



Feeding Birds

Atlanta Audubon Society's *Learning About Birds* Curriculum Series

EDUCATOR'S GUIDE

Grade Levels
3 - 5

Objective

Students will learn to distinguish between physical and behavioral adaptations and use observation and data collection skills to study the feeding behavior of birds.

Background

Watching birds eat can lead to all sorts of questions and scientific explorations. In the student activity pamphlet, *Feeding Birds*, information and activities are provided to encourage bird feeding because it is a tangible venue for scientific inquiry... and it is neat to see birds up close!

It is essential to have access to a bird feeder for the following activities. Fortunately there are feeders for all types of birds placed in different amounts of space. Some models are described in the student activity guide. It is best to assess the space you have before installing a feeder. Take into consideration (a) the safety of students and birds, (b) the visibility of birds to students, (c) how to mount the feeder, (d) accessibility to refill the feeder, and (e) generally the types of birds you think will visit.

Plan ahead - it will take a few days for birds to find a new feeder. If possible, provide a water source nearby. Moving or dripping water tends to attract more birds and keeps the water cleaner and relatively insect-free.

If you are not sure what kind of feeder to install or are experiencing issues with your feeder, consult your local Audubon chapter or yard/feed supply store.

Vocabulary

Adaptation - A characteristic that allows a living thing to survive in its habitat.

Behavioral Adaptation - An adaptation that refers to the way an organism acts.

Generalist - An organism that can obtain and eat many types of food depending on what is available as conditions in the environment change.

Physical Adaptation - An adaptation that is a part of an organism's body.

Specialist - An organism that is an expert at obtaining and eating specific kinds of foods.

Content and Skills aligned to Georgia Performance Standards

Science - S3L1c; S3L2b; S4P3c,d; S4L2a; S5P2a; S5L1a; S5L2a.

Science Inquiry & Analysis- S3CS1a,b; S3CS2a; S3CS7a; S3CS8a,b; S4CS1a,b,c; S4CS2a; S4CS4c; S4CS7a,b; S4CS8a,b; S5CS1a,b; S5CS2a; S5CS4c; S5CS7a; S5CS8a,b.

Tools - S3CS3a,b; S4CS3a,b; S5CS3a,b.

Communication - S3CS5a,b,c,d; S3CS6a; S4CS5a,b,c,d; S4CS6a,b; S5CS5a,b,c,d; S5CS6a,b.

Activity 1 - Adaptations At Work

Essential Question: What physical and behavioral adaptations do birds have?

Suggested Time: 20-30 minutes

Space: Area where birds can be viewed.

Materials: Blank paper, pencils. *Optional:* bird feeder, clipboards, binoculars, *Feeding Birds* student guides.

Instructional Methods

1. Ask the group what an adaptation is. Reiterate that plants and animals have traits that allow them to survive in their environment.
2. These adaptations can be a part of their body, called physical adaptations, or the way they act, called behavioral adaptations. Ask the group for an example of each.
3. *Optional:* Pass out the student activity guides and give students time to read and complete the bill adaptation matching activity. This will give them an idea of what types of adaptations birds have.
4. Explain that the students will watch birds in the wild and list the adaptations they observe. This activity can be done individually or in pairs. Pass out blank paper, pencils, clipboards (optional), and binoculars (optional). Instruct students to fold their paper in half lengthwise to make a T-chart. Students should label the left column "Physical Adaptations" and the right column "Behavioral Adaptations."
5. Bring the group to an area where birds can be easily observed, such as near a feeder. Students should watch the birds and write down each adaptation

Activity 1 – Adaptations At Work continued

they observe under the correct column. NOTE: It is not necessary to be able to identify the type of bird.

6. After ample time, bring the group back together and allow time for students to share the adaptations they observed. Ask students how what they observed helped the bird to survive.

Activity 2 - Feeders in Action

Essential Question: What types of information can be learned from observing a bird feeder?

Suggested Time: 30-45 minute introduction, 15 minute blocks at regular intervals, 30 minute wrap up.

Space: Area where birds can be observed.

Materials: Bird feeder, field guides, blank paper or notebook, pencils, poster board or projectable spreadsheet. *Optional:* clipboards, binoculars.

Instructional Methods

1. This is meant to be an ongoing project. Before beginning this project, decide (a) the period of time that you would like to collect bird observations, (b) how often students will make observations (will there be a schedule?), and (c) what format you will use. If students will collect data for more than a couple of days, having students use a notebook or journal is recommended.
2. Introduce the activity by discussing different forms scientific studies can take (observations, collecting specimens, and conducting experiments). Explain that you have set up a bird feeder and the group will collect observations over the amount of time you selected according to the schedule you set up. Ask the group what form of scientific study this is.
3. Show the group the feeder set-up. Write a list of the types of information students may find out based on their brainstorm: for example, types of birds, number of birds, color of birds, relative sizes, bird behavior, how weather affects bird numbers, etc. Decide as a group what information you want to collect. Ask students what predictions they have.
4. Ask the students how they can keep track of their data (information collected from the study) each time they observe the feeder. Give the group time to think about how they would organize the types of information they will collect. Suggestions may

Activity 2 – Feeders in Action continued

include a T-chart, table, journal entry, or a diagram with a key. Discuss their ideas and decide upon one method. Allow students time to set up their papers/notebooks. *Variation:* Allow students to record their data as they would like as long as you can check each individual's work.

5. Conduct observations on the planned schedule. Have a poster or spreadsheet where students can record their data regularly.
6. At the end of the study, show the group the poster or spreadsheet of data they collected. Ask the students to write down one conclusion that can be drawn from the data. Allow time to share these conclusions with the group. Ask students if these were the results they predicted.

Extension Ideas

- Examine the feeding adaptations of the birds in the *Ten Common Birds of Atlanta* student activity guide.
- Examine feeder physics. What forces are acting upon a feeder to keep it mounted? How does the design of a feeder determine what birds can use it?
- Design a birdseed study. What types of seed(s) do the birds in your area prefer?
- Use the Chippy Challenge as a group competition to build a functional feeder out of recycled materials.

Performance Tasks and Assessments

- Assign a narrative describing the challenges that a particular bird faces in finding food. Students can choose their bird. Focus on one eco-region.
- Have students complete the "Bird Feeder Science" activity in the student pamphlet. Take time to review the scientific method before the assignment.
- Assign a step-by-step recipe with measurements for making suet or nectar. What physical and chemical changes occur?

Additional Resources

- Bradley, F.M. 2004. *Projects for the Birder's Garden*. Yankee Publishing Inc. New Hampshire.
- Peterson, R.T. 2000. *A Field Guide to Feeder Birds*. Houghton Mifflin Harcourt. New York.
- Sibley, D.A. 2001. *The Sibley Guide to Bird Life and Behavior*. Alfred A. Knopf, New York.



For more information on Atlanta Audubon Society's Learning About Birds curriculum series, please visit the Atlanta Audubon Society website at www.atlantaaudubon.org.

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