Facilitator can:

- Lead a discussion about reliability and validity of resources that we rely on for accurate information.

Facilitator will:

- Share that Merlin is a Cornell Lab of Ornithology app.
 - ***Their mission statement reads:*** “Dedicated to advancing the understanding and protection of the natural world, the Cornell Lab joins with people from all walks of life to make new scientific discoveries, share insights, and galvanize conservation action.”
 - Why does Cornell care about birds?
 - Why are they tracking them?
 - How does the information we put into Merlin help Cornell Lab with their science?

Facilitator will:

- Have all youth download the merlin app on their phones.

Youth can:

- Compare the information that they got about the Northern Cardinal from the field guide with information from Merlin.

Facilitator can:

- Ask youth questions designed to elicit their understanding of the main features of Merlin (descriptions, maps and sounds) to be sure that youth can use the app to identify flat birds in the next lesson.

