



Bioblitz Skillbuilders: Learning and Applying the Skills of a Naturalist

Skillbuilder 2: ID That Bird! Using Field Guides

Key Question

How can we use field guides to identify common birds?

Objectives

- Students will **understand** how binoculars function.
- Students will **practice observation skills** through identifying field markings.
- Students will **identify** birds using field guide.

Grades: 6-8

Time: 15-20 minutes

Location: Classroom

Materials

- Data sheet or journal,
- Binoculars (optional)
- Bird cutouts (attached)
- Projector
- Bird field guides (recommended field guides: National Geographic, Peterson, any tri-fold or iNaturalist guide: <https://www.inaturalist.org/guides/2427>)

Background

The Cornell Lab of Ornithology "[All About Birds](#)" has excellent resources for beginner birding. Click the following links to learn more about:

- [Bird ID Skills](#)
- [Bird Names and Shapes](#)
- [Searchable Bird Guide](#)

Preparation

- Print cutouts of common birds (attached)
- For each bird, write the family or order of birds to help students narrow their search in the field guide. For example, write "blackbirds" for Brown-headed Cowbird or "Shorebirds" for Killdeer (labeled on each attached image). If using multiple brands of field guide, be sure that the family or order names are the same across guides.
- Place bird cutouts around classroom, gymnasium, or somewhere outside that is visible from classroom. Birds should be placed at a distance appropriate for students to use binoculars.
- Set up one pair of binoculars and field guide per group.

Directions

1. Place students in groups of two to three. Explain that the U.S. is home nearly 1,000 species of bird – they are everywhere! But we need to observe very carefully in order to find birds.
2. Project one bird photo on screen and demonstrate how binoculars are used. Then, ask students:
 - a. What are some characteristics, or “field markings” of this bird that might help us to identify it?
 - b. Does it have a crest, bright colors, a long tail, a unique bill?
 - c. And does this bird remind you of any other birds you have seen? Similar species of birds are organized in groups like ducks, gulls, birds of prey, and songbirds.
3. Next, demonstrate using the field guide index to find the bird group, then open to that page and scan through, asking class if they see the bird. Finally, check the range of the bird on the map to see if the bird spends time in Florida. If the students think they already know the identification, show them where to find the glossary to find the page of that bird.
4. Students will walk around the room or stand at a window. One student will scan with binoculars and the other will hold the field guide and observation sheet. The student with binoculars should scan for birds, then switch with his/her partner, until they find a bird. Partners can use the index of the field guide to find the group of birds their bird is in. They should discuss and write down THREE characteristics to compare to the birds in that group in a journal or notebook. Some key field markings are size, shape, and color pattern. For example: The bird is in the raptor group: it is light brown/white with dark markings on bottom side of wings, broad wings, and red tail (Red-tailed Hawk).
5. Once they make an identification, they should write it next to the three characteristics they observed. The group can look for another bird.
6. Review birds, including the field markings students observed and the species identified.

Next Generation Science Standards

Performance Expectations

MS-LS4-1. Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

Connections to Nature of Science

Scientific Knowledge Assumes an Order and Consistency in Natural Systems: Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation. (MS-LS4-1),(MS-LS4-2)

Science and Engineering Practices

- Asking Questions and Defining Problems
- Analyzing and Interpreting Data
- Obtaining, Evaluating, and Communicating Information



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Example Bird Images + Groups

Red-tailed Hawk

Buteo jamaicensis

Order Accipitriformes: Raptors or Birds of Prey (Eagles, Hawks)



Blue Jay

Cyanocitta cristata

Order Passeriformes (Songbirds group: blackbirds, warblers, sparrows, finches, etc.)

Family Corvidae (Ravens, Crows, Jays)



Ruby-throated Hummingbird

Archilochus colubris

Order Caprimulgiformes (Nightjars, Swifts, and Hummingbirds)

Family Trochilidae: Hummingbirds Group



Northern Flicker
Colaptes auratus
Order Piciformes (Woodpeckers Group)



Killdeer

Charadrius vociferus

Order Charadriiformes (Shorebirds: Plovers, Sandpipers, Oystercatchers, Avocets)

Family Charadriidae: Plovers Group



Cedar Waxwing

Bombycilla cedrorum

Order Passeriformes (Songbirds group: blackbirds, warblers, sparrows, finches, etc.)

Family Bombycillidae (Waxwings)



Brown-headed Cowbird

Molothrus ater

Order Passeriformes (Songbirds Group: blackbirds, warblers, sparrows, finches, etc.)

Family Icteridae (Blackbirds)



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