

Bird Observation Experiment

Grades: 3 - 5

Objectives:

Affective:

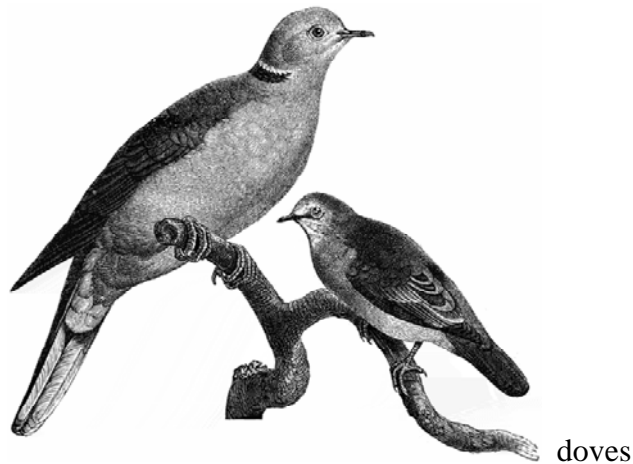
- Students will be able to describe the species of birds in their community.
- Students will be able to identify the particular foods that are necessary to attract these birds.

Academic:

- Students will conduct research using the Internet and library books.
- Students will gain scientific investigatory skills.

Motivation:

Ask students they have bird feeders at the homes. Ask them if they can name or identify (from photos presented to the class) any indigenous bird species. Ask them what they think these birds eat.



Materials: Here is a list of the types of feed that attract various kinds of birds:

- sunflower seeds
- suet
- bread
- nyjer (thistle) seeds
- diced, dried fruits and raisins
- cracked corn
- wild bird seed
- lettuce
- peanut butter
- acorns
- chicken scratch
- nut fragments

Procedure:

Experiment

- 1) Using two, standard bird feeders, place one several feet from the other in a location that can be easily observed without disturbing the birds that flock to the feeders.
- 2) Select two varieties of feed that are appropriate for different birds. (You can learn the diets of specific birds by consulting the reference sources above.)
- 3) Place one of the two feeds in one of the feeders, and the other feed in the other.
- 4) After some time (e.g., two weeks), switch the positions of the feeders to insure that the birds are going to the food, not to the location.

Data Collection

- 1) Students can observe that kinds of birds that are attracted to each feeder and learn some of the habits of those birds. In a log book, compile information on which types of birds are attracted to what type of food. The types of birds that appear will reflect the species native to your part of the state.
- 2) Have more than one student count how many birds appear at a given feeder during the same time. On the board, show the different numbers. Ask the students why they think there may be differences in the numbers. Ask them what they can do to rectify the differences; introduce the concept of averaging.
- 3) You may also want to take photographs of the birds you see or record their sounds as an additional step in the project.
- 4) Compare the difference in sounds that are made by various birds species.

Summary:

- Students can create journals about the creation and running of the experiment, including drawing pictures of the birds, and describing their interactions.
- They may also submit their data to different organizations (see the resources below).
- Student can create graphs depicting which birds appear at what times (during the same day and/or various days). Even though students can collect, graph, and present the data in groups, a teacher will likely have to help the students during each of these steps.

Literature for Teachers:

- Audubon, John James, The Birds of North America. New York: American Heritage Publishing Company, Inc.
- Bull, John, Farrand, John, & Hogan, Lori (1994). National Audubon Society Field Guide to North American Birds: Eastern Region. New York: Knopf.

- Stan Tekiela (2000). Birds Of New York Field Guide. Cambridge, MN: Adventure Publications
- Weber, William J. (1978). Wild Orphan Babies: Caring for Them, Setting Them Free. New York: Holf, Rinehart & Winston.

Websites:

- <http://www.math.sunysb.edu/~tony/birds> Bird songs (and drawings) for many New York State birds. Some birds (e.g., the great horned owl) also have interesting quotes about their sounds.
- <http://www.fnysbc.org> Federation of New York State Bird Clubs
Has a lot of information including conservation issues, field trip ideas, a list of birding societies across the state, checklist of birds frequent to different areas, and a *Checklist of the Birds of New York State*.
- <http://birds.cornell.edu> Information, both fun and scholarly about many aspects of birds and their worlds (especially when their world is ours!).
- <http://ny.audubon.org> New York Audubon Society
Many resources, including links to local Audubon societies, an education site that has--among other things--information about Audubon Adventures (<http://ny.audubon.org/adventures.htm>) and songs about birds for children (<http://ny.audubon.org/education/songs.htm>)
- <http://birds.cornell.edu/PFW> Project Feeder Watch
During the winter, student can use the data they collect during this activity to help advance science and conservation efforts!
- <http://www.ebird.org/> eBird
“Record any bird you see...then explore where the birds are!”
- <http://www.dec.state.ny.us/website/dfwmr/wildlife/bba>
Breeding Bird Atlas Project: A more ambitious endeavor than Project Feeder Watch, dedicated teachers and students can further help scientists understand and map New York State birds.
- <http://www.pbs.org/lifeofbirds/songs> Bird Songs
An interesting article on bird songs.
- <http://www.birdfeeding.org/kids.html> For information on the basics of bird feeding, including making bird feeders out of milk containers, plastic bottles and cans.

New York State Standards Addressed:

MST Standard 4 - Elementary Science

Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

The Living Environment

5. Organisms maintain a dynamic equilibrium that sustains life

Observing Animal Behavior
Stephen Zawistowski, Ph.D., CAAB
ASPCA

- Make sure the animals will be active – behaving!
 - Bird feeders (project feeder watch)
 - Dog runs
 - Fish tanks
 - Pigeons (project pigeon watch)
 - Squirrels

- Prepare
 - Visit the site or check out the idea
 - Can you do it?
 - Provide descriptive information – Use behavior, not intentions, moods, etc.
 - Dog behavior
 - Fish – chase, nip, fin positions, feeding, etc.
 - Be aware of and plan to deal with elimination and sexual behaviors
 - Can you identify individuals?
 - Practice
 - Video
 - Photos
 - Watch one another

- Methods – not mutually exclusive
 - Focal sample (one individual) – complete log of an individual’s behavior
 - Scan/Instantaneous sample – count of what individuals are doing at set intervals
 - Focus sample – log instances of a particular behavior

- Equipment/materials
 - Paper/pencil
 - Binoculars
 - Stopwatches, clocks, etc.
 - Camera, tape recorder

- Recording – frequency, duration, transitions
 - Manual – Checklists
 - Audio – tape recording
 - Photography
 - Video – allows review back in the classroom

- Presentation and interpretations
 - Evaluate context of behaviors and now is the time to infer intentions, etc.