



Songbird Survey

ALABAMA OUTDOOR CLASSROOM ACTIVITY

Grade Levels

7-12

Overview

Students will identify birds through their songs and describe the importance of bird counting as one means of inventorying wildlife populations.

Subject Areas

Science, Environmental Education

Duration

3—1 hour sessions

Learning Objectives

Students learn how to identify song birds by their sounds and how to conduct an inventory of bird populations.

Alabama Course of Study Objective Correlations for Science

Seventh: 4, 5, & 7

High School Biology: 9, 11, 12 & 15

Outdoor Classroom Connection

Explore your outdoor classroom site and use bird-counting techniques to conduct an inventory of bird populations.

Materials

- Field guides (*listed on page 2*)
- Paper
- Pencils
- Drawing paper
- Pictures of birds
- Binoculars (*optional*)
- Bird-call recordings (*book & website listed on page 2*)
- CD or Tape player

Adapted from Project Wild's
"Song Bird Survey"

Page 1 of 4

Background Info

People interested in wildlife and its habitat use a variety of techniques to learn and assist in the management for conservation and protection of wildlife. Some techniques are used to acquire information and some to apply knowledge. Inventory is a technique that is used to acquire information about the number and kinds of wildlife in a given area.

This activity is designed to give students some experience in the use of inventory. Birds are the subject of study. The variety of species and the number of individual birds in an area are good indicators of the quality of that particular environment (habitat). Their presence indicates food, water, shelter and space in an appropriate arrangement to suit their needs. "Bird watching" can be a valuable research tool, as well as an aesthetically pleasing activity that brings the student into touch with intangible values.

One means of identifying a bird species is by sight; another is by sound or song. Male birds of most species sing from conspicuous perches to mark territory, except during the nesting period. With practice, identification of many bird songs can be learned easily.

Note: This can be an annual project or a one-time project during a single school year. Students who participate in a multi-year project can be contributing to a meaningful record of the natural history of their area.

Preparation

Explore a suitable tract of land (preferably in your outdoor classroom site) and an optimal season for conducting this activity.

Conducting a bird inventory is typically easiest in the wintertime while leaves are off of the trees and birds are searching for food. If you prefer to inventory migratory birds, then you'll want to conduct your inventory in the fall or spring as they are migrating thru Alabama. You can also check field guides and websites or contact members of the Audubon Society to find out which time of year in your area there would be the greatest variety and number of birds.

Find an area in your outdoor classroom site that will offer the greatest variety of habitats and thus more likely to offer variety in birds as well. Transition areas between differing ecosystems—like ponds, woods and meadows—are apt to be good locations. Watering sites and feeding sites with vegetation nearby are other good locations. If the students are assisting in identifying the most suitable site, remind them of the basic habitat needs of animals, including birds—food, water, shelter and space in an appropriate arrangement. They can use these components as working criteria.

Procedure

Session 1:

Practice identifying the birds by their songs. For a list of bird song cds, visit <http://www.birdwatching.com/cds/index.html>.



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Literature Connections

- ⇒ *Bird Songs: 250 North American Birds in Song* by Les Beletsky & Jon L Dunn (ISBN: 10-1932855416)
- ⇒ *Bird Calls* by Frank Gallo (ISBN: 10-1584760648)

Bird Field Guides

- ⇒ *National Audubon Society Field Guide to Southeast United States* (ISBN-10: 0679446834)
- ⇒ *The Sibley Field Guide to Birds of Eastern North America* by David Allen Sibley (ISBN: 067945120X)
- ⇒ *Birds of Alabama Field Guide* by Stan Tekiela (ISBN: 1591931517) with *Birds of Alabama Audio CD* (ISBN-10: 1591931509)

Bird Magazines

- ⇒ *Birds & Blooms*
- ⇒ *Audubon Magazine*
- ⇒ *Birder's Digest*

Helpful Websites

- ⇒ Cornell's Celebrate Urban Birds: <http://www.birds.cornell.edu/celebration/GettingStarted>
- ⇒ Bird Songs CDs: <http://www.birdwatching.com/cds/index.html>
- ⇒ Bird Identification Website: <http://www.whatbird.com/>

Other Related Conservation Education Activities

Project WILD

- ⇒ *Bird Song Survey*

Flying WILD

- ⇒ *Avian Acoustics: Sound Off!*
- ⇒ *The Birding Beat*
- ⇒ *Count Your Birds*

Discovering Alabama Videos

- ⇒ *Red-cockaded Woodpecker*
- ⇒ *Wildlife History*

Procedure continued...

Session 2:

Invite a member of a local bird club (e.g. affiliate chapter of the National Audubon Society) to instruct the class in field study techniques for bird watching. These people can help the class determine what bird species are common to the area, which are most easily identified or most difficult to spot, what precautions to take in order not to disturb the birds or other wildlife in the area to be studied, etc. As part of the students' preparation for their guests from the local bird club, ask them to bring in bird guides from home, school, local libraries or natural history museums.

Note: Review "Helpful Hints for Bird Watching" on page 3.

Session 3:

1. Now it is time to visit the site to apply the knowledge and skills the students have been working to acquire. Select a trail, path or road to walk in the area that has an easily discernible starting and ending point. If possible, the students should walk the trail in the early morning, using techniques they were taught by the bird club members in making and recording their observations. Ideally, members of the bird club, parents, or other community members can come along to assist as well.

Option: Take along the recorded tapes of birds songs with a battery-operated cd or tape player. This reference "in the field" is a big help in identification.

2. Repeat the inventory one or more times that morning to try to account for all breeding pairs. The number of singing males identified on each walk should be consistent.

3. Once back in class, have the students compile the results of their observations. Map the site and mark the locations of bird sightings (e.g. using colored dots for birds with an explanatory key). Encourage the students to discuss their observations as well as the feelings they experienced in the process of watching the birds. Also, talk about any difficulties they feel they might have experienced in getting an accurate count.

Option: A small group of students might volunteer to compile all the findings in a written format, including magazine photos or sketches of the birds, etc. This booklet could serve as the beginning of a year-to-year record of the inventory of birds in that location at that time of year, and thus could be used by students conducting this project in subsequent years. As a new group of students repeats the inventory each year, the results could be graphed, showing year-to-year changes, if any. Trends could be analyzed, etc. Additional information can be included in this report format, including a map of the area selected for the inventory with the trail and other notable landmarks identified.

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Outdoor Classroom and Discovering Our Heritage Connection

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Materials

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Helpful Hints for Bird Watching

There are five basic clues you can look and listen for that will help you to solve the bird identification puzzle:

- 1) **Silhouette** (size and shape) — Is the bird large or small, short-legged or long-legged, crested or not crested, plump or slim and sleek, short-tailed or long-tailed? Is the end of the tail square, pointed, round, or forked? What shape is the beak?
- 2) **Plumage** (color and pattern of the bird's feathers) — What color are the feathers? How would you describe the color pattern? Is there an eye ring (tissue or feathers surrounding the eye) and what color is it? What color are the legs? What other "field marks" or visible characteristics does it have, such as breast spots, wing bars (thin lines along the wings), ect.?
- 3) **Behavior** (how it flies, forages, or generally comports itself) — Does it flap its wings constantly when it flies or does it soar? What position are the wings in when it flies, in or out? Does it climb up the side of a tree? Do they spend a lot of time on the ground? Does it hold its tail up for balance?
- 4) **Habitat** (where it lives) — Where do you see the bird (land, shore, woods, water, etc)? What kind of food do you see it eating?
- 5) **Voice** (bird song) — What does its call sound like? Is it short or long? How often does it repeat the call?

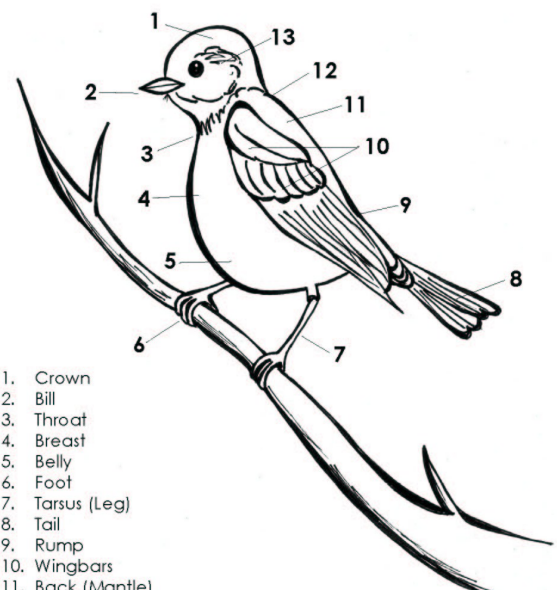
This may seem like a formidable amount of information to gather, but in truth you often need only one or two of these clues to identify a bird. Sometimes, the key to identification is simply knowing which clue to look for first when you see an unusual bird. Remember, the bird is most likely a species that commonly occurs in your area, so focus on those birds first. As your birding abilities increase, you will be able to pinpoint the important clues with greater ease and certainty.

Information derived from <http://www.floridabirdingtrail.com/birdid.htm>

The Parts of a Bird

This diagram shows some of the basic body parts used to identify birds.

Describe a bird in terms of these attributes and you can almost always find him in your field guide.



1. Crown
2. Bill
3. Throat
4. Breast
5. Belly
6. Foot
7. Tarsus (Leg)
8. Tail
9. Rump
10. Wingbars
11. Back (Mantle)
12. Nape
13. Eyebrow

By Linda Dow



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Page 4 of 4

Assessment

- ▶ Summarize the findings from your study. Why is it important to be able to inventory wildlife populations?
- ▶ Design a wildlife survey plan for conducting a butterfly inventory.
- ▶ Use the "Visual Vocabulary" evaluation technique to either review or assess students on new concepts and terms introduced in this activity.

Extensions

In one school year, conduct several counts throughout the migration period, checking to see what happens in the area selected. Take counts seasonally, noticing similarities and differences.

One or two signing male birds could be followed closely to determine the size of their respective territories. Be sure that students are following rather than chasing the bird. This could be a mapping and mathematics project, using geometry to calculate the area of the bird's territory. Map each location where the bird perches to sign his song and try to determine where he comes into conflict with a neighboring, singing male.

Compare the class results with those of statistical count experts, if such research data are available.

Send for inventory techniques, counts, trends and management implications for other species of animals from the state wildlife agency, etc. make comparisons with class techniques and data.

Notes

The Alabama Outdoor Classroom Program is a partnership between:



Alabama Cooperative
Extension System



Alabama Wildlife Federation

www.alabamawildlife.org/classrooms/



Alabama Department of
Conservation & Natural Resources